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California Regional Water Quality Control Board

San Francisco Bay Region

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ORDER NO. R2-2009-0062
NPDES NO. CA0037681

WASTE DISCHARGE REQUIREMENTS FOR THE CITY AND COUNTY OF SAN FRANCISCO OCEANSIDE WATER POLLUTION CONTROL PLANT (SOUTHWEST OCEAN OUTFALL) AND COLLECTION SYSTEM, INCLUDING THE WESTSIDE WET WEATHER FACILITIES

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

Table 1. Discharger Information

Discharger	City and County of San Francisco
Name of Facility	Oceanside Water Pollution Control Plant and Collection System, Including the Westside Wet Weather Facilities
Facility Address	3500 Great Highway
	San Francisco, CA 94132
	San Francisco County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a **major** discharge.	

Discharges by the City and County of San Francisco from the discharge points identified below are subject to waste discharge requirements as set forth in this Order.

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Secondary Treated Wastewater, Combined Primary and Secondary Treated Wastewater and Stormwater, and the equivalent of wet weather primary treated combined Wastewater and Stormwater decant flow from a Combined Sewer System	37 º 42’ 18” N	122 º 34’ 39” W	Pacific Ocean, Offshore

CSD-001	The equivalent of wet weather Primary Treated Combined Wastewater and Stormwater Discharge	37 ° 42' 55" N	122 ° 30' 16" W	Pacific Ocean (Fort Funston, Ocean Beach)
CSD-002	The equivalent of wet weather Primary Treated Combined Wastewater and Stormwater Discharge	37 ° 44' 16" N	122 ° 30' 29" W	Pacific Ocean (Vicente St., Ocean Beach)
CSD-003	The equivalent of wet weather Primary Treated Combined Wastewater and Stormwater Discharge	37 ° 45' 50" N	122 ° 30' 42" W	Pacific Ocean (Lincoln Way, Ocean Beach)
CSD-004	The equivalent of wet weather Primary Treated Combined Wastewater and Stormwater Discharge	37 ° 47' 5" N	122 ° 30' 37" W	Pacific Ocean (Mile Rock)
CSD-005	The equivalent of wet weather Primary Treated Combined Wastewater and Stormwater Discharge	37 ° 47' 16" N	122 ° 29' 30" W	Pacific Ocean (China Beach)
CSD-006	The equivalent of wet weather Primary Treated Combined Wastewater and Stormwater Discharge	37 ° 47' 22" N	122 ° 29' 16" W	Pacific Ocean (Baker Beach)
CSD-007	The equivalent of wet weather Primary Treated Combined Wastewater and Stormwater Discharge	37 ° 47' 22" N	122 ° 29' 13" W	Pacific Ocean (Baker Beach)

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	August 12, 2009
This Order shall become effective on:	October 1, 2009
This Order shall expire on:	September 30, 2014
CIWQS Regulatory Measure	360578
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	180 days prior to the Order expiration date

The signatures below certify that the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on August 12, 2009, and of a National Pollutant Discharge Elimination System permit issued by the United States Environmental Protection Agency, Region IX, on the date below.

Bruce H. Wolfe, Executive Officer
California Water Quality Control Board
San Francisco Bay Region

Date: 8/12/09

Alexis Strauss, Director
Water Division
USEPA Region IX

Date: 12 August 2009

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I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	City and County of San Francisco
Name of Facility	Oceanside Water Pollution Control Plant and Collection System, Including Westside Wet Weather Facilities
Facility Address	3500 Great Highway
	San Francisco, CA 94132
	San Francisco County
Facility Contact, Title, Phone	Tommy Moala, Assistant General Manager, (415) 554-2465
CIWQS Place ID	256498
CIWQS Party ID	39680
Mailing Address	San Francisco Public Utilities Commission/Wastewater Enterprise
	1155 Market Street, 11th Floor
	San Francisco CA 94103
Type of Facility	Publicly Owned Treatment Works (POTW)
Facility Design Flow	Oceanside Plant 43 MGD, maximum dry weather design flow (providing secondary treatment) 65 MGD maximum wet weather design flow (providing secondary treatment for 43 MGD and primary treatment for an additional 22 MGD)
	Westside Wet Weather Facilities Collection system flows greater than 65 MGD and less than 175 MGD receive the equivalent of wet weather primary treatment in the Westside Wet Weather Facilities (storage/transports) and are discharged at the Southwest Ocean Outfall. Flows greater than 175 MGD receive the equivalent of wet weather primary treatment in the Westside Wet Weather Facilities and are discharged at authorized combined sewer overflow discharge points on the shoreline.

II. FINDINGS

The U.S. Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board), find:

A. **Background.** The City and County of San Francisco (hereinafter the Discharger) is currently discharging pursuant to Order No. R2-2003-0073 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0037681. The Discharger submitted a Report of Waste Discharge, dated March 28, 2008, and applied to renew its NPDES permit to discharge up to 65 MGD of treated wastewater from the Oceanside Water Pollution Control Plant (Plant), through the Southwest Ocean Outfall, and primary treated wet weather flows from the Westside Wet Weather Facilities.

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

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B. **Facility Description.** The Discharger is the owner and operator of the Oceanside Plant and its associated collection system, a combined sewer system that includes the Westside Wet Weather Facilities. The collection system includes approximately 300 miles of sewer pipes on the westside watershed of the city that covers the areas of Richmond, Sunset, and Lake Merced as well as a small portion of Daly City. The system also includes four all weather pump stations and two wet weather pump stations.

Treatment at the Oceanside Plant, which has a peak secondary treatment capacity of 43 MGD, includes coarse screening at the Westside Pump Station, fine screening and grit removal at the Plant headworks, primary sedimentation, activated sludge treatment by a pure oxygen process, and secondary clarification. Secondary treated wastewater is discharged to the Pacific Ocean between 3.4 and 3.6 nautical miles offshore, at Discharge Point 001 - the Southwest Ocean Outfall. These receiving waters are waters of the United States but are beyond the territorial waters of the State of California, which are three nautical miles from the low water mark at shore. During wet weather periods of high influent flow, the Oceanside Plant can provide primary treatment for an additional 22 MGD of influent flow, which, following treatment, is blended with secondary treated wastewater (i.e., a total treatment capacity of 65 MGD) and discharged at Discharge Point 001.

The Discharger's collection system includes three large storage/transport structures – the Westside Transport, a 49.3 million gallon box-like structure located beneath the Great Highway; the Richmond Transport, a 12 million gallon structure located to the north; and the Lake Merced Transport, a 10 million gallon structure located to the south. The combined storage capacity of these "Westside Wet Weather Facilities" is 73.5 million gallons, which includes 2.2 million gallons of capacity within the sewer lines.

Plant operations depend on rainfall, forecasts, and storage conditions in the Westside, Lake Merced, and Richmond Transport structures. Collection system flows that exceed the Oceanside Plant's treatment capacity of 65 MGD are stored in the Westside Wet Weather Facilities, which provide the equivalent of wet weather primary treatment through solids settling, skimming of floatable solids, and screening at pump stations. Combined wastewater from the storage/transport structures is pumped via the Westside Pump Station to Discharge Point 001, until the pumping capacity of the combined sewer system facilities to the outfall is reached at 175 MGD. Combined wastewater flows greater than 175 MGD also receive treatment in the storage/transport structures (the equivalent of wet weather primary treatment) but are discharged at the seven, near-shore combined sewer overflow discharge (CSOD) structures authorized by this Order. These receiving waters are waters of the United States and territorial waters of the State of California.

To be considered a discrete overflow discharge event, it must be separated by six hours in time from any other combined sewer overflow discharge. For the purposes of this permit, authorized, treated combined sewer overflow discharges from the near-shore discharge structures are referred to as combined sewer overflow discharges (CSODs). Unauthorized, untreated combined sewer overflow discharges from combined sewer systems are referred to as combined sewer overflows (CSOs).

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Wastewater solids removed by settling in the Westside Wet Weather Facilities are flushed to the Plant when wet weather flows subside. Primary and secondary solids from the Plant are blended and thickened using gravity belt thickeners, anaerobically digested, dewatered, and beneficially re-used at permitted sites.

Attachment B provides a map of the area around the facility. Attachment C provides a flow schematic of the Plant and the Westside Wet Weather Facilities.

C. **Legal Authorities.** This Order is issued pursuant to federal Clean Water Act (CWA) §402 and the California Water Code (CWC) Chapter 5.5, Division 7 (commencing with §13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to CWC Article 4, Chapter 4, Division 7 (commencing with §13260). Because this Order concerns discharges to waters of the United States, both within and beyond State territorial waters, USEPA and Regional Water Board are jointly issuing the permit.

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

E. **California Environmental Quality Act (CEQA).** Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA. Similarly, pursuant to CWA §511(c), this action to reissue an NPDES permit does not trigger the requirements of the National Environmental Policy Act [42 U.S.C. 4321 et seq.].

F. **Technology Based Effluent Limitations.** CWA §301(b) and NPDES regulations at 40 CFR 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. Plant discharges authorized by this Order must meet the minimum federal technology-based requirements for POTWs established by USEPA at 40 CFR 133 (Secondary Treatment Regulation). For wet weather discharges, this Order includes technology-based requirements based on USEPA's Combined Sewer Overflow Control Policy. The Fact Sheet contains a discussion on the development of the technology-based effluent limitations and requirements.

G. **Water Quality Based Effluent Limitations.** CWA §301(b) and NPDES regulations at 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

40 CFR 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established

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for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using:

- USEPA criteria guidance under CWA §304(a), supplemented where necessary by other relevant information;
- an indicator parameter for the pollutant of concern; or
- a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the State's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

H. **Water Quality Control Plans.** The *Water Quality Control Plan for the San Francisco Bay Basin* (the Basin Plan) is the Regional Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface water and groundwaters, and includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Regional Water Board and approved by the State Water Resources Control Board (State Water Board), USEPA, and the Office of Administrative Law, as required. For the protection of ocean waters of the State, the Basin Plan incorporates by reference provisions of the *Water Quality Control Plan for Ocean Waters of California* (the Ocean Plan).

The Basin Plan implements State Water Board Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply (MUN). As the total dissolved solids (TDS) levels of marine waters significantly exceed 3,000 mg/L, ocean waters meet an exception to Resolution No. 88-63, and therefore, the MUN designation does not apply. According to Basin Plan Table 2-1, beneficial uses of the Pacific Ocean are as follows.

Table 5. Beneficial Uses

Receiving Water	Basin Plan Beneficial Uses
Territorial waters of the State of California within the Pacific Ocean	• Industrial Service Supply • Ocean, Commercial, and Sport Fishing • Shellfish Harvesting • Marine Habitat • Fish Migration • Preservation of Rare and Endangered Species • Fish Spawning • Wildlife Habitat • Water Contact Recreation • Noncontact Water Recreation • Navigation

Requirements of this Order implement the Basin Plan.

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I. **California Ocean Plan.** The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California* (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 applies, in its entirety, to point source discharges to the territorial waters of the State as defined by California law to the extent that these waters are outside of enclosed bays, estuaries, and coastal lagoons. The Ocean Plan identifies the following beneficial uses of ocean waters of the State: Industrial Water Supply; Water Contact and Non-contact Recreation, Including Aesthetic Enjoyment; Navigation; Commercial and Sport Fishing; Mariculture; Preservation and Enhancement of Designated Areas of Special Biological Significance; Rare and Endangered Species; Marine Habitat; Fish Migration; Fish Spawning; and Shellfish Harvesting. To protect beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation for discharges to State territorial waters.

Discharge Point 001, the Southwest Ocean Outfall, is 3.4 to 3.6 nautical miles offshore in federal waters. The territorial waters of the State end three nautical miles from shore. The Ocean Plan (Appendix 1, Ocean Waters) states, "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 Ocean Plan will occur in ocean waters." For the reasons set forth in the Fact Sheet (Appendix F), the Regional Water Board finds that the discharge at Discharge Point 001 could not affect the quality of the waters of the State during dry weather. During wet weather, the Ocean Plan defers to the Combined Sewer Overflow Control Policy, discussed in Finding K, below. Therefore, this Order does not regulate the discharge at Discharge Point 001 directly through the Water Board's Ocean Plan authorities.

J. **Determination of Unreasonable Degradation of the Marine Environment.** Discharges from the Southwest Ocean Outfall are to waters of the United States beyond the territorial waters of the State of California. Federal regulations at 40 CFR 125.122 require the permitting authority to determine whether a discharge will cause unreasonable degradation of the marine environment. Based on 40 CFR 125.22(b), USEPA conducted a reasonable potential analysis using Ocean Plan objectives and included numeric permit limitations, based on the Ocean Plan's dilution procedures, for toxicity and mercury, the only numeric Ocean Plan objectives for which USEPA found reasonable potential to cause or contribute to an exceedance of water quality standards. USEPA also included narrative receiving water limitations for the Ocean Plan narrative objectives for which it found reasonable potential. For determining reasonable potential for the dioxins, USEPA used recently updated Toxicity Equivalency Factors (TEFs) published by the World Health Organization in 2005, as well as the congener-specific Bioconcentration Equivalency Factors (BEFs) used for the Great Lakes System. The "Bay Area Clean Water Agencies' Draft Dioxin Issue Paper: Expert Panel Response and Recommendations," dated April 4, 2008, proposed using both TEFs and BEFs in developing NPDES permit limits for dioxins. This approach incorporates recent scientific information for dioxins on a congener-specific basis, while continuing to use the Ocean Plan water quality objective for dioxins (TCDD equivalents) and standards implementation procedures. Given the unique issues dioxins present, USEPA has prepared a determination of no unreasonable degradation based on the ten factors under 40 CFR 125.122(a) (Appendix 1 to the Fact Sheet). USEPA has determined that no unreasonable degradation of the marine environment will result from

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the discharges of dioxins through the Southwest Ocean Outfall as authorized under this Order, with all the limitations, conditions, and monitoring requirements in effect.

K. **Combined Sewer Overflow Control Policy.** Wet weather flows from combined sewer systems are subject to CWA §301(b)(1)(A) and are not subject to secondary treatment regulations. Wet weather flows from combined sewer systems are addressed by the Combined Sewer Overflow Control Policy (59 Federal Register 18688-18698). The *Wet Weather Water Quality Act of 2000* incorporated this policy into the CWA.

The policy establishes a consistent national approach for controlling discharges from combined sewers to the nation's waters. Using the NPDES permit program, the policy initiates a two-phased process. During the first phase, a discharger is required to implement "nine minimum controls" (e.g., prevent dry weather overflows). These controls constitute the technology-based requirements of the CWA as applied to combined sewer facilities (i.e., best conventional pollutant control technology, BCT, and best available control technology economically achievable, BAT). The controls are intended to provide immediate and relatively low-cost water quality improvements for facilities that, unlike the Discharger, have not implemented a long-term control plan. During the first phase, a discharger is required to initiate development of a long-term control plan to select controls to comply with water quality standards, based on consideration of the discharger's financial capabilities.

The second phase of the process involves implementation of the long-term control plan developed in the first phase. The purpose of this long-term control plan is to comply with CWA water quality requirements. The Discharger's program, which continues to implement the Discharger's long-term plan, is consistent with the policy. This Order implements the policy and is consistent with the Regional Water Board policy on wet weather overflows described in Basin Plan Section 4.9. During wet weather, CSODs from shoreline discharge points CSD-001 through CSD-007 and the Southwest Ocean Outfall are subject to this policy.

L. **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 [65 FR 24641 (April 27, 2000) (codified at 40 CFR 131.21)]. 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.

M. **Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on biochemical oxygen demand (BOD), total suspended solids (TSS), and pH. Restrictions on these pollutants are discussed in Section IV.B of the Fact Sheet (Attachment F). This Order's technology-based pollutant restrictions implement the minimum applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum federal technology-based requirements. The water quality-based limits are

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necessary to meet water quality standards. They are not more stringent than required by the CWA.

Water quality-based effluent limitations have been derived to implement water quality objectives that protect beneficial uses. Both beneficial uses and water quality objectives in State waters have been approved pursuant to federal law and are the applicable water quality standards. The procedures used for this Order to calculate individual water quality-based effluent limitations for State waters are based on the California Ocean Plan, which was approved by USEPA on February 14, 2006.

N. **Antidegradation Policy**. NPDES regulations at 40 CFR 131.12 require that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law and requires that existing quality of waters be maintained unless degradation is justified based on specific findings. Water quality plans implement and incorporate by reference, both the State and federal antidegradation policies. The permitted discharges are consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16 because there is no increase in authorized flow and effluent limitations are at least as stringent as in the previous permit.

O. **Anti-Backsliding Requirements.** CWA Sections 402(o)(2) and 303(d)(4) and NPDES 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. With the exception of acute and chronic toxicity, all effluent limitations in this Order are at least as stringent as the effluent limitations in the previous permit. Compliance with anti-backsliding requirements is discussed in Fact Sheet section IV.C.6.

P. **Endangered Species Act.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the State. The Discharger is responsible for meeting all requirements of applicable State and federal law pertaining to threatened and endangered species.

Section 7(a)(2) of the federal Endangered Species Act requires USEPA, in reissuing this NPDES permit, to ensure, after consultation with appropriate agencies that discharges at the Southwest Ocean Outfall are not likely to jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of critical habitat for such species. USEPA has initiated informal consultation with National Oceanic Atmospheric Administration.

Q. **Monitoring and Reporting.** NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. CWC §13267

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and §13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program accompanying this Order (Attachment E) establishes monitoring and reporting requirements to implement federal and State requirements.

R. **Standard and Special Provisions.** Federal Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must comply with all federal standard provisions and with those additional conditions that apply pursuant to 40 CFR 122.42. The Regional Water Board has also included State standard provisions in this Order as Attachment G. The rationale for these special provisions is provided in the Fact Sheet (Attachment F). Where federal standard provisions are duplicative with State standard provisions, the federal standard provisions will apply and any excursion from a duplicative standard provision will not be interpreted as two excursions.

S. **Notification of Interested Parties.** The USEPA and Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharges described herein and has provided them with an opportunity to submit written comments and recommendations. Details of the notification are provided in the Fact Sheet, which accompanies this Order.

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

THEREFORE, IT IS HEREBY ORDERED, that this Order supersedes Order No. R2-2003-0073, except for enforcement purposes, and in order to meet the provisions contained in CWC Division 7 (commencing with §13000) and regulations adopted hereunder, and the provisions of the federal CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

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III. DISCHARGE PROHIBITIONS

A. Discharge of treated wastewater at a location or in a manner different from that described by this Order is prohibited.

B. Discharge from Discharge Point 001 that does not receive an initial dilution of at least 150:1 is prohibited.

C. Bypass of secondary treatment facilities at the Oceanside Plant is prohibited, except during a wet weather day, as defined by this Order (see Definitions, Attachment A), or as provided for by NPDES regulations at 40 CFR 122.41(m)(4) and in Section IV.B of *Regional Standard Provisions, and Monitoring and Reporting Requirements (Supplement to Attachment D) for NPDES Wastewater Discharge Permits*, July 2009 (Attachment G).

D. Discharge of wastewater at a location other than Discharge Point 001 is prohibited, except on wet weather days (as defined in Attachment A) when the capacity of the system to discharge to Discharge Point 001 has been exceeded.

E. Discharge of wastewater at Discharge Points CSD-001 through CSD-007 is prohibited, except on wet weather days (as defined in Attachment A) and in accordance with the terms of this Order.

F. Plant discharges shall not exceed 43 MGD at Monitoring Location EFF-001 during dry weather. Compliance with this prohibition shall be based on average dry weather flow determined over three consecutive dry weather months.

G. Any CSO that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited. This does not include authorized combined sewer overflow discharges (CSODs).

H. The discharge of municipal and industrial waste sludge directly or indirectly to the ocean, or into a waste stream that discharges to the ocean without further treatment, is prohibited.

I. The discharge of waste to designated Areas of Special Biological Significance, except as provided by Ocean Plan Chapter III.E, is prohibited.

J. Degradation of harvestable shellfish in the area as a result of dry weather discharge from Discharge Point 001 is prohibited.

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IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations for Dry Weather – Discharge Point 001

The following effluent limitations apply during dry weather days, as defined in Attachment A. Limitations, conditions, and other requirements applicable during wet weather conditions are established in Section VI.C of this Order.

1. Effluent Limitations – Discharge Point 001

a. The Discharger shall comply with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the attached Monitoring and Reporting Program:

Table 6. Effluent Limitations for Conventional Pollutants, Discharge Point 001

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
BOD_5[(1)] @ 20°C	mg/L	30	45	---	---	---
TSS[(2)]	mg/L	30	45	---	---	---
pH[(3)]	std units	---	---	-9.0--	6.0	9.0

(1) Biochemical Oxygen Demand
(2) Total Suspended Solids
(3) The pH effluent limit of 6.0 shall not apply if the discharger can demonstrate that the addition of inorganic chemicals or industrial sources is not causing the excursion below 6.0. The regulations at 40 CFR 133.102(c) allow the modification or elimination of pH limitations when it can be demonstrated that the addition of inorganic chemicals or industrial sources is not causing an excursion above or below the limits.

b. Percent Removal: The average monthly percent removal of BOD_5 @ 20°C and TSS shall not be less than 85 percent.

2. Effluent Limitations for Toxic Substances – Discharge Point 001

The Discharger shall comply with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the attached Monitoring and Reporting Program:

Table 7. Effluent Limitations for Toxic Pollutants, Discharge Point 001

Parameter	Units	Effluent Limitations[(1)(3)]		
		6-month median	Maximum Daily	Instantaneous Maximum
Chronic Toxicity	TUc	N/A	150	N/A
Mercury[(2)]	µg/L	5.9	24	N/A

(1) Limitations apply to the concentration of all samples collected during the period (daily = 24-hour period)
(2) Mercury limitations are expressed as total recoverable metal.
(3) A daily or 6-month median value for a given constituent shall be considered noncompliant with the effluent limitations only if it exceeds the effluent limitation and the Reporting Level (RL) for that constituent. Ocean Plan Appendix II indicates the Minimum Level (ML) upon which the Reporting Level is based for compliance purposes. For mercury this is 0.2 µg/L.

3. Effluent Limits for Disinfectants

The effluent is not disinfected; thus there are no limits on chlorine or other disinfectant residuals.

B. Land Discharge Specifications

Not Applicable.

C. Reclamation Specifications

Not Applicable.

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Ocean Plan water quality objectives were used to determine the receiving water limitations in this Order. Dry Weather Day discharges authorized by this Order at Discharge Point 001 shall not cause exceedances of the following surface water limitations in ocean receiving waters. As indicated in the Fact Sheet (Attachment F, Section IV.C.6), disinfection to meet bacteria level objectives is not required. Attachment F Section III.C.4 describes an Ocean Plan exception for combined sewer overflows discharges.

1. Floating particulates and grease and oil shall not be visible.

2. The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.

3. Natural light shall not be significantly reduced at any point outside the initial dilution zone as the result of the discharge of waste.

4. The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.

5. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as a result of the discharge of oxygen demanding waste material.

6. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.

7. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.

8. The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life.

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9. Nutrient levels shall not cause objectionable aquatic growths or degrade indigenous biota.

10. Marine communities, including vertebrate, invertebrate and plant species, shall not be degraded.

11. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.

12. The concentration of organic materials in fish, shellfish, or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.

B. Groundwater Limitations

Not Applicable

VI. PROVISIONS

A. Standard Provisions

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

2. The Discharger shall comply with all applicable items of the *Regional Standard Provisions and Monitoring and Reporting Requirements (Supplement to Attachment D) for NPDES Wastewater Discharge Permits*, July 2009 **(Attachment G)**, including any amendments thereto.

3. If any discrepancies exist between requirements in the Order, the federal standard provisions included in Attachment D, and the Regional Standard Provisions included in Attachment G, the requirements in this Order prevail over requirements in Attachment D, which prevail over requirements in Attachment G.

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E. The Discharger shall also comply with all applicable items of the *Regional Standard Provisions and Monitoring and Reporting Requirements (Supplement to Attachment D) for NPDES Wastewater Discharge Permits*, July 2009 **(Attachment G)**.

C. Special Provisions

1. Re-opener Provisions

The Regional Water Board or USEPA, as appropriate, may modify or re-open this Order prior to its expiration date in any of the following circumstances as allowed by law.

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a. If present or future investigations demonstrate that a discharge governed by this Order will have, or will cease to have, a reasonable potential to cause or contribute to adverse impacts on water quality or beneficial uses of the receiving waters.

b. If new or revised Water Quality Objectives (WQOs) or TMDLs come into effect for the receiving waters, effluent limitations may be modified as necessary to reflect the updated WQOs and waste load allocations in TMDLs. Adoption of effluent limitations as contained in this Order is not intended to restrict in any way future modifications based on legally adopted WQOs, TMDLs, or as otherwise permitted under regulations governing permit modifications.

c. If translator or other water quality studies provide a basis for determining that a permit condition should be modified.

d. If an administrative or judicial decision on a separate NPDES permit or WDR necessitates modifications of the requirements established by this Order.

e. As otherwise authorized by law.

The Discharger may request permit modification in any of the circumstances described above. Such a request shall include appropriate antidegradation and anti-backsliding analyses.

2. Special Studies, Technical Reports, and Additional Monitoring Requirements

a. Combined Sewer Collection System Overflow Study

The combined sewer system commingles stormwater and domestic and industrial sewage. Heavy storm events can potentially result in flows that exceed the collection system capacity, at least in some areas. The Discharger shall submit a report, for planning purposes, by June 30, 2012, evaluating the potential locations of such system excursions and the primary conditions that result in such events. The report shall evaluate the feasibility and effectiveness of alternatives to minimize these events.

b. Dilution Model Update and Stratification Data Collection

Available ambient data to determine stratification for the purposes of dilution modeling for this discharge is out-dated. The Discharger shall submit with the permit application for the next permit reissuance, ambient data collected during the term of this permit, as well as updated dilution modeling for use during the next permit reissuance. The discharger shall:

(1) Submit a work plan to USEPA and the Regional Water Board for stratification data collection no later than one year after the effective date of this Order. The purpose of the data collection effort is to determine the months of maximum stratification based on actual ocean observations. At a minimum, the work plan shall include the following tasks:

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- Collect temperature and salinity data during the months of maximum stratification in the vicinity of the outfall uninfluenced by the waste-field;
- Record data at a minimum of five equally spaced depths and at an appropriate resolution to determine maximum stratification;
- Provide effluent temperature and salinity or density data and flow rate for the time period encompassing the study;
- Describe how the data will be collected, the location(s), sensors, and instruments to be deployed and equipment to be used; and
- Describe appropriate quality assurance protocols to be followed to ensure the data is of adequate quality and representative of actual conditions within the water column.

(2) Upon completion of data collection, the Discharger shall prepare and submit a data report in hard copy and electronic format to USEPA and the Regional Water Board. Records that include large data gaps, errors, or instrument failures may not be used for dilution modeling.

(3) No later than 4 years after the effective date of this Order, the Discharger shall submit a work plan for updated dilution modeling. This work plan shall include models to be used and model inputs and assumptions.

(4) No later than at the time of submittal of the application for permit reissuance, the Discharger shall submit updated dilution modeling runs, with all inputs and outputs presented in hard copy and electronic form.

3. Best Management Practices and Pollution Prevention

a. Pollution Minimization Program

The Discharger shall continue to implement and improve, in a manner acceptable to the Executive Officer, its existing Pollutant Minimization Program (PMP) to reduce pollutant loadings to the combined sewer system, and therefore to the receiving waters.

b. Annual Pollution Prevention Report

The Discharger shall submit an annual report, acceptable to the Executive Officer, no later than February 28th of each calendar year. The annual report shall cover January through December of the preceding year. Each annual report shall include at least the following information.

(1) *Brief description of the treatment plant, treatment plant processes and service area.*

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(2) *Discussion of current pollutants of concern.* Periodically, the Discharger shall determine which pollutants are currently a problem and which pollutants may be potential future problems. This discussion shall address why the pollutants were identified as pollutants of concern.

(3) *Identification of sources of pollutants of concern.* This discussion shall address how the Discharger identifies pollutant sources. The Discharger should also identify sources or potential sources not directly within its ability or authority to control, such as pollutants in the potable water supply and air deposition.

(4) *Identification and implementation of measures to reduce the sources of the pollutants of concern.* This discussion shall identify and prioritize tasks to address the Discharger's pollutants of concern. The Discharger may implement the tasks themselves or participate in a regional, State, or national group to address its pollutants of concern whenever it is efficient and appropriate to do so. A time line shall be included for the implementation of each task.

(5) *Outreach to employees.* The Discharger shall inform its employees regarding pollutants of concern, potential sources, and how they might be able to help reduce the discharge of these pollutants. The Discharger may provide a forum for employees to provide input to the program.

(6) *Continuation of Public Outreach Program. The* Discharger shall prepare a public outreach program to communicate pollution minimization measures to its service area. Outreach may include participation in existing community events such as county fairs, initiating new community events such as displays and contests during Pollution Prevention Week, conducting school outreach programs, conducting plant tours, and providing public information in various media. Information shall be specific to target audiences. The Discharger shall coordinate with other agencies as appropriate.

(7) *Discussion of criteria used to measure PMP's and tasks' effectiveness.* The Discharger shall establish criteria to evaluate the effectiveness of its PMP. This discussion shall address specific criteria used to measure the effectiveness of each task identified in provisions VI.C.3.b(3 – 6), above.

(8) *Documentation of efforts and progress.* The Discharger shall describe all its PMP activities for the reporting year.

(9) *Evaluation of PMP's and tasks' effectiveness.* The Discharger shall use the criteria established in b.7, above, to evaluate the Program's and tasks' effectiveness.

(10) *Identification of specific tasks and time schedules for future efforts.* Based on the evaluation of effectiveness, the Discharger shall describe how it will continue or change its PMP tasks to more effectively reduce the loading of pollutants to the treatment plant, and subsequently, in its effluent.

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The Discharger shall 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 ML, 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 identified in Table B of the Ocean Plan is present in the effluent above an effluent limitation that is calculated for a constituent contained in Table B of the Ocean Plan and either:

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

(ii) The concentration of the pollutant is reported as ND and the effluent limitation is less than the ML, using definitions described in Attachment A and reporting protocols described in MRP section X.B.4.

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

(i) An annual review and semi-annual monitoring of potential sources of the reportable pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling; or alternative measures approved by the Executive Officer when it is demonstrated that source monitoring is unlikely to produce useful analytical data;

(ii) Quarterly monitoring for the reportable pollutant(s) in the influent to the wastewater treatment system; or alternative measures approved by the Executive Officer, when it is demonstrated that influent monitoring is unlikely to produce useful analytical data;

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

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

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

- All PMP monitoring results for the previous year;
- A list of potential sources of the reportable pollutant(s);
- A summary of all actions undertaken pursuant to the control strategy; and
- A description of actions to be taken in the following year.

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4. Construction, Operation and Maintenance Specifications

a. Wastewater Facilities, Review and Evaluation, and Status Reports

(1) The Discharger shall operate and maintain its wastewater collection, treatment, and disposal facilities in a manner to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary, in order to provide adequate and reliable transport, treatment, and disposal of all wastewater from both existing and planned future wastewater sources under the Discharger's service responsibilities.

(2) The Discharger shall regularly review and evaluate its wastewater facilities and operation practices in accordance with Section a.(1) above. Reviews and evaluations shall be conducted as an ongoing component of the Discharger's administration of its wastewater facilities.

(3) The Discharger shall provide USEPA and the Regional Water Board, upon request, a report describing the current status of its wastewater facilities and operation practices, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall also include, in each annual SMR, a description or summary of its review and evaluation procedures, and wastewater facility programs or capital improvement projects.

b. Operations and Maintenance (O&M) Manual, Review and Status Reports

(1) The Discharger shall maintain an O&M Manual for the Plant and collection system. The O&M Manual shall be maintained in usable condition and be available for reference and use by all personnel.

(2) The Discharger shall regularly review, revise, or update, as necessary, the O&M Manual to ensure that it remains useful and relevant to current equipment and operation practices. The Discharger shall conduct reviews annually, and revise or update the O&M Manual as necessary. For any significant changes in treatment facility equipment or operation practices, the Discharger shall complete any revisions within 90 days.

(3) The Discharger shall provide USEPA and the Regional Water Board, upon request, a report describing the current status of its O&M Manual, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall also include, in each annual SMR, a description or summary of review and evaluation procedures and changes to its operations and maintenance manual.

c. Contingency Plan, Review and Status Reports

(1) The Discharger shall maintain a Contingency Plan as prudent in accordance with current municipal facility emergency planning. The discharge of pollutants in violation of this Order when the Discharger has failed to develop

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and adequately implement a Contingency Plan will be the basis for considering such a discharge a willful and negligent violation of this Order pursuant to CWC §13387.

(2) The Discharger shall annually review the Contingency Plan and update it, as necessary, so that the plan may remain useful and relevant to current equipment and operation practices.

(3) The Discharger shall provide USEPA and the Regional Water Board, upon request, a report describing the current status of its Contingency Plan review and update. The Discharger shall also include, in each annual SMR, a description or summary of its review and evaluation procedures and any changes to its Contingency Plan.

5. Special Provisions for Municipal Facilities

a. Pretreatment Program

(1) The Discharger shall implement and enforce its approved pretreatment program in accordance with federal Pretreatment Regulations (40 CFR 403), pretreatment standards promulgated under Sections 307(b), 307(c), and 307(d) of the CWA, pretreatment requirements specified under 40 CFR 122.44(j), and the requirements in Attachment H, "Pretreatment Requirements." The Discharger's responsibilities include, but are not limited to:

(i) Enforcement of National Pretreatment Standards of 40 CFR 403.5 and 403.6;
(ii) Implementation of its pretreatment program in accordance with legal authorities, policies, procedures, and financial provisions described in the General Pretreatment regulations (40 CFR 403) and its approved pretreatment program;
(iii) Submission of reports to USEPA, the State Water Board, and the Regional Water Board, as described in Attachment H "Pretreatment Requirements".

(iv) Evaluate the need to revise local limits under 40 CFR 403.5(c)(1), and within the term of this Order, submit a report acceptable to the Executive Officer describing the changes with a plan and schedule for implementation.

(2) The Discharger shall implement its approved pretreatment program and the program shall be an enforceable condition of this Order. If the Discharger fails to perform the pretreatment functions, the Regional Water Board, the State Water Board, or USEPA may take enforcement actions against the Discharger as authorized by the CWA .

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b. Sludge Management Practices Requirements

(1) All sewage sludge generated by the discharger shall be disposed in a municipal solid waste landfill that meets the requirements of 40 CFR 258, land applied in accordance with the requirements in 40 CFR 503 Subpart B, or delivered to a composter for treatment and land application in accordance with the requirements in 40 CFR 503 Subpart B. The Discharger shall notify USEPA and the Regional Water Board 60 days prior to any change in use or disposal practices.

(2) Sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, or result in groundwater contamination.

(3) The Discharger shall take all reasonable steps to prevent or minimize any sludge use or disposal that has a likelihood of adversely affecting human health or the environment.

(4) The discharge of sludge shall not cause waste material to be in a position where it is or can be carried from the sludge treatment and storage site and deposited in waters of the United States.

(5) The sludge treatment and storage site shall have facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the temporary storage site. Adequate protection is defined as protection from at least a 100-year storm and protection from the highest possible tidal stage that may occur.

(6) For sludge applied to land, placed on a surface disposal site, or fired in a sludge incinerator as defined in 40 CFR 503, the Discharger shall submit an annual report to USEPA and the Regional Water Board containing monitoring results and pathogen and vector attraction reduction requirements as specified by 40 CFR 503, by February 19 of each year, for the period covering the previous calendar year.

(7) Sludge disposed of in a municipal solid waste landfill shall meet the requirements of 40 CFR 258. In the annual self-monitoring report, the Discharger shall include the amount of sludge disposed of and the landfill to which it was sent.

(8) Permanent on-site sludge storage or disposal activities are not authorized by this Order. A report of Waste Discharge shall be filed and the site brought into compliance with all applicable regulations prior to commencement of any such activity.

(9) Sludge Monitoring and Reporting Provisions of this Order (Attachment G) apply to sludge handling, disposal, and reporting practices.

(10) The USEPA and the Regional Water Board may amend this Order prior to expiration if changes occur in applicable state and federal sludge regulations.

6. Combined Sewer Overflow (CSO) Control Policy Requirements (Wet Weather Controls)

In accordance with the Nine Minimum Controls of the USEPA *Combined Sewer Overflow Control Policy* (1994) and the Discharger's Long Term Control Plan, the Discharger shall maximize flow to the Plant and pollutant removal during wet weather.

a. Combined Sewer Operations and Maintenance Plan. The Discharger shall revise and update its Combined Sewer Operations and Maintenance Plan as necessary to ensure compliance with the Nine Minimum Controls and the Long Term Control Plan requirements of the Combined Sewer Overflow Control Policy. The Discharger shall submit a revised plan to the Regional Water Board by September 30, 2010, and following any subsequent revisions during the term of this Order.

b. Nine Minimum Controls. The Discharger shall continue to implement and comply with the following technology-based requirements.

(1) *Conduct Proper Operations and Regular Maintenance Programs*. The Discharger shall implement its Combined Sewer Operations and Maintenance Plan, which shall include the elements described below. The Discharger shall update the plan to incorporate changes to the system and shall operate and maintain the system according to the plan. The Discharger shall maintain records to document the implementation of the Combined Sewer Operations and Maintenance Plan.

(i) *Designation of a Manager for CSOs.* The Discharger shall designate a person to be responsible for the wastewater collection system and serve as the contact person regarding the operation of the combined sewer system. The Discharger shall notify USEPA and the Regional Water Board within 90 days of the designation of a new contact person.

(ii) *Inspection and Maintenance of the Combined Sewer System.* The Discharger shall:

- Inspect and maintain all overflow structures, regulators, pumping stations, and tide gates to ensure that they are in good working condition and adjusted to minimize overflows and prevent tidal inflow.

- Inspect each overflow outfall at least once per year. The inspection shall include, but not be limited to, entering the regulator structure, if accessible; determining the extent of debris and grit buildup; and removing any debris that may constrict flow, cause blockage, and result in a dry weather CSO. For overflow outfalls that are inaccessible,

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the Discharger may perform a visual check of the overflow pipe to determine whether CSOs have occurred or could potentially occur during dry weather flow conditions.

- Record the results of the inspections in a maintenance log.

(iii) *Provision for Trained Staff*. The Discharger shall provide adequate staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this Order. Each member of the staff shall receive appropriate training.

(iv) *Allocation of Funds for Operation and Maintenance*. The Discharger shall allocate adequate funds specifically for CSO operation and maintenance activities.

(2) *Maximize Use of the Collection System for Storage.* The Discharger shall continue to maximize the use of the collection system for in-line storage. (Note that this provision refers to the use of collection system piping, not the storage basins/transports, for storage.)

(3) *Review and Modify Pretreatment Program*. The Discharger shall continue to implement selected controls to minimize the impact of non-domestic discharges to its collection system. At three-year intervals, the Discharger shall re-evaluate whether additional modifications to its pretreatment program are feasible or practical. The Discharger shall maintain records to document this evaluation and to document implementation of the selected controls to minimize non-domestic discharges to its collection system.

(4) *Maximize Flow to Plant*. The Discharger shall operate the Plant at maximum treatable flow during wet weather flow conditions. The Discharger shall report rainfall and influent flow data to USEPA and the Regional Water Board with SMRs required by the attached Monitoring and Reporting Program (Attachment E.)

Consistent with the objectives of the Combined Sewer Operations and Maintenance Plan, the Discharger shall ensure that the facility Operation and Maintenance Plan is implemented to maximize the volume of wastewater treated at the Plant and discharged via Discharge Point 001, consistent with the hydraulic capacities of the storage, transport, treatment, and disposal facilities.

(5) *Prohibit CSOs During Dry Weather*. Dry weather CSOs from Discharge Points CSO-001 through CSO-007 or other locations are prohibited. All CSOs must be responded to in accordance with Regional Standard Provisions, and Monitoring, and Reporting Requirements (Section V.E.2) as provided in Attachment G. The Discharger shall document in the inspection log each CSO event, the duration of the event, the cause of the event and the corrective measures taken.

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(6) *Control Solid and Floatable Materials in CSODs.* The Discharger shall continue to implement measures to control solid and floatable materials in CSODs. These measures shall include:

(i) ensuring that all the CSO structures are baffled or that other means are used to reduce the volume of floatable materials in CSOs, and

(ii) removing solid or floatable materials captured in the storage/transport system in an acceptable manner prior to discharge to receiving waters.

(7) *Develop and Implement a Pollution Prevention Program*. The Discharger shall continue to implement a Pollution Prevention Program focused on reducing the impact of CSOs on receiving waters. This Pollution Prevention Program is authorized by federal regulations on CSOs. This program shall be developed and implemented in accordance with Provision VI.C.3.

(8) *Notify the Public of Overflows*. The Discharger shall continue to implement a public notification plan to inform citizens of when and where CSOs occur. The process shall include:

(i) a mechanism to alert persons using all receiving waters affected by overflows.

(ii) a system to determine the nature and duration of conditions resulting from overflows that are potentially harmful to users of these receiving waters.

Specifically, warning signs must be posted at beach locations where water contact recreation occurs whenever there is a discharge from the diversion structures. Such warning signs shall be posted on the same days as the overflow events unless the overflow occurs after 4:00 p.m., in which case, signs shall be posted by 8:00 a.m. The Discharger shall maintain records documenting public notification.

(9) *Monitor to Effectively Characterize CSO Impacts and the Efficacy of CSO Controls*. To comply with the Nine Minimum Controls as well as post construction compliance monitoring under the CSO Control Policy, the Discharger shall continue regular monitoring necessary to evaluate CSO controls. The monitoring shall build on the efforts and results of the Discharger described in its August 30, 2007, report, *Westside Study to Effectively Characterize Overflow Impacts and the Efficacy of Combined Sewer Overflow Controls.* The Discharger shall provide a summary report annually and submit a final report to USEPA and the Regional Water Board by September 30, 2014. The report shall include:

(i) Summary of existing data in order to show status and trends;
(ii) Monitoring of wet weather discharges;
(iii) Evaluation of results in order to effectively characterize CSO impacts and efficacy of CSO controls;

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(iv) Review of CSO impacts and, if necessary, proposal of revisions to the CSOD control program, including the Nine Minimum Controls;
(v) Recreational use surveys, as described in the MRP, following CSO events, to track changes in uses over time; and
(vi) Summary of post-construction monitoring results and an analysis of CWA compliance with water quality standards and the protection of beneficial uses.

If water quality standards are not being attained, the Discharger shall submit a revised CSO control program that, once implemented, will attain water quality standards. The Discharger may also wish to consider the review and appropriate revision of water quality standards and implementation procedures on CSO-impacted waters.

c. Long-Term Control Plan. The Discharger shall comply with the following provisions:

(1) The Discharger shall optimize the operation of its system to minimize combined sewer discharges and maximize pollutant removal during all wet weather conditions.

(2) The Discharger shall capture for treatment, or storage and subsequent treatment, 100 percent of the combined sewage flow collected in the combined sewage system during precipitation events. Captured combined sewage shall be directed to either the Plant or the storage/transports. All combined sewage captured shall receive a minimum of the following treatment:

- Secondary treatment (at Plant), or
- Primary treatment (at Plant), or
- Flow-through treatment (in storage/transports).

(3) The Discharger shall comply with the following for wet weather Plant operations:

(i) The Plant shall have an influent flow rate of at least 43 MGD prior to initiating decant from the Westside Transport to Discharge Point 001.

(ii) The flow rate at Discharge Point 001 shall be at least 165 MGD within 2 hours of a discharge into the Pacific Ocean from Discharge Point CSD-002 or CSD-003.

(iii) The Sea Cliff Pump Station I shall be operated at maximum capacity prior to an overflow at Discharge Point CSD-005.

(iv) The Sea Cliff Pump Station II shall be operated at maximum capacity prior to an overflow at Discharge Point CSD-007.

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(4) The Discharger shall comply with the following after rains subside:

(i) Treatment at the Plant shall continue until the Westside Drainage Basin storage/transports are empty of stormwater flows.

(ii) If the National Weather Service predicts a 30 percent chance of rain within the next 24 hours:

- Pumping shall be maximized from the Westside storage/transport via the Westside Pump Station to the Oceanside Plant and Discharge Point 001 until the level of combined sewage in the East Box is between 5 and 10 feet.

- Pumping shall be maximized from the Westside storage/transport via the Westside Pump Station to the Plant and/or Discharge Point 001 until the level of combined sewage in the West Box is essentially zero.

(iii) If the National Weather Service does not predict rain within the next 24 hours:

- Pumping shall be maximized from the Westside storage and transport until the level of combined sewage in the West Box is zero and total flow to the Oceanside Plant is less than 43 MGD.

7. Sensitive Areas Feasibility Report for Overflows

The Discharger shall submit a report, by December 31, 2011, implementing the "consideration of sensitive areas" section of the Combined Sewer Overflow Control Policy. At a minimum, the Discharger shall assess techniques (including green infrastructure and low impact development) to eliminate or relocate CSODs from sensitive areas and discuss the level of treatment for any remaining CSODs necessary to meet water quality standards.

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 priority pollutants shall be determined using sample reporting protocols defined in the Monitoring and Reporting Program (Attachment E) and Fact Sheet Section VI. For purposes of reporting and administrative enforcement, the Discharger shall be deemed out of compliance with single-sample effluent limitations if the concentration of the pollutant in the monitoring sample is greater than the effluent limitation. For averaged or median-based effluent limitations, the Discharger shall be deemed out of compliance if the average or median concentration in the data set is greater than the effluent limitation.

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B. Multiple Sample Data

When determining compliance with a pollutant limit and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of “Detected, but Not Quantified” (DNQ) or “Not Detected” (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

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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 Ocean Plan Appendix III. If specific identifiable substances in wastewater can be demonstrated by the discharger as being rapidly rendered harmless upon discharge to the marine environment, but not as a result of dilution, the LC 50 may be determined after the test samples are adjusted to remove the influence of those substances.

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

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

where:

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

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

Average Dry Weather Discharge
The average dry weather discharge is the average discharge rate over three consecutive months of dry weather (i.e., a wet weather day has not occurred)

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.

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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)

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 Ocean Plan Appendix III.

Combined Sewer System
A combined sewer system (CSS) is a wastewater collection system owned by a State or municipality which conveys sanitary wastewaters (domestic, commercial, and industrial wastewaters) and stormwater through a single-pipe system to a Publicly Owned Treatment Works (POTW) Treatment Plant.

Combined Sewer Overflow
A combined sewer overflow (CSO) is the discharge from a combined sewer system at a point prior to the POTW Treatment Plant.

Combined Sewer Overflow Discharge
A combined sewer discharge (CSOD) is an authorized, treated discharge from the near-shore discharge structures, offshore discharge structures, or treatment facilities during a wet weather day.

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).

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

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

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

Downstream Ocean Waters
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".

Dry Weather Day
Any day that is not a wet weather day. During dry weather, all wastewater collected is treated to secondary levels at the Plant and discharged at Discharge Point 001.

Enclosed Bays
Indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between 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
The sum of endosulfan-alpha and -beta and endosulfan sulfate.

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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.

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

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

Initial Dilution
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.

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

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

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

Kelp Beds
For purposes of the bacteriological standards of the Ocean Plan, are significant aggregations of marine algae of the genera Macrocystis and Nereocystis. Kelp beds include the total foliage canopy of Macrocystis and Nereocystis plants throughout the water column.

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

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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 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)
The highest allowable daily discharge of a pollutant.

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

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

Natural Light
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.

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

Ocean Waters
The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. 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 Ocean Plan will occur in ocean waters.

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

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

Pollutant Minimization Program (PMP)
PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce

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all potential sources of pollutants of concern through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Reported Minimum Level
The ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix II of the Ocean Plan in accordance with section III.C.5.a. of the Ocean Plan or established in accordance with section III.C.5.b. of the Ocean Plan. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the reported ML.

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

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

Significant Difference
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.

State Water Quality Protection Areas
Non-terrestrial 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 Numbers 74-28, 74-32, and 75-61 are now also classified as a subset of State Water Quality Protection Areas and require special protections afforded by the Ocean Plan.

TCDD Equivalents
In this Order, TCDD Equivalents means the sum of the concentrations of chlorinated dibenzodioxins and chlorinated dibenzofurans multiplied by their Toxicity Equivalency Factor

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(TEF) and their Bioaccumulation Equivalency Factor (BEF). This is based on 40 CFR Part 132, Appendix F, Procedure 4, Tables 1 and 2.

$(TEC)_{TCDD}$= The sum of $(C)_x(TEF)_x(BEF)_x$

Where $(TEC)_{TCDD}$ = TCDD Equivalents concentration in effluent

$(C)_x$ = concentration of total congener x in effluent

$(TEF)_x$ =TCDD toxicity equivalency factor for congener x

$(BEF)_x$ = TCDD bioaccumulation equivalency factor for congener x

Toxicity Equivalency Factor and Bioaccumulative Equivalency Factors are listed in the table below.

Congener	Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factors (BEF)
2,3,7,8-TCDD	1.0	1.0
1,2,3,7,8-Pe-CDD	0.5	0.9
1,2,3,4,7,8-HxCDD	0.1	0.3
1,2,3.6,7,8-HxCDD	0.1	0.1
1,2,3,7,8,9-HxCDD	0.1	0.1
1,2,3,4,6,7,8-HpCDD	0.01	0.05
OCDD	0.0003	0.01
2,3,7,8-TCDF	0.1	0.8
1,2,3,7,8-PeCDF	0.03	0.2
2,3,4,7,8-PeCDF	0.3	1.6
1,2,3,4,7,8-HxCDF	0.1	0.08
1,2,3,6,7,8-HxCDF	0.1	0.2
2,3,4,6,7,8-HxCDF	0.1	0.7
1,2,3,7,8,9-HxCDF	0.1	0.6
1,2,3,4,6,7,8-HpCDF	0.01	0.01
1,2,3,4,7,8,9-HpCDF	0.01	0.4
OCDF	0.0003	0.02

Toxicity Reduction Evaluation (TRE)
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

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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.)

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

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.

Wet Weather Day
A wet weather day is any day in which one of the following conditions exists as a result of rainfall:

1. Instantaneous influent flow to the Plant exceed 43 MGD; or
2. The average daily influent flow concentration of TSS or BOD is less than 100 mg/L; or
3. The Westside storage/transport flow elevation exceeds 0 feet in the West Box or 18 feet in the East Box. (Flow is decanted to the West Box from the East Box only when the East Box storage level exceeds 18 feet.)

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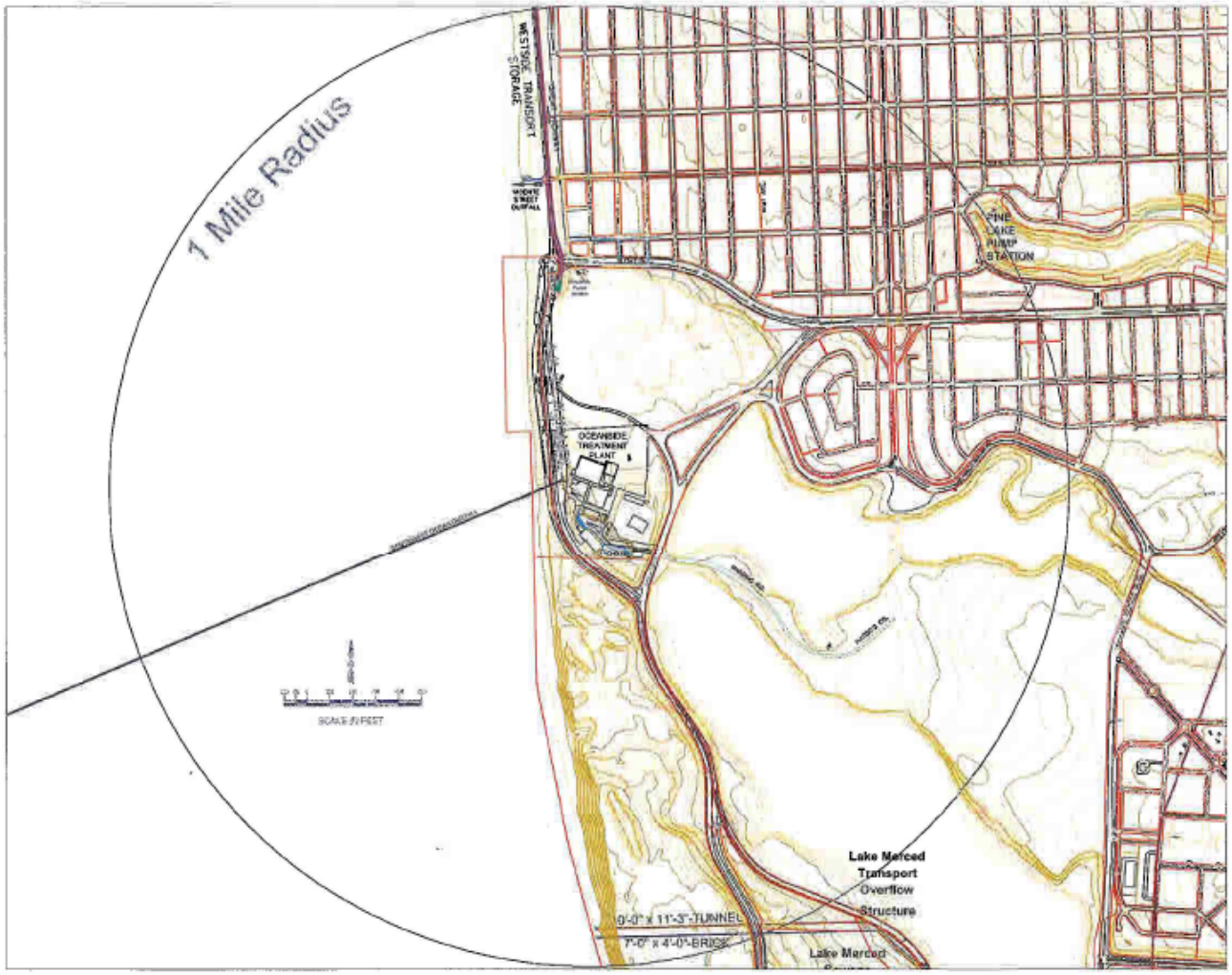
ATTACHMENT B – MAP

OCEANSIDE TREATMENT PLANT TOPOGRAPHIC MAP - ONE MILE RADIUS



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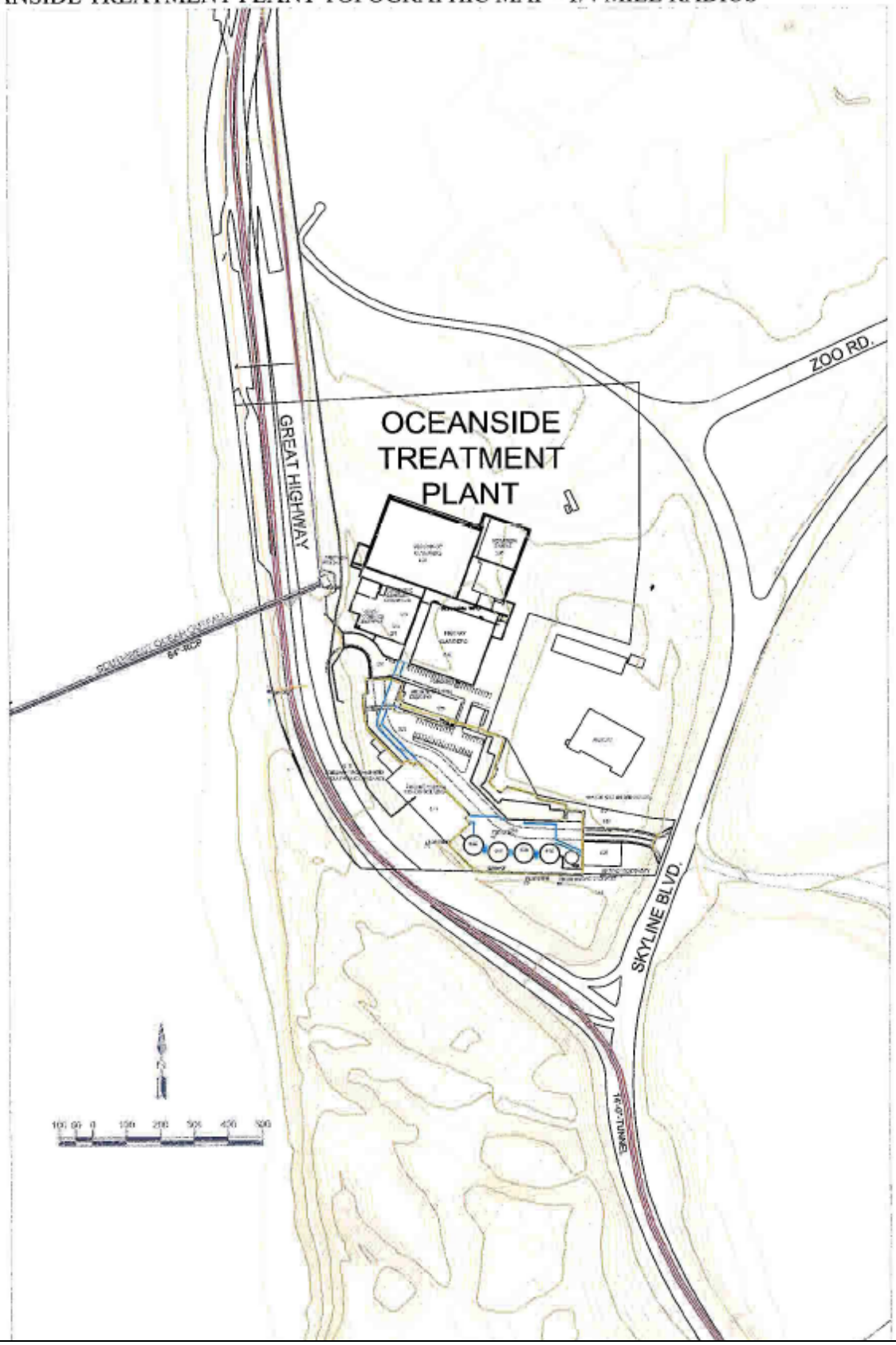
OCEANSIDE TREATMENT PLANT TOPOGRAPHIC MAP - 1/4 MILE RADIUS



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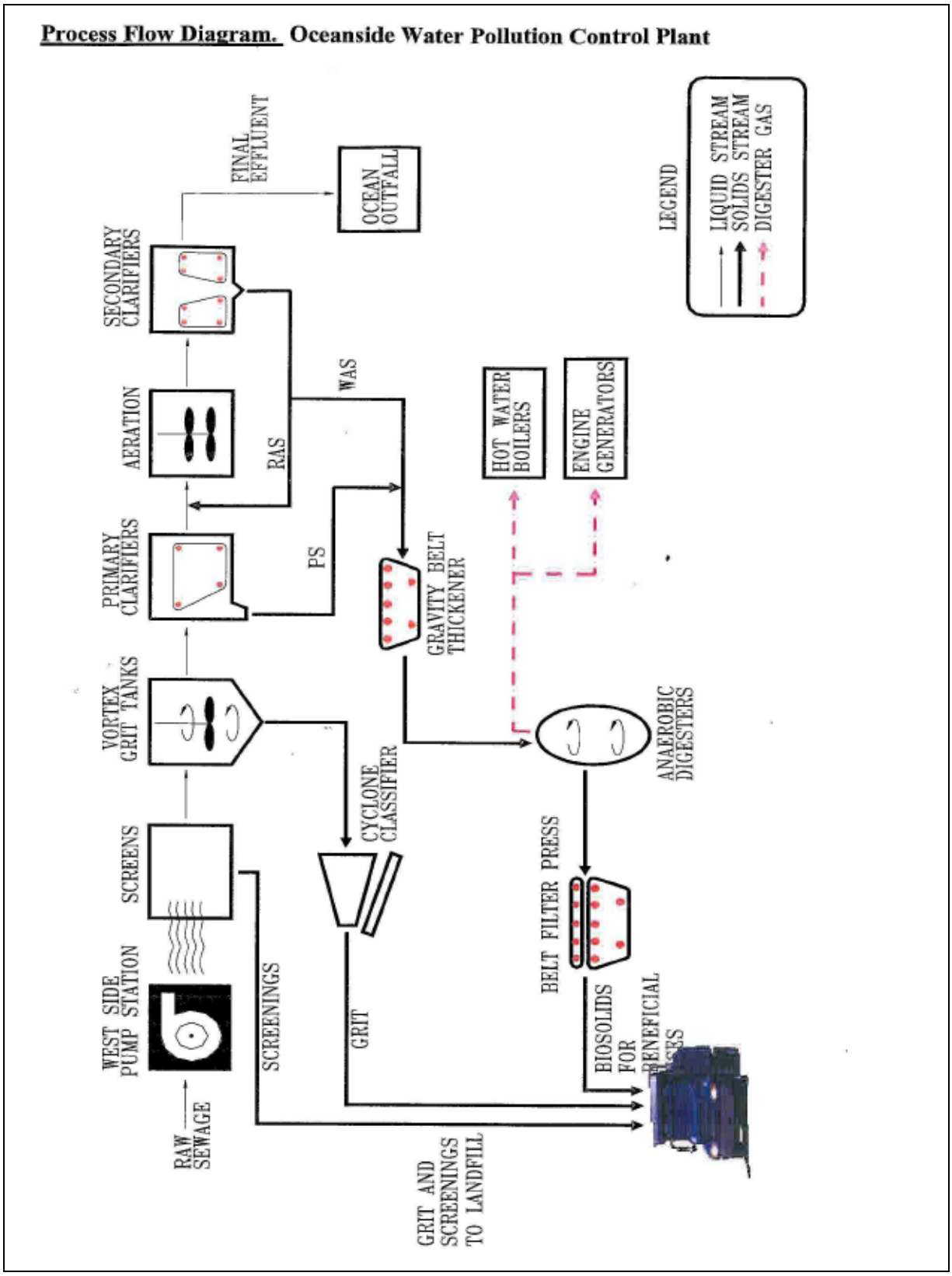
ATTACHMENT C – FLOW SCHEMATIC



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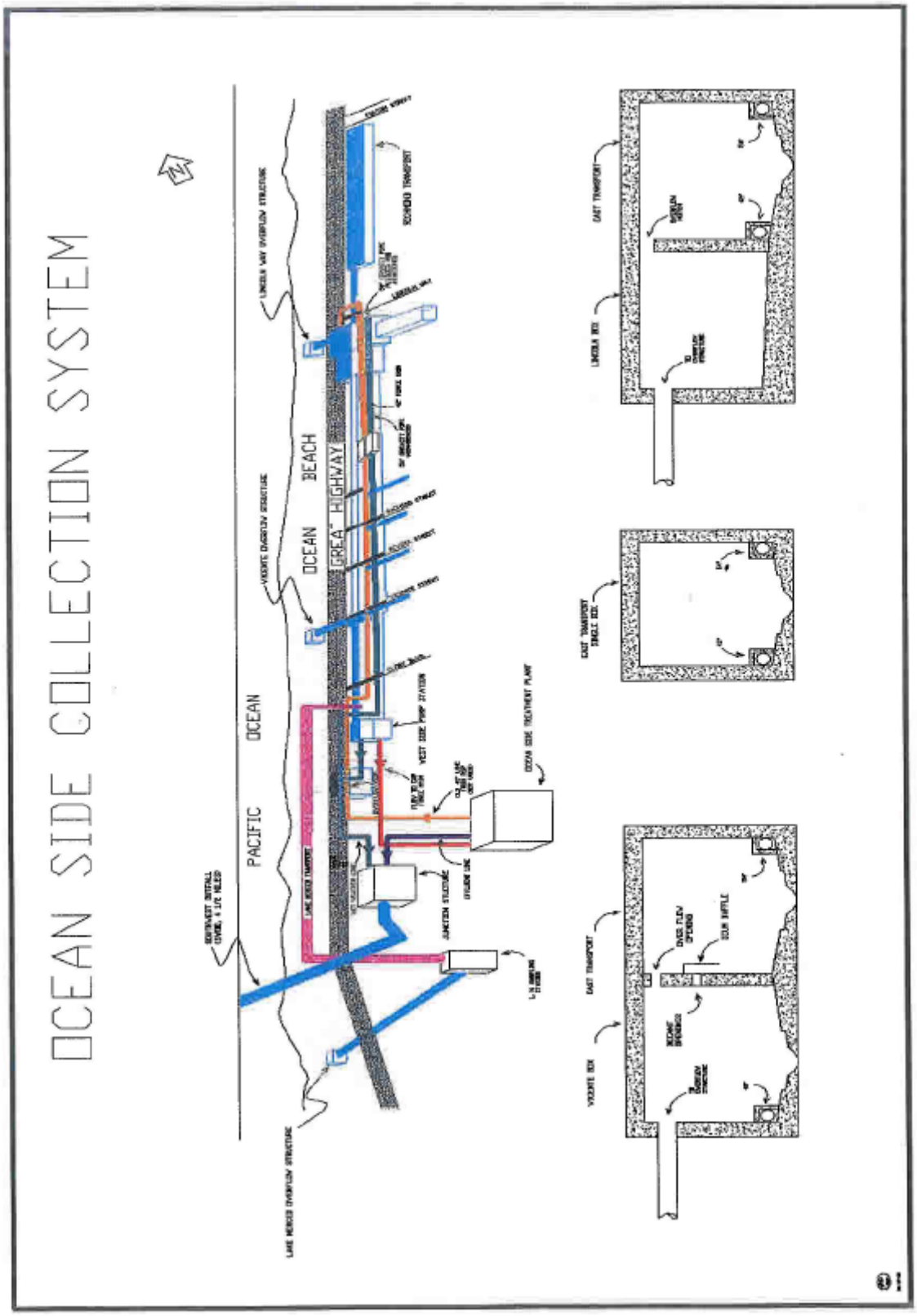
Process Flow Diagram. **Westside Transport**



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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 and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; 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 CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 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 §22.41(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).)

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F. Inspection and Entry

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

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

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

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

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, 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, I.G.4, 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 §22.41(m)(4)(i)(A));

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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)(i)(B)); and

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

4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 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 (24-hour notice). (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 Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation, 40 CFR §122.41(n)(1).

Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review, 40 CFR §122.41(n)(2).

6. 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)):

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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)(ii));

c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (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).

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

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

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

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IV. STANDARD PROVISIONS – RECORDS

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

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

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B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 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 specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR §122.22(b)(2)); and

   c. The written authorization is submitted to the Regional Water Board and State Water Board. (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 and State Water Board 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

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that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 CFR §122.22(d).)

C. Monitoring Reports

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

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 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 Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 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).)

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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 section 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 that are not subject to effluent limitations in this Order. (40 CFR §122.41(l)(1)(ii).)

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

G. Anticipated Noncompliance

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

H. Other Noncompliance

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

I. Other Information

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

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VI. STANDARD PROVISIONS – ENFORCEMENT

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

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).)

3. 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

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify monitoring and reporting requirements. California Water Code (CWC) §13267 and §13383 authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, that implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. The Discharger shall comply with the MRP and *Regional Standard Provisions, and Monitoring and Reporting Requirements (Supplement to Attachment D) for NPDES Wastewater Discharge Permits*, July 2009 (**Attachment G**). The MRP may be amended by the Executive Officer pursuant to USEPA regulations 40 CFR122.62, 122.63, and 124.5. If any discrepancies exist between the MRP and the Regional Standard Provisions, the MRP prevails.

B. Sampling is required during the entire year when discharging. All analyses shall be conducted using current USEPA methods, or methods that have been approved by the USEPA Regional Administrator pursuant to 40 CFR 136.4 and 136.5, or if 40 CFR 136 methods are not available, equivalent methods that are commercially and reasonably available. Analytical methods shall provide sufficient quantification of sampling parameters and constituents to evaluate compliance with applicable effluent limits and to perform reasonable potential analyses. Equivalent methods shall be more sensitive than those specified in 40 CFR 136, shall be specified in the permit, and shall be approved for use by the Executive Officer following consultation with the State Water Quality Control Board's Quality Assurance Program.

C. For compliance and reasonable potential monitoring, analyses shall be conducted using commercially available and reasonably achievable detection levels that are lower than applicable water quality objectives or criteria, or the effluent limitations, whichever are lower. The objective is to provide quantification of constituents sufficient to allow evaluation of observed concentrations with respect to the Minimum Levels (MLs).

MLs are 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.

As shown in Table II-3 of Ocean Plan Appendix II, the test method the Discharger may use for compliance with mercury effluent limitations and reasonable potential monitoring is Cold Vapor Atomic Absorbance with a ML of 0.2 µg/L.

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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 E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Formerly Sampling Station A-003. At any point in the facility headworks at which all waste tributary to the system is present and preceding any phase of treatment, and exclusive of any return flows or process side streams that would significantly impact the quantity or quality of the influent.
001	EFF-001	Formerly Sampling Station E-007. At any point in the sewerage system following all phases of treatment and prior to contact with the receiving water or any effluent from the Westside Wet Weather Facilities.
CSD-001 through CSD-007	EFF-CSD	A representative monitoring location for the Westside Wet Weather Facilities, previously identified as a point prior to discharge from the Vicente Box, where all waste tributary to the diversion structure is present and treatment is complete.
---	SRF-15 east	Near shore receiving water along Baker Beach, in the surf east of SRF-15
---	SRF-15	Near shore receiving water along Baker Beach, in the surf at the terminus of Lobos Creek
---	SRF-16	Near shore receiving water along Baker Beach, in the surf opposite the Sea Cliff 2 Pump Station
---	SRF-17	Near shore receiving water in the surf along China Beach opposite the Sea Cliff 1 Pump Station
---	SRF-18	Near shore receiving water along Ocean Beach, in the surf at the foot of Balboa Street
---	SRF-19	Near shore receiving water along Ocean Beach, in the surf at the foot of Lincoln Way, opposite the Lincoln Overflow Discharge Structure
---	SRF-20	Near shore receiving water along Ocean Beach, in the surf at the foot of Pacheco Street
---	SRF-21	Near shore receiving water along Ocean Beach, in the surf at the foot of Vicente Street, opposite the Vicente Overflow Discharge Structure
---	SRF-21.1	Near shore receiving water along Ocean Beach, in the surf at the foot of Sloat Blvd
---	SRF-22	Near shore receiving water along Ocean Beach, in the surf at Fort Funston, opposite the Lake Merced Overflow Discharge Structure.

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III. INFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor Plant influent at Monitoring Location INF-001 in accordance with the following table.

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow rate [1]	MGD	Continuous	Daily	Meter
$BOD^{(2)}_5$	mg/L	C-24	1/W	[3]
TSS[4]	mg/L	C-24	5/W	[3]
pH	Standard units	Grab	5/W	[3]

[1] For influent flows, the following shall be reported:

Daily: Total Daily Flow Volume (million gallons) plus total daily influent flow originating as effluent/decant from the Westside Transport

Monthly: Minimum, Average, and Maximum Daily Flow (MGD)

Monthly: Total Flow Volume (million gallons) plus total monthly influent flow originating as effluent/decant from the Westside Transport

[2] Biochemical Oxygen Demand

[3] Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136.

[4] Total Suspended Solids

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

The Discharger shall monitor effluent at Monitoring Location EFF-001 as follows.

Table E-3. Effluent Monitoring, Monitoring Location EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Method
Flow rate [1]	MGD	Cont.	Daily	Meter
BOD_5	mg/L	C-24	1/W	[2]
TSS	mg/L	C-24	5/W	[2]
Grease and Oil [3]	mg/L	C-24	1/Q	[2]
Turbidity	NTU	C-24	1/Q	[2]
pH	Standard Units	Grab	5/W	[2]
Ammonia, total	mg/L N	C-24	1/Q	[2]
Chronic Toxicity [4]	TUc	C-24	1/Q	[2]
Mercury [5]	µg/L	C-24	1/M	[2]
TCDD Equivalents	µg/L	C-24	1/Y	[2]
Table B Inorganic Pollutants [6]	µg/L	C-24	1/Q	[2]
Remaining Table B Pollutants [7]	µg/L	C-24	1/Y	[2]

[1] For effluent flows, the following shall be reported:

Daily: Total Daily Flow Volume (million gallons)

Monthly: Minimum, Average, and Maximum Daily Flow (MGD)

Monthly: Total Flow Volume (million gallons)

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(2) Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136. The methods shall meet the lowest minimum levels (MLs) specified in Ocean Plan Appendix II. Where no method is specified for a given pollutant, the method shall be approved by the Regional Water Board. For TCDD congeners, the Discharger shall use USEPA Method 1613 and the MLs shall be as given below. Estimated congener concentrations (below the ML) shall not be included when adding the congener concentrations to calculate TCDD equivalents.

Parameter	Minimum Level
2,3,7,8-TetraCDD	5 pg/L
1,2,3,7,8-PentaCDD	25 pg/L
1,2,3,4,7,8-HexaCDD	25 pg/L
1,2,3,6,7,8-HexaCDD	25 pg/L
1,2,3,7,8,9-HexaCDD	25 pg/L
1,2,3,4,6,7,8-HeptaCDD	25 pg/L
OctaCDD	50 pg/L
2,3,7,8-TetraCDF	5 pg/L
1,2,3,7,8-PentaCDF	25 pg/L
2,3,4,7,8-PentaCDF	25 pg/L
1,2,3,4,7,8-HexaCDF	25 pg/L
1,2,3,6,7,8-HexaCDF	25 pg/L
1,2,3,7,8,9-HexaCDF	25 pg/L
2,3,4,6,7,8-HexaCDF	25 pg/L
1,2,3,4,6,7,8-HeptaCDF	25 pg/L
1,2,3,4,7,8,9-HeptaCDF	25 pg/L
OctaCDF	50 pg/L

(3) Grease and oil samples shall consist of 3 grab samples taken at 8 hour intervals during the sample day, with each grab being collected in a glass container and analyzed separately. Results shall be expressed as a weighted average of the three results, based on the instantaneous flow rates at the time each sample was collected.

(4) Samples for whole effluent toxicity tests shall be collected coincident with routine composite effluent samples. Refer to Section V of this MRP for whole effluent toxicity testing requirements.

(5) The Discharger may, at its option, sample effluent mercury either as grab or as 24-hour composite samples.

(6) The Table B inorganic pollutants are those inorganic constituents listed in Ocean Plan Table B, excluding mercury.

(7) The remaining Table B pollutants are the pollutants listed in Ocean Plan Table B, excluding those pollutants with monitoring requirements established elsewhere in this table (i.e., inorganics, mercury, chronic toxicity, and radioactivity). Because effluent is not chlorinated, chlorine is also excluded.

B. Monitoring Locations EFF-CSD-0xx

1. During each CSOD occurrence, the Discharger shall monitor discharges at the appropriate Monitoring Location EFF-CSD-0xx in accordance with the following elements established by Table E-4. Monitoring is required only during discharge events, which may last for less than one hour or for more than one day. Composite sampling shall commence within one hour after a discharge begins or as soon as

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reasonably practicable with due consideration for safety. and shall continue until the discharge stops; however, the compositing period shall not exceed 24 hours.

Table E-4. Effluent Monitoring, Monitoring Location EFF-CSD

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Method
Flow	MGD	Cont.	Continuous during discharge	Meter (1)
BOD_5	mg/L	C-X (2)	1/occurrence	(7)
Total Suspended Solids	mg/L	C-X (2)	1/occurrence	(7)
Ammonia	mg/L N	C-X (2)	1/occurrence	(7)
Grease and Oil	mg/L	C-X (2)	1/occurrence	(7)
pH	Std Units	C-X (2)	1/occurrence	(7)
Table B Inorganics (3)	µg/L	C-X (2)	1/occurrence	(7)
Pesticides and PCBs (4)	µg/L	C-X (2)	1/occurrence	(7)
PAHs (5)	µg/L	C-X (2)	1/occurrence	(7)
Remaining Table B Pollutants (6)	µg/L	C-X (2)	1/year	(7)

(1) Alternately, flow may be estimated using models.

(2) Composite sample of 1 grab sample per hour over X hours, where X = the duration of the discharge but not exceeding 24 hours

(3) The Table B inorganic pollutants are those inorganic constituents listed in Table B of the 2005 Ocean Plan - arsenic, cadmium, hexavalent chromium, copper, lead, mercury, nickel, selenium, silver, zinc, and cyanide.

(4) As identified in EPA Method 608,

(5) As identified by the Ocean Plan and by Attachment A of this Order (Definitions).

(6) The remaining Table B pollutants are those listed in Ocean Plan Table B, excluding those with monitoring requirements established elsewhere in this table, and radioactivity. These pollutants shall be monitored during a CSOD occurrence.

(7) Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136.

2. The Discharger shall record the following information for each combined sewer overflow discharge event from discharge points CSD-001, CSD-002, CSD-003, CSD-005, and CSD-007.

a. Date and time that CSOD started;

b. Frequency, duration, and volume of CSOD;

c. Rainfall intensity and amount (hourly data, aggregated);

d. Data to support discharge volume estimate (if estimated); and

e. Documentation of conformance with the Operation Plan for wet weather facilities.

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V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Chronic Toxicity Monitoring Requirements

1. *Sampling.* The Discharger shall collect 24-hour composite samples of the effluent for critical life stage toxicity testing as indicated below. For toxicity tests requiring renewals, 24-hour composite samples collected on consecutive days are required.

2. *Test Species.* The Discharger shall utilize the echinoderm embryo development test, with either the sand dollar (*Dendraster excentricus*) or the purple sea urchin (*Strongylocentrotus purpuratus*), such that the test species used is in gravid condition. The Discharger is required to re-screen for the most sensitive species once during the term of this permit and shall submit the chronic toxicity screening report to the Regional Water Board no later than 180 days prior to the Order expiration date with the application for permit reissuance.

3. *Methodology.* Sample collection, handling and preservation shall be in accordance with USEPA protocols. In addition, bioassays shall be conducted in compliance with the most recently promulgated test methods, as shown in **Appendix E-2**. These are "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms," currently EPA/600/R-95/136, August 1995. Any methodology exceptions must be granted by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).

4. *Dilution Series*. The Discharger shall conduct tests at the in-stream waste concentration (IWC), four concentrations bracketing the IWC, and a control.

B. Chronic Toxicity Reporting Requirements

1. Routine Reporting. Toxicity test results for the current reporting period shall include, at a minimum, for each test:

   (i) Sample date(s)

   (ii) Test initiation date

   (iii) Test species

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

   (v) NOEC value(s) in percent effluent

   (vi) IC15, IC25, IC40, and IC50 values (or EC15, EC25 ... etc.) as percent effluent

   (vii) TUc values (100/NOEC)

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(viii) Mean percent mortality (±s.d.) after 96 hours in 100% effluent (if applicable)

(ix) NOEC and LOEC values for reference toxicant test(s)

(x) IC50 or EC50 value(s) for reference toxicant test(s)

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

2. Compliance Summary. The results of the chronic toxicity testing shall be provided in the self-monitoring report and shall include a summary table of chronic toxicity data from at least eleven of the most recent samples. The information in the table shall include items listed above under 1 specifically item numbers (i), (iii), (v), (vi) (IC25 or EC25) and (vii).

C. Quality Assurance

1. Concurrent testing with reference toxicants shall be conducted.

2. If either the reference toxicant test or effluent test does not meet all test acceptability criteria as specified in the test method manual, then the Discharger must re-sample and re-test at the earliest time possible.

3. Control and dilution water should be obtained from an unaffected area of the receiving water. If the dilution water used is different from the culture water, a second control using culture water should be used. If it is not practicable to collect samples from the unaffected area of the receiving water then a laboratory prepared control and dilution water should be used.

4. If the effluent sample is significantly different from the control sample, and the minimum significant difference (% MSD) is less than 5%, the Discharger at its option may exclude this result and re-test. If control sample variability in the effluent test exceeds the upper limit of 20% MSD which is the same as the reference toxicant, the Discharger shall re-sample and re-test as soon as possible.

D. Toxicity Reduction Evaluation (TRE)

If monitoring shows a violation of the chronic toxicity effluent limitation, the Discharger shall conduct a TRE and take all reasonable steps to reduce toxicity once the source of toxicity is identified. The Discharger shall initiate a TRE in accordance with the following:

1. ,To be ready to respond to a toxicity event the Discharger shall prepare a generic TRE work plan within 90 days of the effective date of this Order and update it as necessary.

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2. Within 60 days of exceeding the effluent limitation for chronic toxicity, the Discharger shall submit to USEPA a TRE work plan that should be the generic work plan revised for this toxicity event after considering discharge data.

3. Within 30 days of the date of completion of the accelerated monitoring tests observed to exceed the effluent limitation, the Discharger shall initiate a TRE in accordance with a TRE work plan that incorporates any and all comments from USEPA. Accelerated monitoring can be achieved by the Discharger conducting six additional toxicity tests using the same species and test method, approximately every two weeks, over a 12 week period. This testing shall begin within 145 days of receipt of test results exceeding the toxicity effluent limit. If none of the additional tests exceed the toxicity limitation, then the Discharger may return to the regular testing frequency.

4. The TRE shall be specific to the discharge and be prepared in accordance with current technical guidance and reference materials, including USEPA guidance materials. The TRE shall be conducted as a tiered evaluation process as summarized below:

a. Tier 1 consists of basic data collection (routine and accelerated monitoring).

b. Tier 2 consists of evaluation of optimization of the treatment process, including operation practices and in-plant process chemicals.

c. Tier 3 consists of a toxicity identification evaluation (TIE).

d. Tier 4 consists of evaluation of options for additional wastewater treatment processes.

e. Tier 5 consists of evaluation of options for modifications of in-plant treatment processes.

f. Tier 6 consists of implementation of selected toxicity control measures, and follow- up monitoring and confirmation of implementation success.

5. The TRE may be ended at any stage if monitoring finds there is no longer consistent toxicity (complying with requirements of Section VI.C.2.a of this Order).

6. The objective of a TIE shall be to identify the substance or combination of substances causing the observed toxicity. All reasonable efforts using currently available TIE methodologies shall be employed.

7. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with the toxicity effluent limitations.

8. Many recommended TRE elements parallel required or recommended efforts of source control, pollution prevention, and stormwater control programs. TRE efforts

should be coordinated with such efforts. To prevent duplication of efforts, evidence of complying with requirements or recommended efforts of such programs may be acceptable to comply with TRE requirements.

9. Chronic toxicity may be episodic and identification of causes of, and reduction of sources of, toxicity may not be successful in all cases. Enforcement action will be based in part on the Discharger's responses and efforts to identify and control or reduce sources of consistent toxicity.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

Not Applicable.

VII. RECLAMATION MONITORING REQUIREMENTS

Not Applicable.

VIII. RECEIVING WATER MONITORING REQUIREMENTS

The Discharger shall conduct routine shoreline monitoring for bacteria at six monitoring locations from Baker Beach along the San Francisco County shoreline perimeter to Sloat Blvd. on Ocean Beach one day per week in accordance with the schedule established in Table E-5, below.

During CSOD events, the Discharger shall post the beach in the vicinity of the CSOD event and shall conduct shoreline monitoring for bacteria at monitoring locations in the vicinity of the CSOD event from Baker Beach along the San Francisco County shoreline perimeter to Fort Funston on Ocean Beach in accordance with the schedule established in Table E-5, below.

During CSOD events, shoreline monitoring shall be initiated as soon as reasonable, with due consideration for safety. (Darkness, tidal conditions and storm related wave activity may prevent samples from safely being collected immediately after initiation of a CSOD event.) Shoreline monitoring shall be conducted at those locations in closest proximity to the CSOD. Daily shoreline monitoring during and following CSOD events and beach posting shall continue until bacteria concentrations in the receiving water at those locations fall below single sample maximum limits.

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Table E-5. Receiving Water Surf Monitoring Requirements

Monitoring Locations	Bacteria Type	Units	Minimum Monitoring Frequency	Sample Type	Analytical Method
Routine Monitoring					
SRF-15 east SRF-15 SRF-17 SRF-18 SRF-19 SRF-21.1	Total Coliform *E. coli* Enterococcus	MPN/100 mLs	Once / week (1)	Grab	Quanti-Tray Method - Colilert 18™ Medium (total coliform and *E. coli*), Enterolert™ Medium (enterococcus)
CSOD Event Monitoring(1)					
SRF-15 east SRF-15 SRF-16 SRF-17 SRF-18 SRF-19 SRF-20 SRF-21 SRF-21.1 SRF-22	Total Coliform *E. coli* Enterococcus	MPN/100 mLs	Daily	Grab	Quanti-Tray Method - Colilert 18™ Medium (total coliform and *E. coli*), Enterolert™ Medium (enterococcus)

(1) Monitoring is only required at those locations in the vicinity of the CSOD.

IX. PRETREATMENT AND BIOSOLIDS MONITORING REQUIREMENTS

The Discharger shall comply with the pretreatment requirements specified in Table E-2 for influent (at Monitoring Location INF-001), effluent (at Monitoring Location EFF-001), and biosolids monitoring.

Table E-6. Pretreatment and Biosolids Monitoring Requirements

Constituents	Influent INF-001	Effluent(3) EFF-001	Biosolids(4)	Sample Type	
				INF-001 & EFF-001	Biosolids(d)
VOC	1/quarter	1/quarter	2/year	multiple grabs(5a)	grabs
BNA	1/quarter	1/quarter	2/year	multiple grabs(5a)	grabs
Metals(1)	1/month	1/month	2/year	24-hour composite(5b)	grabs
Hexavalent Chromium(2)	1/month	1/month	2/year	multiple grabs(5a)	grabs
Mercury	1/month	1/month	2/year	24-hour composite(5b,5c)	grabs
Cyanide	1/month	1/month	2/year	multiple grabs(5a)	grabs

Legends

VOC = volatile organic compounds
BNA = base/neutrals and acids extractable organic compounds
1/month = once per month
1/quarter = once per quarter
2/year = twice per year

Footnotes:

(1) The parameters are arsenic, cadmium, copper, lead, nickel, silver, zinc, and selenium.

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(2) The Discharger may elect to run total chromium instead of hexavalent chromium. Sample collection for total chromium measurements may also use 24-hour composite sampling.
(3) Effluent monitoring conducted in accordance with Table E-3 can be used to satisfy these pretreatment monitoring requirements.
(4) Since the Discharger operates its solar drying operations only during the dry season, the biosolids monitoring frequency is once per year during those times when it does not stockpile biosolids (i.e., the dry season). However, if and when the Discharger stockpiles biosolids (e.g., during wet weather), it shall report biosolids monitoring results for the stockpile during the wet season monitoring as well (i.e., twice per year).
(5) Sample types:
   a. Multiple grabs samples for VOC, BNA, hexavalent chromium, and cyanide, must be made up of a minimum of four (4) discrete grab samples, collected equally spaced over the course of a 24-hour period, with each grab analyzed separately and the results mathematically flow-weighted or with grab samples combined (volumetrically flow-weighted) prior to analysis.
   b. 24-hour composite sample may be made up discrete grab samples and may be combined (volumetrically flow-weighted) prior to analysis, or they should be mathematically flow-weighted. If automatic compositor is used, 24-hour composite samples must be obtained through flow-proportioned composite sampling.
   c. Automatic compositors are allowed for mercury if either 1) the compositing equipment (hoses and containers) comply with ultra-clean specifications, or 2) appropriate equipment blank samples demonstrate that the compositing equipment has not contaminated the sample. This direction is consistent with the Regional Water Board's October 22, 1999, letter on this subject.
   d. Biosolids collection should comply with those requirements specified in Attachment H, Appendix H-3 of this Order for sludge monitoring. The biosolids analyzed shall be a composite sample of the biosolids for final disposal. The Discharger shall also comply with biosolids monitoring requirements required by 40 CFR 503.

X. OTHER MONITORING REQUIREMENTS

1. **Off-Shore Monitoring Areas**. The Discharger shall continue to monitor the area outside San Francisco Bay between Rocky Point in Marin County and Point San Pedro in San Mateo County to identify any environmental effects of the discharge on receiving waters, sediment, or aquatic life.

2. **Frequency of Sampling**. The Discharger shall continue the Ocean Outfall Offshore Monitoring Program, sampling annually in the fall, when sediments are least disturbed.

3. **Specific Monitoring Points**. Monitoring locations are identified in Table E-6, below. (The Discharger selected locations using the USEPA's EMAP grid system, with 15 fixed locations and 36 random locations.)

Table E-7. Ocean Outfall Offshore Monitoring Locations

EMAP Station Number	Southwest Ocean Outfall (SWOO) Station Number	Latitude	Longitude
Fixed Locations			
1	---	37º 42' 12.00''	-122º 34' 31.20''
2	---	37º 42' 37.80''	-122º 34' 30.00''
4	---	37º 42' 42.00''	-122º 35' 42.00''
6	---	37º 40' 00.00''	-122º 32' 15.00''

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25	---	37º 42’ 13.80’’	-122º 34’ 30.00’’
28	---	37º 41’ 54.00’’	-122º 34’ 28.80’’
31	---	37º 43’ 28.80’’	-122º 34’ 01.80’’
Random Locations			
R1	32	37º 52’ 04.77’’	-122º 38’ 28.60’’
R2	33	37º 51’ 06.14’’	-122º 36’ 00.87’’
R3	34	37º 51’ 04.65’’	-122º 38’ 50.77’’
R4	35	37º 50’ 53.96’’	-122º 40’ 45.11’’
R5	36	37º 50’ 15.84’’	-122º 37’ 12.27’’
R6	37	37º 50’ 11.61’’	-122º 35’ 41.45’’
R7	38	37º 49’ 40.86’’	-122º 39’ 18.05’’
R8	39	37º 49’ 19.20’’	-122º 41’ 25.50’’
R9	40	37º 48’ 31.68’’	-122º 37’ 29.76’’
R12	43	37º 47’ 07.88’’	-122º 36’ 57.88’’
R14	45	37º 46’ 29.37’’	-122º 38’ 38.38’’
R16	47	37º 45’ 39.83’’	-122º 37’ 04.52’’
R17	48	37º 45’ 33.87’’	-122º 38’ 55.98’’
R19	50	37º 45’ 00.01’’	-122º 39’ 56.01’’
R20	51	37º 44’ 46.38’’	-122º 35’ 55.51’’
R21	52	37º 43’ 43.07’’	-122º 31’ 11.61’’
R22	53	37º 43’ 04.34’’	-122º 38’ 42.51’’
R23	54	37º 42’ 59.44’’	-122º 32’ 47.41’’
R24	55	37º 42’ 56.50’’	-122º 34’ 15.08’’
R25	56	37º 42’ 41.24’’	-122º 36’ 28.29’’
R26	57	37º 42’ 33.84’’	-122º 31’ 08.82’’
R27	58	37º 42’ 15.49’’	-122º 34’ 55.24’’
R28	59	37º 41’ 35.66’’	-122º 32’ 11.82’’
R29	60	37º 41’ 20.89’’	-122º 36’ 06.47’’
R30	61	37º 40’ 55.35’’	-122º 33’ 29.05’’
R31	62	37º 40’ 56.18’’	-122º 37’ 43.15’’
R32	63	37º 39’ 31.65’’	-122º 33’ 41.41’’
R33	64	37º 39’ 14.63’’	-122º 32’ 04.75’’
R34	65	37º 38’ 02.91’’	-122º 32’ 27.99’’
R35	66	37º 37’ 42.23’’	-122º 36’ 40.08’’
R36	67	37º 37’ 34.73’’	-122º 33’ 53.51’’
R37	68	37º 37’ 00.97’’	-122º 36’ 55.75’’
R38	69	37º 36’ 52.15’’	-122º 35’ 28.81’’
R39	70	37º 36’ 32.16’’	-122º 32’ 01.35’’
R40	71	37º 36’ 16.73’’	-122º 33’ 03.03’’

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4. **Sediment Sampling**. The Discharger shall collect benthic samples from seven historical fixed locations (1, 2, 4, 6, 25, 28, 31) to maintain time series data, and 30 out of the 36 random locations (R1- R9, R12, R16 – R17, R19 – R40), for a total of 45 samples. Samples shall be collected using a 0.1 m^2 Smith McIntyre grab sampler. Two grabs shall be collected at each station and the top 5 centimeters of sediment shall be composited from each grab prior to analysis. Analysis of the sediment samples shall include:

   - Total volatile solids
   - Total organic carbon
   - Kjeldahl nitrogen
   - Grain size
   - Inorganic toxic pollutants [Al, As, Cd, Cr, Cr(VI), Cu, Fe, Pb, Mn, Hg, Ni, Se, Ag, Zn] [The Discharger may elect to report total chromium in lieu of chromium (VI).].
   - DDT, PCBs, and PAHs

5. **Infaunal Sampling**. One benthic grab sample collected from each of the above locations shall be analyzed for infaunal organisms. This sample shall be passed through a 1.0 mm and a 0.5 mm sieve. Organisms retained on each sieve shall be relaxed and preserved for later enumeration and taxonomic determination to the lowest taxon.

6. **Trawls***.* The Discharger shall conducts trawls once per year in the fall to assess the presence or absence of demersal fish and epibenthic invertebrates in the vicinity of the ocean outfall, and to determine any bioaccumulation of priority pollutants in these organisms.

   A fish community analysis shall be conducted at a minimum of one of four fixed sampling locations (SWOO 1, 2, 25, or 28) and at one reference location outside of the influence of the discharge. Fish and invertebrates shall be collected, identified to the lowest identifiable taxon, and enumerated. The following information shall be recorded.

   - Fish
     - Abnormalities and disease symptoms, such as fin erosion, lesions, or tumors
     - Standard length of all fish specimens; disk width for skates and rays

   - Invertebrates
     - Carapace length and identification of unsexed or gravid females of shrimp
     - Carapace width and sex of crabs

   Tissue samples to assess the bioaccumulation of pollutants shall be composite samples collected at one of four fixed sampling locations (SWOO 1, 2, 25, 28) and at one or more reference locations outside of the influence of the discharge. Three composite samples shall be collected of one fish species and one macroinvertebrate species at each location. Each composite sample shall consist of ten or more organisms of each species, with the preferred species being English sole (*Pleuronectes vetulus)* and dungeness crab (*Cancer magister).* Muscle and liver/hepatopancreas tissues shall be

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analyzed for inorganic pollutants (As, Cd, Cr, Cu, Pb, Hg, Se, Ag, and Zn), and DDT, PCBs, and PAHs.

7. **Adaptive Management**. The Discharger shall confer with USEPA and the Regional Water Board regarding any proposed changes to the monitoring program in response to ongoing analyses of monitoring data to maximize the amount of relevant and useful data that can be collected within the five year permit term.

8. **Reporting**. All offshore monitoring data shall be reported to USEPA and the Regional Water Board in an Annual Report submitted by August 30 of the year following sampling to allow for time to make modifications, if necessary, for the following sampling event. The report shall include raw data tables and summaries for each monitoring component. A comprehensive cumulative summary report shall be submitted with the next application for permit reissuance.

XI. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

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) or to any other Internet web site specified by the Regional Water Board or USEPA. Until such notification is given, the Discharger shall submit paper copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall submit monthly SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order for each calendar month. Monthly SMRs shall be due on the 30th day following the end of each calendar month, covering samples collected during that calendar month; Annual Reports shall be due on February 1 following each calendar year.

3. The Discharger shall comply with the following schedule of monitoring periods and reporting.

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Table E-8. Monitoring Periods

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period
Continuous	Day after permit effective date	All
Cont./D	Day after permit effective date	All
Daily	Day after permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday
5/Week	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday
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
2/Month	First day of calendar month following permit effective date or on permit effective date if that date is first date of the month	1st day of calendar month through last day of calendar month
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
Annually	January 1 following (or on) permit effective date	January 1 through December 31. July 1 through June 30 for shoreline CSD and other rainfall initiated data.
<X> / Discharge Event	As soon as possible after discharge begins	For the duration of the discharge event

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

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

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

b. Sample results less than the 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

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Concentration" (which may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numeric estimates of the data quality for the reported result. Numeric 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 (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 except in reporting estimated sample results less than the RL, but greater than or equal to the laboratory MDL as stated in 4.b. above.

5. The Discharger shall comply with effluent limitations for reportable pollutants determined using sample reporting protocols defined above and in Attachment A of this Order. For purposes of reporting and administrative enforcement, the Discharger shall be deemed out of compliance with single-sample effluent limitations if the concentration of the reportable pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the ML. For averaged or median-based effluent limitations, the Discharger shall be deemed out of compliance if the average or median concentration in the data set is greater than the effluent limitation

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

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

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

c. If the Discharger wishes to invalidate any measurement, the letter of transmittal shall include identification of the measurement suspected to be invalid and notification of intent to submit a formal request to invalidate the measurement , within 60 days. This request shall include the original measurement in question, the reason for invalidating the measurement, all relevant documentation that supports the invalidation (e.g., laboratory sheet, log entry, test results etc.), and discussion of the corrective actions taken or planned (with time schedule for

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completion) to prevent recurrence of the sampling or measurement problem. The invalidation of a measurement by USEPA or Regional Water Board staff will be based solely on the documentation submitted at that time.

d. 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:

Executive Officer
California Regional Water Quality Control Board
San Francisco Region
1515 Clay Street, Suite 1400
Oakland, CA 94612
ATTN: NPDES Wastewater Division

C. Discharge Monitoring Reports (DMRs)

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

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

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

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 will not be accepted unless they follow the exact same format of EPA Form 3320-1.

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APPENDIX E-1
CHRONIC TOXICITY
DEFINITION OF TERMS AND SCREENING PHASE REQUIREMENTS

I. Definition of Terms

A. No observed effect level (NOEL) for compliance determination is equal to IC_{25} or EC_{25}. If the IC_{25} or EC_{25} cannot be statistically determined, the NOEL shall be equal to the NOEC derived using hypothesis testing.

B. Effective concentration (EC) is a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Karber. EC_{25} is the concentration of toxicant (in percent effluent) that causes a response in 25 percent of the test organisms.

C. Inhibition concentration (IC) is a point estimate of the toxicant concentration that would cause a given percent reduction in a nonlethal, nonquantal biological measurement, such as growth. For example, an IC_{25} is the estimated concentration of toxicant that would cause a 25 percent reduction in average young per female or growth. IC values may be calculated using a linear interpolation method such as USEPA's Bootstrap Procedure.

D. No observed effect concentration (NOEC) is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. It is determined using hypothesis testing.

II. Chronic Toxicity Screening Phase Requirements

A. The Discharger shall perform screening phase monitoring:

1. Subsequent to any significant change in the nature of the effluent discharged through changes in sources or treatment, except those changes resulting from reductions in pollutant concentrations attributable to source control efforts, and at least once during the Order term.

2. Screening phase monitoring data shall be included in the NPDES permit application for reissuance. The information shall be as recent as possible, but may be based on screening phase monitoring conducted within 5 years before the permit expiration date.

B. Design of the screening phase shall, at a minimum, consist of the following elements:

1. Use of test species specified in **Appendix E-2**, attached, and use of the protocols referenced in those tables, or as approved by the Executive Officer.

2. Two stages:

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a. Stage 1 shall consist of a minimum of one battery of tests conducted concurrently. Selection of the type of test species and minimum number of tests shall be based on **Appendix E-2** (attached).

b. Stage 2 shall consist of a minimum of two test batteries conducted at a monthly frequency using the three most sensitive species based on the Stage 1 test results and as approved by the Executive Officer.

3. Appropriate controls.

4. Concurrent reference toxicant tests.

5. Dilution series should include the IWC, and four concentrations that bracket the IWC, or other concentrations approved by the Executive Officer.

C. The Discharger shall submit a screening phase proposal acceptable to the Regional Water Board. The proposal shall address each of the elements listed above. If within 30 days neither USEPA nor the Regional Water Board staff comments, the Discharger shall commence with screening phase monitoring.

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APPENDIX E-2
SUMMARY OF TOXICITY TEST SPECIES REQUIREMENTS
Critical Life Stage Toxicity Tests for Marine and Estuarine Waters

Species	(Scientific Name)	Effect	Test Duration	Reference
Alga	*(Skeletonema costatum)* *(Thalassiosira pseudonana)*	Growth rate	4 days	1
Red alga	*(Champia parvula)*	Number of cystocarps	7–9 days	3
Giant kelp	*(Macrocystis pyrifera)*	Percent germination; germ tube length	48 hours	2
Abalone	*(Haliotis rufescens)*	Abnormal shell development	48 hours	2
Oyster Mussel	*(Crassostrea gigas)* *(Mytilus edulis)*	Abnormal shell development; percent survival	48 hours	2
Echinoderms - Urchins Sand dollar	*(Strongylocentrotus purpuratus, S. franciscanus)* *(Dendraster excentricus)*	Percent fertilization Development test	1 hour 72 hours	2
Shrimp	*(Mysidopsis bahia)*	Percent survival; growth	7 days	3
Shrimp	*(Holmesimysis costata)*	Percent survival; growth	7 days	2
Topsmelt	*(Atherinops affinis)*	Percent survival; growth	7 days	2
Silversides	*(Menidia beryllina)*	Larval growth rate; percent survival	7 days	3

Toxicity Test References:

1. American Society for Testing Materials (ASTM). 1990. Standard Guide for Conducting Static 96-Hour Toxicity Tests with Microalgae. Procedure E 1218-90. ASTM, Philadelphia, PA.
2. Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms. EPA/600/R-95/136. August 1995.
3. Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to Marine and Estuarine Organisms. EPA/600/4-90/003. July 1994.

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Toxicity Test Requirements for Stage One Screening Phase

Requirements	Receiving Water Characteristics		
	Discharges to Coast	Discharges to San Francisco Bay[2]	
	Ocean	Marine/Estuarine	Freshwater
Taxonomic diversity	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish
Number of tests of each salinity type: Freshwater[1] Marine/Estuarine	0 4	1 or 2 3 or 4	3 0
Total number of tests	4	5	3

[1] The freshwater species may be substituted with marine species if:

(a) The salinity of the effluent is above 1 part per thousand (ppt) greater than 95 percent of the time, or

(b) The ionic strength (TDS or conductivity) of the effluent at the test concentration used to determine compliance is documented to be toxic to the test species.

[2] (a) Marine/Estuarine refers to receiving water salinities greater than 1 ppt at least 95 percent of the time during a normal water year.

(b) Fresh refers to receiving water with salinities less than 1 ppt at least 95 percent of the time during a normal water year.

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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.

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	2 386009001
Discharger	City and County of San Francisco
Name of Facility	Oceanside Water Pollution Control Plant, and Collection System including the Westside Wet Weather Facilities
Facility Address	3500 Great Highway
	San Francisco, CA 94132
	San Francisco County
Facility Contact, Title and Phone	Tommy Moala, Assistant General Manager, Wastewater Enterprise (415) 554-2465
Authorized Person to Sign and Submit Reports	Arleen Navarret, Regulatory Manager, (415) 934-5731
Mailing Address	San Francisco Public Utilities Commission/Wastewater Enterprise 1155 Market St., 11th Floor, San Francisco CA 94103
Billing Address	Same as above
CIWQS Place ID	256498
CIWQS Party ID	39680
Billing Address	Same as above
Type of Facility	Publicly Owned Treatment Works
Major or Minor Facility	Major
Threat to Water Quality	2
Complexity	A
Pretreatment Program	Y
Receiving water	Pacific Ocean
Receiving Water Type	Main discharge starting at about 3.4 nautical miles from shore, CSO discharges at shoreline
Reclamation Requirements	NA
Facility Permitted Flow	43 million gallons per day (MGD), average dry weather
Facility Design Flow	Oceanside Plant 43 MGD, average dry weather design flow (providing secondary treatment) 65 MGD maximum wet weather design flow (providing secondary treatment for 43 MGD, and primary treatment for an additional 22 MGD)

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	Westside Wet Weather Facilities Collection system flows greater than 65 MGD and less than 175 MGD receive the equivalent of wet weather primary treatment in the Westside Wet Weather Facilities (storage/transports) and are discharged at the Southwest Ocean Outfall. Flows greater than 175 MGD receive the equivalent of wet weather primary treatment in the Westside Wet Weather Facilities and are discharged at authorized combined sewer overflow discharge (CSOD) points.
Watershed	San Mateo Coastal
Receiving Water	Pacific Ocean
Receiving Water Type	Ocean waters

A. The City and County of San Francisco (hereinafter the Discharger) is the owner and operator of the Oceanside Water Pollution Control Plant (Plant) and Westside Wet Weather Facilities, a publicly owned treatments works (POTW). For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and State laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. The facility discharges wastewater to the Pacific Ocean, waters of the United States, and is currently regulated by Order No. R2-2003-0073, which was adopted on August 20, 2003, expiring on September 30, 2008.

C. On March 28, 2008, the Discharger filed a report of waste discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment or Controls

The Discharger is the owner and operator of the Oceanside Plant and its associated collection system, a combined sewer system that includes the Westside Wet Weather Facilities. The collection system includes approximately 300 miles of sewer pipes on the west side watershed of the city that covers the areas of Richmond, Sunset, and Lake Merced as well as a small portion of Daly City. The system also includes four all weather pump stations, Seacliff #1, Seacliff #2, Pine Lake and Westside and two wet weather pump stations, Seacliff #3 and the Zoo Wet-Weather Lift Station. There are no satellite systems.

Treatment at the Oceanside Plant, which has a peak secondary treatment capacity of 43 MGD, includes coarse screening at the Westside Pump Station, fine screening and grit removal at the Plant headworks, primary sedimentation, activated sludge treatment by a pure oxygen process, and secondary clarification. Secondary treated wastewater is discharged to the Pacific Ocean, 3.4 to 3.6 nautical miles offshore, at Discharge Point 001 - the Southwest Ocean Outfall. These receiving waters are waters of the United States but are beyond the territorial waters of the State of California. During wet weather periods of high influent flow, the Oceanside Plant can provide primary treatment for an additional 22 MGD of influent flow, which, following treatment, is

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blended with secondary treated wastewater (i.e., a total treatment capacity of 65 MGD) and discharged at Discharge Point 001.

The Discharger's collection system includes three large storage/transport structures – the Westside Transport, a 49.3 million gallon box-like structure located beneath the Great Highway; the Richmond Transport, a 12 million gallon structure located to the north; and the Lake Merced Transport, a 10 million gallon structure located to the south. The combined storage capacity of these "Westside Wet Weather Facilities" is 73.5 million gallons, which includes 2.2 million gallons of capacity within the sewer lines.

Collection system flows that exceed the Oceanside Plant's treatment capacity of 65 MGD, are stored in the Westside Wet Weather Facilities, which provide the equivalent of wet weather primary treatment through solids settling, skimming of floatable solids, and screening at pump stations. Combined wastewater from the storage/transport structures is pumped via the Westside Pump Station to Discharge Point 001, until the pumping capacity of the combined sewer system facilities to the outfall is reached at 175 MGD. Combined wastewater flows greater than 175 MGD also receive (the equivalent of wet weather primary treatment) treatment in the storage/transport structures but are discharged at the seven, near-shore combined sewer overflow discharge structures, authorized by this Order. These receiving waters are waters of the United States and territorial waters of the State of California. To be considered a discrete combined sewer overflow discharge event, the combined sewer overflow discharge must be separated by six hours in time from any other combined sewer overflow discharge. For the purposes of this permit, authorized treated combined sewer overflow discharges from the near-shore overflow discharge structures are referred to as combined sewer overflow discharges (CSODs). Unauthorized untreated combined sewer overflows from combined sewer systems are referred to as combined sewer overflows (CSOs).

Wastewater solids removed by settling in the Westside Wet Weather Facilities are flushed to the Plant when wet weather flows subside. Primary and secondary solids from the Plant are blended and thickened using gravity belt thickeners, anaerobically digested, dewatered, and beneficially re-used at permitted sites.

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

Based on 70 years of historical rainfall records, the Westside Wet Weather Facilities were designed to achieve a long term average of eight discrete CSOD events per year. State Water Board Order No. WQ 79-16 defines a discrete combined sewer overflow discharge event as one separated from any other combined sewer overflow discharge by at least six hours. CSOD information for the period of January 2007 through December 2007 is summarized in Table F- 2, below.

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Table F-2. CSOD Summary 2007

Overflow Discharge Point	CSD-001	CSD-002	CSD-003	CSD-004	CSD-005	CSD-006	CSD-007
CSOD Structure Name	Lake Merced	Vicente St.	Lincoln Way	Mile Rock	Sea Cliff 1	Sea Cliff Sewer	Sea Cliff 2
Days with Rainfall	63	63	63	63	63	63	63
Discharge Events	2	2	2	NA	0	NA	1
Average Duration (hours)	1.64	1.71	2.19	NA	NA	NA	1.1
Average Volume/Event (million gallons.)	5.98	5.83	6.17	NA	NA	NA	7.11

B. Discharge Points and Receiving Waters

The locations of the discharge points and their receiving waters are listed in Table F-3, below.

Table F-3. Outfall Locations

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Secondary Treated Wastewater, Combined Primary and Secondary Treated Wastewater and Stormwater, and the equivalent of wet weather primary treated combined Wastewater and Stormwater decant flow from a combined sewer system.	37 º 42’ 18” N	122 º 34’ 39” W	Pacific Ocean
CSD-001	The equivalent of wet weather Primary Treated Combined Wastewater and Stormwater	37 º 42’ 55” N	122 º 30’ 16” W	Pacific Ocean (Fort Funston, Ocean Beach)
CSD-002	The equivalent of wet weather Primary Treated Combined Wastewater and Stormwater	37 º 44’ 16” N	122 º 30’ 29” W	Pacific Ocean (Vicente St., Ocean Beach)
CSD-003	The equivalent of wet weather Primary Treated Combined Wastewater and Stormwater	37 º 45’ 50” N	122 º 30’ 42” W	Pacific Ocean (Lincoln Way, Ocean Beach)
CSD-004	The equivalent of wet weather Primary Treated Combined Wastewater and Stormwater	37 º 47’ 5” N	122 º 30’ 37” W	Pacific Ocean (Mile Rock)

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CSD-005	The equivalent of wet weather Primary Treated Combined Wastewater and Stormwater	37 º 47' 16" N	122 º 29' 30" W	Pacific Ocean (China Beach)
CSD-006	The equivalent of wet weather Primary Treated Combined Wastewater and Stormwater	37 º 47' 22" N	122 º 29' 16" W	Pacific Ocean (Baker Beach)
CSD-007	The equivalent of wet weather Primary Treated Combined Wastewater and Stormwater	37 º 47' 22" N	122 º 29' 13" W	Pacific Ocean (Baker Beach)

Discharge Point 001 is located beginning about 3.4 nautical miles offshore, beyond the three nautical mile limit of the State's territorial waters. CSOD outfalls are located in the nearshore waters of the San Mateo Coastal Watershed.

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

1. Effluent limitations contained in the existing Order for discharges from Discharge Point 001 (formerly Discharge Point 007) and representative monitoring data for Monitoring Location EFF-001 (formerly E-007) from the term of the previous permit are as follows:

Table F-4. Historic Effluent Limitations and Monitoring Data

Para-meter	Unit	Effluent Limitation				Monitoring Data (From 12/03 to 12/07)		
		Average Monthly	Average Weekly	Maxi-mum Daily	Instant-aneous Maximum	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
BOD_5	mg/L	30	45	---	---	33	40	---
TSS	mg/L	30	45	---	---	19	30	
Grease and Oil	mg/L	25	40	---	75	9.7	9.7	9.7
Turbidity	NTU	75	100	225	---	11	25	38
pH	s.u.	Between 6 and 9 at all times			---	5.7 minimum 8.0 maximum		
Acute Toxicity	TUa	---	---	2.58	---	---	---	1.58
Chronic Toxicity	TUc	---	---	76	---	---	---	50

2. The previous permit contained weekly monitoring requirements for bacteria in the receiving water at several surf stations, and additional surf monitoring requirements for bacteria in response to CSOD events. Requirements of the previous permit included posting notices at beaches with elevated bacteria levels until monitoring indicated bacteria were below water quality objectives. The following table summarizes periods of elevated bacteria levels during the term of the previous permit.

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Table F-5. Receiving Water Surf Monitoring Summary

Wet Weather Season	Rainfall (inches)	Number of Discrete[1] Combined Sewer Discharges	Total Number of Days Per Year One or More Beaches Were Posted for Elevated Bacteria Counts
2003-2004	18.77	8	33
2004-2005	26.2	12	31
2005-2006	31.83	13	53
2006-2007	14.76	3	12
Average	22.89	9	32.3

(1) Discrete events are separated by at least six hours between discharges, as defined in State Water Board Order No. WQ 79-16.

D. Compliance Summary

1. **Compliance with Numeric Effluent Limitations.** During the term of Order No. R2-2003-0073, the Discharger reported exceedances of effluent limitations for BOD_5 and pH as summarized in Table F-6.

Table F-6. Summary of Effluent Violations

Date of Violation	Parameter	Effluent Limitation	Reported Value
December 31, 2005	BOD_5	30 mg/L	32.5 mg/L
December 31, 2005	BOD_5 Percent Removal	85% Removal Minimum	76% Removal
October 10, 2007	pH	Between 6 and 9 at all times	5.7

Rainfall records for San Francisco indicate that 2.12 inches of rain fell on December 31, 2005, and 0.82 inches fell on the preceding day. This may have been a “wet weather” day, in which case no exceedance occurred. Similarly on October 10, 2007, the reported date of the pH exceedance, the rainfall was 0.18 inches and the rainfall for the preceding day was 0.43 inches. This rainfall could have contributed to the low pH values. Under these circumstances, Regional Water Board staff did not recommend formal enforcement.

2. **Compliance with Permit Provisions.** A list of special activities required by Order No. R2-2003-0073 and the status toward completing those requirements are shown in Table F-7, below.

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Table F-7. Permit Provisions Compliance

Provision Number	Requirement	Status of Completion
F.2 [A]	Marine Mammal Report identifying monitoring methodologies to determine presence of pathogens with potential to affect marine mammals.	Report submitted October 28, 2005.
F.4.i	Nine Minimum Controls (A) Study Plan to monitor CSOD Impacts and Controls due December 1, 2003 (B) Annual Status Reports summarizing data, evaluating CSOD impacts and controls, and proposing revisions to nine minimum controls, if necessary, due August 30 annually. (C) Final Report due 1 year prior to permit expiration.	 Submitted November 26, 2003 Submitted 2004, 2005, 2006, 2007 Submitted August 30, 2007

[A] In response to concerns expressed by the National Oceanic Atmospheric Administration (NOAA) Fisheries and US Fish and Wildlife Service regarding the potential of stormwater and undisinfected wastewater from the Southwest Ocean Outfall to transmit pathogens to marine mammals, the previous permit required investigation of methods to determine impacts of human pathogens on marine mammals and conveyance of the findings in a Marine Mammal Report. On October 28, 2005, the Discharger submitted a report that concluded that little information is available regarding the environmental occurrence, fate, and transport of *T. gondii*, *S. neurona*, and Morbilliviruses, microbes of concern to marine mammals, in part because methods for detection of these microbes in the environment are insufficient.

E. Planned Changes

No changes are planned

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 the federal Clean Water Act (CWA) §402 and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and California Water Code (CWC) Chapter 5.5, Division 7 (commencing with §13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to CWC Article 4, Chapter 4, Division 7 (commencing with §13260). USEPA and the Regional Water Board are jointly issuing this permit. It covers Discharge Point 001, the Southwest Ocean Outfall, which is 3.4 to 3.6 nautical miles offshore in Federal waters. (The territorial waters of the State end three nautical miles from shore.) It also covers Discharge Points CSD-001 through CSD-007, which are near-shore in State waters.

Under Water Code §13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA. Likewise, pursuant to CWA §511(c), this action to reissue an NPDES permit does not trigger the requirements of the National Environmental Policy Act (NEPA) [42 U.S.C. 4321 et seq.].

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B. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The *Water Quality Control Plan for the San Francisco Bay Basin* is the Regional Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Regional Water Board and approved by the State Water Board, USEPA, and the Office of Administrative Law where required.

   Beneficial uses established by the Basin Plan for waters within the San Mateo Coastal Watershed are as follows:

Table F-8. Basin Plan Beneficial Uses

Receiving Water	Basin Plan Beneficial Uses
Territorial waters of the State of California within the Pacific Ocean	• Industrial Service Supply • Ocean, Commercial, and Sport Fishing • Shellfish Harvesting • Marine Habitat • Fish Migration • Preservation of Rare and Endangered Species • Fish Spawning • Wildlife Habitat • Water Contact Recreation • Noncontact Water Recreation • Navigation

   Requirements of this Order implement the Basin Plan.

2. **California Ocean Plan.** The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California* (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 applies, in its entirety, to point source discharges to the territorial waters of the State as defined by California law to the extent that these waters are outside of enclosed bays, estuaries, and coastal lagoons. The Ocean Plan identifies the following beneficial uses of ocean waters of the State: Industrial Water Supply; Water Contact and Non-contact Recreation, Including Aesthetic Enjoyment; Navigation; Commercial and Sport Fishing; Mariculture; Preservation and Enhancement of Designated Areas of Special Biological Significance; Rare and Endangered Species; Marine Habitat; Fish Migration; Fish Spawning; and Shellfish Harvesting. To protect beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation for discharges to state territorial waters.

   Discharge Point 001, the deep water outfall, is 3.4 to 3.6 nautical miles offshore in federal waters. The territorial waters of the State end three nautical miles from shore. The Ocean Plan (Appendix 1, Ocean Waters) states, "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 Ocean Plan will occur in

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ocean waters." For the reasons set forth below, the Regional Water Board finds that the discharge at Discharge Point 001 could not affect the quality of the waters of the State during dry weather. During wet weather, the Ocean Plan defers to the Combined Sewer Overflow Control Policy, discussed in Finding K. Therefore, this Order does not regulate the discharge at Discharge Point 001 directly through the Water Board's Ocean Plan authorities.

The Discharger has compiled information demonstrating that the discharge at Discharge Point 001 during dry weather could not affect the quality of the waters of the State ("Assessment of Effects on California State Waters from the Oceanside Southeast Ocean Outfall," September 26, 2008). Regional Water Board staff has supplemented the Discharger's information with independent analysis.

a. **Receiving Water Monitoring.** The Discharger has monitored the receiving waters since the 1970s, before and after the installation of the Southwest Ocean Outfall in 1986. Aquatic biological communities, including benthic communities, do not appear to be any different near the outfall than at reference locations. Sediment quality appears to be similar as well. Since the discharge does not appear to affect water quality in the vicinity of the outfall, there is no evidence that it could affect the quality of State waters.

b. **Dilution.** This Order uses a minimum initial dilution of effluent from Discharge Point 001 of 150:1. The Discharger has submitted a study indicating that initial dilution could be over 170:1 ("Dilution Modeling for the San Francisco Southwest Ocean Outfall," City and County of San Francisco, June 2007). Substantial additional dilution occurs between the outfall and State waters, which are 0.36 nautical miles (2,200 feet) away. A worst-case estimate of this far-field dilution is over 400:1. Regional Water Board staff has concluded that such highly diluted effluent from the deep water outfall could not affect the quality of State waters.

c. **Ocean Currents.** Ocean currents at the Southwest Ocean Outfall typically move parallel to the coast, not toward State waters.

d. **Effluent Toxicity Monitoring.** The Discharger routinely monitors acute and chronic toxicity in the effluent to ensure that it complies with effluent limitations. This monitoring has never indicated a violation of toxicity limitations at the outfall. Therefore, the discharge could not cause toxicity in State waters 0.36 nautical miles away. Receiving water sediment toxicity test results corroborate this conclusion.

e. **Bacteria Monitoring.** In the 1980s, the Discharger completed an extensive study to determine how discharging primary treated effluent from the deep water outfall was affecting receiving water bacteria levels (*Wastefield Transport and Bacteriological Compliance Studies of the San Francisco Ocean Outfall CH2MHill March 1989*). The Discharger now treats its wastewater to secondary treatment standards during dry weather. Regional Water Board staff used data from that study representing primary treatment to estimate the potential effects of discharging secondary-treated effluent (staff memorandum, October 10, 2008). Estimated bacteria levels in federal waters were below Ocean Plan water quality

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objectives. Therefore, the deep water discharge could not affect bacteria levels in State waters.

3. **Determination of Unreasonable Degradation of the Marine Environment.** Discharges from the Southwest Ocean Outfall are to waters of the United States beyond the territorial waters of the State of California. Federal regulations at 40 CFR 125.122 require the permitting authority to determine whether a discharge will cause unreasonable degradation of the marine environment. Based on 40 CFR 125.22(b), USEPA conducted a reasonable potential analysis using Ocean Plan objectives and included numeric permit limitations, based on the Ocean Plan's dilution procedures, for toxicity and mercury, the only numeric Ocean Plan objectives for which USEPA found reasonable potential to cause or contribute to an exceedance of water quality standards. USEPA also included narrative receiving water limitations for the Ocean Plan narrative objectives for which it found reasonable potential. For determining reasonable potential for the dioxins, USEPA based its analysis on 40 CFR 125.122(a) and used recently updated Toxicity Equivalency Factors (TEFs) published by the World Health Organization in 2005, as well as the congener-specific Bioconcentration Equivalency Factors (BEFs) used for the Great Lakes System. The "Bay Area Clean Water Agencies' Draft Dioxin Issue Paper: Expert Panel Response and Recommendations," dated April 4, 2008 recommended the use of TEFs and BEFs to develop NPDES permit limits for dioxins. This approach incorporates recent scientific information for dioxins on a congener-specific basis, while continuing to use the Ocean Plan water quality objective for dioxins (TCDD equivalents) and standards implementation procedures. Given the unique issues dioxins present, USEPA has prepared a determination of unreasonable degradation for the ten factors under 40 CFR 125.122(a) (Appendix 1 of this Fact Sheet). USEPA has determined that no unreasonable degradation of the marine environment will result from the discharges of dioxins through the Southwest Ocean Outfall as authorized under this Order, with all the limitations, conditions, and monitoring requirements in effect.

4. **Combined Sewer Overflow Control Policy.** Wet weather flows from combined sewer systems are subject to CWA §301(b)(1)(A) and are not subject to secondary treatment regulations. Wet weather flows from combined sewer systems are addressed by the Combined Sewer Overflow Control Policy (59 Federal Register 18688-18698). The *Wet Weather Water Quality Act of 2000* incorporated this policy into the CWA.

   The policy establishes a consistent national approach for controlling discharges from combined sewers to the nation's water. Using the NPDES permit program, the policy initiates a two-phased process. During the first phase, the Discharger is required to implement "nine minimum controls" (e.g., prevent dry weather overflows). These controls constitute the technology-based requirements of the Clean Water Act as applied to combined sewer facilities (i.e., best conventional pollutant control technology, BCT, and best available control technology economically achievable, BAT). The controls are intended to provide immediate and relatively low-cost water quality improvements for facilities that, unlike the Discharger, have not implemented a long-term control plan. During the first phase, the Discharger is required to initiate development of a long-term control plan to select controls to comply with water quality standards, based on consideration of the Discharger's financial capabilities.

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The second phase of the process involves implementation of the long-term control plan developed in the first phase. The purpose of this long-term control plan is to comply with the CWA water quality requirements. The Discharger's program, which continues to implement the Discharger's long-term plan, is consistent with the policy. This Order implements the policy and is consistent with the Regional Water Board policy on wet weather overflows described in Basin Plan Section 4.9. During wet weather, CSODs from shoreline discharge points CSD-001 through CSD-007 and the Southwest Ocean Outfall are subject to this policy.

Ocean Plan Section III.A.4 acknowledges, "Not withstanding any other provisions in this plan, discharges from the City of San Francisco's combined sewer system are subject to the USEPA's Combined Sewer Overflow Policy." In large part, this acknowledgement is a response to State Water Board Order No. WQ 79-16 (March 23, 1979), which granted an exception from the Ocean Plan for wet weather discharges from the Discharger's diversion structures in the western-most portion of the Discharger's combined sewer system. The exception was necessary because CSODs are inherently inconsistent with certain Ocean Plan standards. In accordance with Ocean Plan procedures for granting exceptions, the State Water Board found that there were unusual circumstances not anticipated at the time of the plan's adoption (the Ocean Plan had failed to address CSODs), that beneficial uses would be protected, and that the public interest would be served. Of particular importance to the State Water Board in granting the exception was the Discharger's proposal to improve its wet weather facilities to allow only an average of eight CSODs per year. The exception was subject to several conditions, including:

- The Discharger needed self-monitoring in accordance with Regional Water Board specifications (this Order requires this in Attachment E),
- Beaches and shellfish harvesting areas potentially affected by CSODs needed to be posted (this Order requires this in Section VI.C.6.b(8)),
- To the greatest extent practical, the Discharger needed to design, construct, and operate wet weather facilities to comply with Ocean Plan requirements (this Order requires this in Section VI.C.4),
- Aside from the average of eight CSOD events per year, all other storm water runoff needed to be contained, and the discharge of all other untreated waste to waters of the State was to be prohibited (this Order requires this in Section III; the provision for eight overflow events per year is the design basis of the effluent treatment system).

5. **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 [65 Fed. Reg. 24641 (April 27, 2000), codified at 40 CFR §131.21]. 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

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already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

6. **Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. This Order's technology-based pollutant restrictions implement the minimum applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum federal technology-based requirements. The water quality-based limits are necessary to meet water quality standards. They are not more stringent than required by the CWA.

   Water quality-based effluent limitations have been derived to implement water quality objectives that protect beneficial uses. Both beneficial uses and water quality objectives in State waters have been approved pursuant to federal law and are the applicable federal water quality standards. The procedures used for this Order to calculate individual water quality-based effluent limitations for State waters are based on the California Ocean Plan, which was approved by USEPA on February 14, 2006.

7. **Antidegradation Policy.** NPDES regulations at 40 CFR§131.12 require that the State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16, which incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. Water quality plans implement, and incorporate by reference, both the State and federal antidegradation policies. The permitted discharge is consistent with the antidegradation provision of 40 CFR§131.12 and State Water Board Resolution No. 68-16 because there is no increase in authorized flow and effluent limitations are at least as stringent as in the previous permit.

8. **Anti-Backsliding Requirements.** CWA Sections 402(o)(2) and 303(d)(4) and NPDES 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. With the exception of acute and chronic toxicity, all effluent limitations in this Order are at least as stringent as the effluent limitations in the previous permit. Compliance with anti-backsliding requirements is discussed in section IV.C.6.

9. **Endangered Species Act.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the State. The Discharger is responsible for meeting all

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requirements of applicable State and federal law pertaining to threatened and endangered species.

§7(a)(2) of the federal Endangered Species Act requires USEPA, in reissuing this NPDES permit, to ensure, after consultation with appropriate agencies, that discharges at the Southwest Ocean Outfall are not likely to jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of critical habitat for such species. USEPA has initiated informal consultation with National Oceanic Atmospheric Administration (NOAA).

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

On November 30, 2006, USEPA approved a revised list of impaired water bodies prepared by the State [hereinafter referred to as the 303(d) list] pursuant to CWA section 303(d), which requires identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. Receiving waters for discharges from CSOD outfalls authorized by this Order are listed as impaired for indicator organisms at Baker Beach, specifically at the mouth of Lobos Creek.

1. Total Maximum Daily Loads

The Regional Water Board plans to adopt Total Maximum Daily Loads (TMDLs) for pollutants on the 303(d) list within ten years. Future review of the 303(d) list may provide schedules or result in revision of schedules for adoption of TMDLs.

2. Waste Load Allocations

The TMDLs will establish waste load allocations (WLAs) for point sources and load allocations for non-point sources, which will result in achieving the water quality standards for waterbodies. Future water quality-based effluent limitations for 303(d) listed pollutants will be based on WLAs contained in the respective TMDLs. If a TMDL is developed and WLAs are established independently for discharges of stormwater and wastewater, these WLAs may be combined to be met collectively by the wastewater and stormwater effluent loads.

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IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

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

A. Discharge Prohibitions

1. **Discharge Prohibition III.A**. (No discharge other than that described in this Order). This prohibition is retained from the previous permit and is based on CWC §13260, which requires filing a Report of Waste Discharge before discharges can occur. Discharges not described in the Report of Waste Discharge, and subsequently in the Order, are therefore prohibited.

2. **Discharge Prohibition III.B**. (No discharge from Discharge Point 001 that does not receive an initial dilution of at least 150:1). This prohibition is retained from the previous permit. In addition, the Order accounts for dilution of 150:1 in the reasonable potential analysis and calculation of WQBELs. The limitations in this Order may not be protective of water quality if the discharge were to not actually achieve a 150:1 initial dilution.

3. **Discharge Prohibition III.C**. (Bypass of secondary treatment is prohibited except as described by the Order on wet weather days or as provided in 40 CFR §122.41(m)(4) and in Regional Standard Provisions, and Monitoring and Reporting Requirements [Attachment G]). This prohibition is retained from the previous permit and is based on NPDES regulations at 40 CFR §122.41(m)(4).

4. **Discharge Prohibition III.D**. (Discharge at a location other than Discharge Point 001 is prohibited except for wet weather days). This prohibition is retained from Order No. R2-2003-0073 and reflects a principle objective of USEPA's *Combined Sewer overflow Control Policy* (1994) to ensure that, if CSODs occur, they are only a result of wet weather and such discharges only occur at specified locations.

5. **Discharge Prohibition III.E**. (Discharge at Discharge Points CSOD-001 through CSOD-007 is prohibited except on wet weather days). This prohibition is retained from the previous permit and reflects a principle objective of USEPA's *Combined Sewer Overflow Control Policy* (1994) to ensure that, if CSODs occur, they are only a result of wet weather.

6. **Discharge Prohibition III.F**. (Average dry weather flow not to exceed 43 MGD). This prohibition is retained from the previous permit, and is based on the design treatment capacity of the Plant. Exceedance of the design capacity may result in lowering the reliability of achieving compliance with effluent limitations.

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7. **Discharge Prohibition III.G**. (CSOs are prohibited). CSOs, as opposed to CSODs, are unauthorized discharges from the combined sewer system. This prohibition is necessary because CSOs result in the release of untreated sewage.

8. **Discharge Prohibition III.H**. (Discharge of municipal or industrial sludge to the ocean is prohibited). This prohibition implements Ocean Plan discharge prohibition III.H.3.

9. **Discharge Prohibition III.J**. (Degradation of harvestable shellfish resulting from dry weather discharges is prohibited). This prohibition is retained from the previous permit and implements Ocean Plan discharge prohibition II.B.2.

B. Technology-Based Effluent Limitations

1. Scope and Authority

a. CWA section 301(b) requires USEPA to develop secondary treatment standards for publicly owned wastewater treatment facilities. These standards implement the level of effluent quality attainable through application of secondary or equivalent treatment. USEPA promulgated technology-based effluent guidelines for POTWs at 40 CFR §133. These Secondary Treatment Regulations include the following minimum requirements, which apply to the Plant during dry weather.

Table F-9. Secondary Treatment Requirements

Parameter	30-Day Average Limitation	7-Day Average Limitation
BOD_5 (1)	30 mg/L	45 mg/L
$CBOD_5$ (2)	25 mg/L	40 mg/L
TSS (1)	30 mg/L	45 mg/L
pH	6.0 – 9.0	

(1) The 30-day average percent removal shall not be less than 85 percent.

(2) At the option of the permitting authority, these effluent limitations for $CBOD_5$ may be substituted for BOD_5 limitations.

b. The USEPA Combined Sewer Overflow Control Policy establishes the technology based requirements for combined sanitary sewer systems, which requires implementation of the Nine Minimum Controls. Related requirements are included in section VI.C.6.b. of this Order.

2. Applicable Technology-Based Effluent Limitations

This Order retains the following technology-based effluent limitations, applicable to discharges at Discharge Point 001 during dry weather, as determined at Monitoring Location EFF-001.

a.. **Compliance with limits.** The Discharger shall comply with the following effluent limitations shown in Table F-10.

Table F-10. Technology-based Effluent Limitations – Discharge Point 001

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Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
BOD_5 @ 20°C	mg/L	30	45	---	---	---
TSS[1]	mg/L	30	45	---	---	---
pH	Standard units	---	---	9.0	6.0	9.0

The pH requirement is retained from the previous permit and is established by USEPA's Secondary Treatment Regulations at 40 CFR Part 133 and by Ocean Plan Table A.

b. Percent Removal. Based on Secondary Treatment Regulation at 40 CFR §133.102 and 133.103 and previous permit limits the average monthly percent removal of BOD_5 at 20°C and TSS shall not be less than 85%.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

CWA section 301(b) and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. This Order contains requirements, expressed as a technology equivalence requirement, more stringent than secondary treatment requirements that are necessary to meet applicable water quality standards.

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

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

2. Minimum Initial Dilution

In accordance with the Ocean Plan, water quality-based effluent limits reflect the minimum initial dilution of the effluent as it reaches the receiving water. The minimum initial dilution can be estimated by experimental observation and computer

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simulation. The reasonable potential calculation for this Order is based on a dilution ratio of 150:1. This is based on an updated dilution model submitted by the Discharger that averaged UM3 and NRFIELD results and utilized averaged oceanographic data from 1988. If the Discharger provides new information to use with new dilution modeling (see provision VI.C.2.b of this Order), any new results based on updated oceanographic data may be considered for the next permit reissuance.

3. Determining the Need for WQBELs

This Order is based on a reasonable potential analysis based on procedures described in Ocean Plan Section III.C and Ocean Plan Appendix VI to determine the need for WQBELs. In general, the procedure is a statistical method that evaluates an effluent data set while taking into account the averaging period of water quality objectives, the long term variability of pollutants in the effluent, limitations associated with sparse data sets, and uncertainty associated with censored data sets. The procedure assumes a lognormal distribution of the effluent data set and compares the 95th percentile concentration at 95 percent confidence for each pollutant in Ocean Plan Table B, accounting for dilution, to the applicable water quality criterion in Ocean Plan Table B. The reasonable potential analysis results in one of three endpoints.

Endpoint 1 – There is “reasonable potential,” and a WQBEL and monitoring are required.

Endpoint 2 – There is no “reasonable potential.” A WQBEL is not required, but monitoring may be required.

Endpoint 3 – The analysis is inconclusive. There are less than 3 detects or more than 80% of samples are non-detect. Any existing WQBEL is retained, and monitoring is required.

The Ocean Plan reasonable potential analysis involves five paths:

a. First Path

If available information about the receiving water or the discharge supports a finding of reasonable potential without analysis of effluent data, the permitting authority may decide that WQBELs are necessary after a review of such information. Such information may include the facility or discharge type, solids loading, lack of dilution, history of compliance problems, potential toxic effects, fish tissue data, 303(d) status of the receiving water, presence of threatened or endangered species or their critical habitat, or other information.

b. Second Path

If any pollutant concentration, adjusted to account for dilution, is greater than the most stringent applicable water quality criterion, there is reasonable potential for

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that pollutant to cause or contribute to exceedances of water quality standards, and a WQBEL is required.

c. Third Path

If the effluent data contains three or more detected and quantified values (i.e., values that are at or above the Minimum Level [ML]), and all values in the data set are at or above the ML, a parametric reasonable potential analysis is conducted to project the range of possible effluent values. The 95th percentile concentration is determined at 95 percent confidence for each pollutant, and compared to the most stringent applicable criterion to determine reasonable potential. A parametric analysis assumes that the range of possible effluent values is distributed lognormally. If the 95th percentile value is greater than the most stringent applicable criterion, there is reasonable potential for that pollutant to cause or contribute to exceedances of water quality standards and a WQBEL is required.

d. Fourth Path

If the effluent data contains three or more detected and quantified values (i.e., values that are at or above the ML), but at least one value in the data set is less than the ML, a parametric reasonable potential analysis is conducted according to the following steps.

(1) If the number of censored values (those expressed as a “less than” value) account for less than 80 percent of the total number of effluent values, calculate the M_L (the mean of the natural log of transformed data) and S_L (the standard deviation of the natural log of transformed data) and conduct a parametric reasonable potential analysis, as described above for the Third Path.

(2) If the number of censored values account for 80 percent or more of the total number of effluent values, conduct a non-parametric reasonable potential anlaysis, as described below for the Fifth Path. (A non-parametric analysis becomes necessary when the effluent data are limited, and no assumptions can be made regarding its possible distribution.)

e. Fifth Path

A non-parametric reasonable potential analysis is conducted when the effluent data set contains less than three detected and quantified values, or when the effluent data set contains three or more detected and quantified values but the number of censored values account for 80 percent or more of the total number of effluent values. A non-parametric analysis is conducted by ordering the data, comparing each result to the applicable criterion, and accounting for ties. The sample number is reduced by one for each tie, when the dilution-adjusted method detection limit (MDL) is greater than the criterion. If the adjusted sample number, after accounting for ties, is greater than 15, the pollutant has no reasonable potential to exceed the water quality standards. If the sample number

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is 15 or less, the analysis is inconclusive, monitoring is required, and any existing effluent limits in the expiring permit are retained.

4. Reasonable Potential Analysis

Table F-11 presents results of the reasonable potential analysis. Data used for this analysis are from October 2003 to December 2007 for most inorganics, and from November 2003 to November 2007 for most organics. A dilution of 150:1 was assumed as explained above. The analysis was performed in accordance with Ocean Plan procedures. The endpoint for each criterion is identified. Results show "reasonable potential" for mercury, and as a result, this Order establishes an effluent limitation for mercury. An effluent limit is retained for chronic toxicity because monitoring under the previous permit showed toxicity levels close to the limit.

As shown in the table, the reasonable potential analysis commonly resulted in Endpoint 3, meaning that the analysis is inconclusive, when a majority of the effluent data is reported as ND (not detected). In these circumstances, the "inconclusive" result is an indication of no concern for a particular pollutant; however, continued monitoring is required during the term of the permit.

a. **TCDD Equivalents.** The calculations to complete a reasonable potential analysis for TCDD equivalents were more complicated than the analysis for other individual pollutants since each sample is analyzed for 16 congeners (Attachment E Section IV.A). For each of the 18 samples (collected between March 2003 and November 2007) the TCDD equivalent of each congener was calculated. When a congener was identified as DNQ (detected but not quantified), then the detection limit value was used in determining the TCDD equivalent for that sample. For each congener in each sample, the TCDD equivalent was calculated using the TEF and BEF as described in Attachment A TCDD equivalents. To determine the TCDD equivalent for each sample, the TCDD equivalents of each congener in that sample were summed.

   The State Water Board has developed a reasonable potential calculator (RPcalc 2.0) for use with the Ocean Plan. The use of this program is described at http://www.waterboards.ca.gov/water_issues/programs/ocean/docs/trirev/stakeholder050505/rphelp20.pdf The calculator is available at the State Water Board's web site: www.waterboards.ca.gov/plnspols/docs/oplans/rpcalc.zip. The calculator was used to determine the need for TCDD equivalents limits in this Order.

   To determine the upper 95th upper confidence bound for the 95th percentile the TCDD equivalent value for the set of 18 samples, the TCDD equivalent value for each sample, or zero for samples with no congeners detected, was entered into the RPcalc program. The results, using a dilution ratio of 76:1, showed no reasonable potential for TCDD equivalents. Therefore, there would also be no reasonable potential assuming 150:1 dilution.

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b. **Chronic Toxicity.** The reasonable potential analysis shown in Table F-11 does not show reasonable potential for chronic toxicity when accounting for at least 150:1 dilution; however, USEPA finds reasonable potential by the first path identified above because monitoring data collected during the term of the previous permit showed chronic toxicity at levels close to the limit and because similar excursions could occur in the future.

c. **Total Chlorine Residual.** On May 17, 1989, the Regional Water Board adopted Order No. 89-71, amending Order No. 88-106 to delete disinfection requirements for the effluent. The Regional Water Board action was based on the Discharger's technical report dated April 3, 1989, *Wastefield Transport and Bacteriological Compliance Studies of the San Francisco Ocean Outfall*. The studies were conducted in 1987 and 1988. The findings indicated that the non-disinfected wastewater discharge from the Discharge Point 001 did not violate the Ocean Plan bacteriological body-contact standards. There is no disinfection of the effluent and thus no potential for disinfectant residuals or by-products, for example from chlorine, to impact the effluent.

Table F-11. Reasonable Potential Analysis Results for the Discharge Point 001

Table B Pollutant	Most Stringent WQO (µg/L)(1)	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	Result, Comment
Objectives for Protection of Marine Aquatic Life					
Ammonia	600	93	0	44	Endpoint 2
Arsenic	8	51	34	5.9	Endpoint 2
Cadmium	1	51	32	1.9	Endpoint 2
Chlorinated Phenolics	1	15	15	ND	Endpoint 3
Chromium (VI)	2	72	42	5.4 (DNQ)	Endpoint 2
Acute Toxicity	0.3(6)				Endpoint 2
Chronic Toxicity	1(2)	53	22	50	Endpoint 3(4) **Effluent Limit** and monitoring
Copper	3	51	0	70	Endpoint 2
Cyanide	1	52	9	6.8	Endpoint 2
Endosulfan (total)	0.009	18	18	ND	Endpoint 2
Endrin	0.002	18	18	ND	Endpoint 2
HCH	0.004	18	18	ND	Endpoint 2
Lead	2	51	20	8.6	Endpoint 2
Mercury	0.04	53	0	12	Endpoint 1 –**Effluent limit** and monitoring
Nickel	5	51	3	7.2	Endpoint 2
Non-chlorinated Phenolics	30	15	14	5.0	Endpoint 3
Radioactivity(3)	-	9	3	37	Endpoint 2
Selenium	15	51	37	1.8	Endpoint 2
Silver	0.7	51	21	3.8	Endpoint 2
Total Chlorine Residual	2	0	0	0(5)	Endpoint 2
Zinc	20	51	0	146	Endpoint 2
Objectives for Protection of Human Health – Noncarcinogens					
1,1,1-Trichloroethane	540000	20	20	ND	Endpoint 2
2,4-Dinitrophenol	4.0	15	14	5.0	Endpoint 3

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Table B Pollutant	Most Stringent WQO (µg/L)[1]	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	Result, Comment
2-Methyl-4,6-Dinitrophenol	220	15	15	ND	Endpoint 3
Acrolein	220	12	11	22	Endpoint 3
Antimony	1200	18	17	0.94	Endpoint 2
Bis(2-Chloroethoxy)Methane	4.4	15	15	ND	Endpoint 3
Bis(2-Chloroisopropyl)Ether	1200	15	15	ND	Endpoint 3
Chlorobenzene	570	20	18	0.44	Endpoint 2
Chromium (III)	190000	51	30	5.4	Endpoint 2
Dichlorobenzenes	5100	19	13	1.2	Endpoint 2
Diethyl Phthalate	33000	15	14	0.47	Endpoint 3
Dimethyl Phthalate	820000	15	15	ND	Endpoint 3
Di-n-Butyl Phthalate	3500	15	15	ND	Endpoint 3
Ethylbenzene	4100	20	16	0.64	Endpoint 2
Fluoranthene	15	17	17	ND	Endpoint 2
Hexachlorocyclopentadiene	58	15	15	ND	Endpoint 3
Nitrobenzene	4.9	15	15	ND	Endpoint 3
Thallium	2	18	18	ND	Endpoint 2
Toluene	85000	20	8	1.6	Endpoint 2
Tributylin	0.0014	17	16	0.008	Endpoint 2
Objectives for Protection of Human Health – Carcinogens					
1,1,2,2-Tetrachloroethane	2.3	20	20	ND	Endpoint 2
1,1,2-Trichloroethane	9.4	20	20	ND	Endpoint 2
1,1-Dichloroethylene	0.9	20	20	ND	Endpoint 2
1,2-Dichloroethane	28	20	19	0.08	Endpoint 2
1,2-Diphenylhydrazine	0.16	15	15	ND	Endpoint 3
1,3-Dichloropropylene	8.9	20	20	ND	Endpoint 2
1,4 Dichlorobenzene	18	19	13	0.84	Endpoint 2
TCDD Equivalents	3.9E-9	18	3	1.8E-09	Endpoint 2
2,4,6-Trichlorophenol	0.29	15	15	ND	Endpoint 3
2,4-Dinitrotoluene	2.6	15	15	ND	Endpoint 3
3,3'-Dichlorobenzidine	0.0081	15	15	ND	Endpoint 3
Acrylonitrile	0.10	13	13	ND	Endpoint 3
Aldrin	2.2E-5	18	18	ND	Endpoint 2
Benzene	5.9	20	20	ND	Endpoint 2
Benzidine	6.9E-5	15	15	ND	Endpoint 3
Beryllium	0.033	18	17	0.086	Endpoint 2
Bis(2-Chloroethyl)Ether	0.045	15	15	ND	Endpoint 3
Bis(2-Ethylhexyl)Phthalate	3.5	15	15	ND	Endpoint 3
Carbon Tetrachloride	0.90	17	17	ND	Endpoint 2
Chlordane	2.3E-5	18	18	ND	Endpoint 2
Chlorodibromomethane	8.6	20	19	0.95	Endpoint 2
Chloroform	130	20	5	9.8	Endpoint 2
DDT (total)	0.00017	18	18	ND	Endpoint 2
Dichlorobromomethane	6.2	18	13	0.65	Endpoint 2
Dieldrin	0.00004	18	18	ND	Endpoint 2
Halomethanes	130	19	14	0.66	Endpoint 2
Heptachlor	0.00005	18	18	ND	Endpoint 2
Heptachlor Epoxide	0.00002	18	18	ND	Endpoint 2
Hexachlorobenzene	0.00021	15	15	ND	Endpoint 3

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Table B Pollutant	Most Stringent WQO (µg/L)[1]	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	Result, Comment
Hexachlorobutadiene	14	15	15	ND	Endpoint 3
Hexachloroethane	2.5	15	15	ND	Endpoint 3
Isophorone	730	15	15	ND	Endpoint 3
Methylene Chloride	450	20	14	1.6	Endpoint 2
N-Nitrosodimethylamine	7.3	15	15	ND	Endpoint 3
N-Nitrosodi-n-Propylamine	0.38	15	15	ND	Endpoint 3
N-Nitrosodiphenylamine	2.5	15	15	ND	Endpoint 3
PAHs (total)	0.0088	20	18	0.0083	Endpoint 2
PCBs	1.9E-5	18	18	ND	Endpoint 2
Tetrachloroethylene	2.0	20	9	8.4	Endpoint 2
Toxaphene	0.00021	18	18	ND	Endpoint 2
Trichloroethylene	27	20	20	ND	Endpoint 2
Vinyl Chloride	36	20	19	1.3	Endpoint 2

Table notes

(1) Ocean Plan Table B Water Quality Objectives limiting concentrations are 6-month median values.
(2) Chronic toxicity is based on a daily maximum.
(3) Measured in pCi/L, radioactivity not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30253 of the CCR§30253.
(4) Reasonable Potential was not found by calculation but was an issue in the previous permit and effluent limits retained, also monitoring is required in the Ocean Plan (Section III.C.c.(4))
(5) Chlorine is not added to the effluent for disinfection, or any other purpose, and there is no monitoring for residual chlorine
(6) The Ocean Plan does not require monitoring for acute toxicity and previous monitoring did not show reasonable potential.

- NA indicates that effluent data is not available.
- ND indicates that the pollutant was not detected.

5. WQBEL Calculations

As described by Section III. C of the Ocean Plan, Effluent limits for Table B pollutants that show reasonable potential are calculated according to the following equation.

$$Ce = Co + Dm (Co – Cs)$$

Where

Ce = the effluent limitation (µg/L)

Co = the concentration (the water quality objective) to be met at the completion of initial dilution (µg/L).

Cs = background seawater concentration (µg/L)

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

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a. Mercury

The reasonable potential analysis showed reasonable potential for mercury because the maximum monthly average mercury concentration in the effluent was 12 µg/L, which when accounting for dilution of 150:1, results in a concentration of 0.08 µg/L, which is above the six-month median water quality objective of 0.04 µg/L. Therefore, this Order establishes mercury WQBELs as described below:

Co (6-month median) = 0.04 µg/L
Co (daily maximum) = 0.16 µg/L
Dm = 149 (based on a dilution of 150:1)
Cs = 0.0005 µg/L (based on Ocean Plan Table C)

Ce (6-month median) = Co (6-month median) + Dm (Co – Cs) = 5.9 µg/L
Ce (daily maximum) = Co (daily maximum) + Dm (Co – Cs) = 24 µg/L

b. Chronic Toxicity

The reasonable potential analysis using the Ocean Plan calculation method did not show reasonable potential for chronic toxicity (accounting for at least 150:1 dilution); however, USEPA finds reasonable potential because monitoring under the previous permit showed chronic toxicity at levels close to the limit and since similar excursions may occur that limit is retained in this Order. A chronic toxicity WQBEL may be calculated as follows:

Co (daily maximum) = 1.0 TUc
Dm = 149 (based on a dilution of 150:1)
Cs = 0 TUc (based on Ocean Plan Table C)
Ce (daily maximum) = Co (daily maximum) + Dm (Co – Cs) = 150 TUc

6. Anti-Backsliding/Antidegradation

Most effluent limitations established by this Order are at least as stringent as limitations in the previous permit; and therefore, CWA anti-backsliding requirements are not triggered. As for acute toxicity, monitoring required under the previous permit did not show any reasonable potential. Also, the Ocean Plan does not require acute toxicity limits for this type of discharge, but does require monitoring and an effluent limit for chronic toxicity. Thus, this permit does not contain an acute toxicity limit but does require continued monitoring, and it imposes a chronic toxicity limit.

As for chronic toxicity, the new limit is higher than the limit in the previous permit; however, this is permissible under anti-backsliding regulations. Although the permittee did not exceed the chronic toxicity limit in the previous permit, the previous permit allowed the removal of ammonia prior to chronic toxicity testing. This Order does not allow removal of ammonia prior to toxicity testing because ammonia may contribute to toxicity in the receiving water. Accordingly, the Discharger's toxicity monitoring requirements have been modified. Data provided by the Discharger

indicate that a chronic toxicity limit of 76 cannot consistently be met without ammonia removal. Therefore, this Order applies the new dilution factor of 150:1 to calculate the chronic toxicity limit and relies on the backsliding exceptions under CWA Sections 402(o)(2)(B)(i) and 402(o)(2) (E), and 40 CFR 122.44(l)(2)(b)(1) and 122.44(l)(2)(i)(E).

Because this Order does not authorize an increased rate of discharge or increased pollutant loadings to receiving waters, the antidegradation requirements of 40 CFR 131.13 and State Water Board Resolution No. 68-16 are also satisfied.

D. Land Discharge Specifications

Not Applicable.

E. Reclamation Specifications

Not Applicable.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

This Order is designed to minimize the influence of the discharge on the receiving water. Ocean Plan Section II serves as the basis for the receiving water limitations specified in Section V.A of the Order. These limits are needed to ensure that the receiving water complies with Ocean Plan water quality objectives and therefore protects beneficial uses.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. CWC §13267 and §13383 authorize the Regional Water Board to require technical and monitoring reports. In addition, the Ocean Discharge Criteria (40 CFR Part 125, subpart M) authorize actions necessary to prevent unreasonable degradation of the marine environment. The Monitoring and Reporting Program (MRP), Attachment E, establishes monitoring and reporting requirements to implement federal and State requirements. The rationale for the monitoring and reporting requirements contained in the MRP for this facility is presented below.

A. Influent Monitoring

In general, influent monitoring requirements are unchanged from the previous permit. Influent monitoring requirements for BOD_5 and TSS are necessary to determine compliance with this Order's 85 percent removal requirement. Influent monitoring for tributyltin and TCDD equivalents are no longer required because previous monitoring has provided for characterization of these pollutants in influent wastewater.

The influent monitoring location remains unchanged, but this Order revises its name for consistency with other NPDES permits in California.

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B. Effluent Monitoring

In general, effluent monitoring requirements for discharges from Discharge Point 001 are retained from the previous permit, with the following exceptions:

- Monitoring for toxic pollutants has been updated to reflect the most recent list of pollutants in Ocean Plan Table B.
- Monitoring for mercury is required one time per month to determine compliance with new mercury effluent limitations.
- The monitoring frequency for chronic toxicity has been set at once per quarter. Monitoring data collected each month during the term of the previous permit showed results consistently below effluent limitations.

The effluent monitoring location for Discharge Point 001 has not changed; however, its name has been changed from E-007 to EFF-001, for consistency with other NPDES permits in California.

Monitoring requirements for discharges at a representative CSOD outfall are retained from the previous permit. However, this Order establishes an additional requirement to monitor for the Table B pollutants not currently monitored at this outfall to further characterize these discharges for future reasonable potential analysis.

C. Whole Effluent Toxicity Testing Requirements

The Discharger is required to conduct chronic toxicity tests as described in the MRP (Attachment E) using the Echinoderm Embryo Development test in accordance with the USEPA approved method in 40 CFR 136 (currently *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms*, August 1995).

The Discharger performed a screening phase study prior to the expiration of the previous permit for the most sensitive West Coast marine species. The results of this study indicated that the giant kelp germination and growth test was the most sensitive, but suggested the test was variable in part due to the availability and quality of field-collected organisms, and suggested the use of the echinoderm embryo development test because gravid species of two alternate echinoderms, the sand dollar and the purple urchin, could alternately be obtained year-round.

This Order retains the requirement to conduct chronic toxicity monitoring with the echinoderm embryo development test and requires the Discharger to re-screen for the most sensitive species once during the term of this Order.

D. Receiving Water Monitoring

Receiving water monitoring is necessary to ensure compliance with the receiving water limits specified in Section V.A of the Order. Requirements to monitor bacteria in shoreline receiving waters and to conduct recreational use surveys, in the Provisions of

the Order, Section VI.6.(9), during and immediately after CSOD events are retained from the previous permit. The monitoring requirements in MRP (Attachment E) sections IV, VIII, and X are sufficient to characterize receiving water quality.

E. Other Monitoring Requirements

Requirements of the Southwest Ocean Outfall Offshore Monitoring Program are retained from the previous permit to determine the effect of the discharge on sediment quality in the vicinity of the outfall and to determine whether pollutants are bioaccumulating in fauna. The program includes monitoring at 45 locations, including 24 reference locations that are unaffected by the discharge. Monitoring includes chemical and physical analysis of sediment, analysis of the benthic (bottom) community, and analysis of fish and macroinvertebrate species collected by trawling.

1. Offshore Monitoring Program History

In 1986, the Southwest Ocean Outfall was completed to transport primary treated wastewater from the Richmond-Sunset Plant, which was replaced in 1993 by the Oceanside Plant. Monitoring conducted from 1986 to 1996 indicated that a single reference location was inadequate to fully characterize background conditions and to determine whether observed differences between monitoring locations were attributable to natural variation or to the discharge. These early studies also showed that the season or time of year had the greatest impact on study results, and that the relatively close proximity of the Southwest Ocean Outfall to the mouth of the San Francisco Bay confounded interpretation of monitoring results due to the effects of outflow near the Golden Gate.

Following collaboration between the Discharger and USEPA, when the Discharger's permit was reissued in 1997, the study area was expanded to include multiple reference sites, and monitoring frequency was reduced to once per year, in the Fall. In the permit, seven fixed monitoring sites were retained, and an additional 40 monitoring locations were added using USEPA's Environmental Monitoring Assessment Program (EMAP) random sample site selection process. The expanded study area included reference locations in the Gulf of the Farallones and the Monterey Bay National Marine Sanctuaries.

In 2002, additional benthic monitoring locations, south of the discharge pipe, were included in the program to investigate whether the pipe structure itself was affecting benthic infauna abundance through an induced reef affect. When the Discharger's permit was reissued in 2003, the number of required trawls was reduced from eight to two, following observation of no differences among mobile organisms between outfall and reference locations, and in an effort to reduce mortality of collected organisms. At that time, some sediment monitoring locations were also removed from the program because they were found to be inconsistent with the rest of the study area.

As stated in Order No. R2-2003-0073, "This program will be implemented dynamically to maximize the amount of relevant and useful data that can be gathered within the five-year permit life by allowing the EPA, the Regional Water Board, and the City and

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County of San Francisco to agree to program corrections in response to ongoing analyses of monitoring data."

2. Monitoring Results from Previous Permit

In January 2006, the Discharger submitted the most recent summary report covering the years from 1997 through 2004. The report indicates no adverse trends in sediment characteristics as a result of the discharge. The mean particle sizes at the outfall area have not changed since pre-construction and pre-discharge periods, which suggests that the Southwest Ocean Outfall does not affect sediment grain size distribution. Additional data collected in 2005 and 2006 show that the outfall area continues to reflect pre-construction and pre-discharge sediment grain size distribution.

Chemical analysis for total solids; total volatile solids; total organic carbon; total Kjeldahl nitrogen; organic pollutants, such as PAHs, PCBs, and DDTs; and trace metals were used to assess the chemical quality of the sediment. Total volatile solvent measurements correlated with areas with high fractions of silt and clay, while total organic carbon and total Kjeldahl nitrogen results correlated with areas of fine sand. All three parameters are historically highest in the northern reference region, indicating little influence of the Southwest Ocean Outfall discharge on these parameters. Sediment chemical quality data collected in 2005 and 2006 indicate that reference stations exceeded tolerance bounds derived from previous monitoring data for percent silt and clay and total organic carbon, but outfall areas were within tolerance bounds for all constituents.

PAH contaminants were present in the sediments prior to discharge and, over the 8 years of measurements, appear to be transitory and affected by sediment movement via currents and winter storms. Concentrations were compared to the Effects Range Medium (ERM) of Sediment Quality Guidelines, which are concentrations of individual compounds that demonstrate the 50% probability of toxic effects. No ERM values for any individual PAH, PCB, or DDT were exceeded during the eight year period. Trace metal analysis of the sediment resulted in consistent exceedances of the ERM values for nickel during the eights years of monitoring; however, nickel occurs naturally in large amounts in the San Francisco Bay area. Overall, the sediment data for the eight years between 1997 an 2004 indicate that the Southwest Ocean Outfall discharge has not negatively affected sediment quality. In 2005, concentrations of 18 PAHs and three PCBs were detected throughout the study area, and total DDTs were detected at three stations. One DDT and 18 PAH compounds were detected in the sediment in 2006. Cadmium, nickel, zinc, and selenium were significantly lower at outfall stations in 2005 over the 2004 results, while nickel concentrations were elevated at all stations in the study area in 2005 and 2006, similar to previous years. Arsenic, selenium, and silver were significantly higher at outfall stations in 2006 versus 2005, while aluminum and mercury were significantly lower at outfall stations in 2006 versus 2005.

The trend of the benthic community analysis over the eight year period indicated that community abundance was more affected by climate than by the discharge, because decreases in abundance correlated with reduced upwelling of the California Current, associated with oceanographic events like El Niño. Analyses of demersal fish and

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epibenthic invertebrate communities for the eight year period did not indicate any apparent effects related to the Southwest Ocean Outfall and observed differences in species composition and abundance correlated with El Niño and La Niña events. Benthic infauna community abundance decreased in 2005 and 2006 to the lowest documented overall abundance for the previous ten years. The local upwelling index in 2004 through 2006 was lower than normal, and the sequential years of decreased summer current upwelling occurrences may be related to an overall increase in infauna abundance. Trawl organisms collected in 2005 and 2006 represented a general assortment of native species common to central California near-shore communities; however, the demersal fish community measures of abundance and diversity were at or below the lower tolerance bounds for the outfall location in 2006. Physical anomalies of collected species were similar in all the 2004, 2005, and 2006 sample events.

Samples were screened for physical anomalies, and tissues were analyzed for bioaccumulative substances. Overall organism conditions were similar between the outfall locations and reference locations. The English sole and the Dungeness crab were species selected for bioaccumulation analysis. Three DDTs, 11 PAHs, and 31 PCB congeners were detected in the liver and hepatopancreas tissues. PCB concentrations were statistically significantly higher in the livers of fish collected from the outfall area over those of fish collected in the reference area throughout the study years, and total PAHs frequently exceeded the screening value in all tissue types in organisms from both the reference and outfall areas. There were not any statistically significant trends in bioaccumulation in any organism from either the reference or outfall areas, nor any trends between organism tissue and sediment concentrations. Mercury levels in fish muscle and zinc concentrations in the fish liver at the outfall area were significantly greater than those sampled in the reference area; however, all concentrations were below the mercury screening value the Discharger chose for the purposes of the study (mercury 0.5 ppm wet weight, and zinc 1500 ppm wet weight). Total PAH concentrations above the screening value were detected in every tissue type (except for fish liver) at both the reference and outfall locations in 2005, and were detected above the screening value in fish liver in 2006. Trace metal concentrations in 2005 and 2006 were similar to previous years and were similar to California coastal organisms in other studies.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D to the Order.

Section 122.41(a)(1) and (b) through (n) establish conditions that apply to all State issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with section 123.25, this Order omits federal conditions that address enforcement authority specified

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in sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Monitoring and Reporting Program

The rationale for these requirements is described in Section VI, above and in Attachment G, Regional Standard Provisions and Monitoring Requirements for NPDES Wastewater Discharge Permits, July 2009.

C. Special Provisions

1. Reopener Provisions

These provisions are based on 40 CFR Part 123 and allow future modification of this Order and its effluent limitations as necessary.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Combined Sewage Collection System Overflow Study

The combined sewer system commingles storm water and domestic and industrial sewage. Heavy storm events can potentially result in flows that exceed the collection system capacity, at least in some areas. Although all overflows would be captured by the collection system at another point and not be discharged to surface waters, the presence of storm water and sewage on and around streets and sidewalks where human exposure could occur would constitute a nuisance as defined by CWC §13050. Such nuisances are prohibited by Regional Standard Provisions, and Monitoring and Reporting Requirements for NPDES Wastewater Discharge Permits (Attachment G). The purpose of this study is to determine whether nuisance conditions occur during wet weather and, if so, the extent to which they occur and what can be done to minimize or eliminate them.

b. Dilution Model Update and Stratification Data Collection

The available ambient data to determine stratification for the purposes of dilution modeling for this discharge is out-dated and incomplete. This provision requires the Discharger to submit updated data during the next permit reissuance to support new findings related to the most appropriate dilution allowance.

3. Best Management Practices and Pollution Prevention

The provision to continue implementation of a Pollutant Minimization Program is retained from the previous permit and is based on Ocean Plan Section C.9. The provision for pollution prevention is also required as one of the Nine Minimum Controls for combined sewer systems, described in under item 6, below.

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4. Construction, Operation, and Maintenance Specifications

a. Wastewater Facilities, Review and Evaluation, and Status Reports

This provision is retained from the previous permit.

b. Operations and Maintenance (O&M) Manual, Review and Status Reports

This provision is based on 40 CFR Part 122 and is retained from the previous permit.

c. Contingency Plan, Review, and Status Reports

This provision is required by Regional Water Board Resolution No. 74-10 and 40 CFR Part 122, and is retained from the previous permit.

5. Special Provisions for Municipal Facilities

a. Pretreatment Program Requirements. This provision requires the Discharger to implement and enforce its approved pretreatment program in accordance with federal pretreatment regulations at 40 CFR Part 403.

b. Sludge Management Practices Requirements. This provision is based on the Basin Plan Chapter IV, Section 14.17, and 40 CFR Parts 257 and 503.

6. Combined Sewer Overflow Control Policy Requirements

The requirements of this provision specify performance criteria for operating the Combined Sewer System under wet weather controls, and are retained from the previous permit. The USEPA *Combined Sewer Overflow Control Policy* (59 FR 18688) regulates the operation of combined sewer systems. The Discharger has designed, constructed, and implemented control and treatment strategies that effectively address wet weather flow conditions, including treatment for 100% of the combined effluent.

The requirements of the USEPA *Combined Sewer Overflow Control Policy* are summarized below:

a. CSO Operation Plan. The Operation Plan is required as part of the Nine Minimum Controls and is revised as necessary to include the long term controls implemented in the long term control plan. This Order retains a provision to revise and update this Plan.

b. Nine Minimum Controls. The Combined Sewer Overflow Control Policy requires "Nine Minimum Controls" to satisfy the CWA technology-based requirements regarding CSOs. These are specifically stated in the provisions of this Order (Section VI.C.6.b) and described generally below .

(1) Conduct proper operations and regular maintenance programs. This control includes a requirement for continuing development and implementation of an Operations Plan.

(2) Maximize use of the collection system for storage. This control refers specifically to the sewer lines, which provide 2.2 million gallons of storage.

(3) Review and modify pretreatment program. This control is intended to minimize the impacts of non-domestic discharges.

(4) Maximize flow to the Plant. Maximizing flow to the Plant maximizes the volume of combined sewer flow treated.

(5) Prohibit CSOs during dry weather. The CWA prohibits CSOs during dry weather, and that prohibition is implemented as one of the Nine Minimum Controls.

(6) Control solid and floatable materials in the CSOs. The control of solids and floatable material is implemented via a baffle system within the combined sewer system and removal of the collected solids captured in the storage/transports.

(7) Develop and implement a Pollution Prevention Program. The Discharger is required to implement a Pollution Prevention Program, as described in section VI.C.3.a. of this Order.

(8) Notify the public of overflows. The Discharger's current notification process fulfills these requirements. The process includes permanent information signs at all beach locations around the perimeter of San Francisco. These signs inform the public in English, Spanish, and Chinese that international NO SWIMMING signs will be posted when it is unsafe to enter the water, and they warn users that bacteria concentrations may be elevated during periods of heavy rainfall. NO SWIMMING signs are posted at beach locations whenever an overflow occurs in the vicinity. These signs remain posted until water sampling indicates that bacteria concentrations have dropped below the level of concern for water contact recreation. Both signs reference the Discharger's toll-free water quality hotline (1-877-SFBEACH), which is updated weekly or whenever beach conditions change. The Discharger also provides color coded indicators (green/open; red/posted) of beach water quality conditions on the Internet (http://beaches.sfwater.org).

(9) Monitor to effectively characterize overflow impacts and the efficacy of CSOD controls. Monitoring requirements established by this Order include all of the Ocean Plan Table B toxic pollutants to better characterize the potential impacts of CSODs on the receiving water.

c. **Long-Term Control Plan.** In conformance with the *Combined Sewer Overflow Control Policy*, the Discharger developed a long-term control plan to select CSOD controls to comply with water quality standards, based on consideration of the Discharger's financial capability. The purpose of the long-term control plan is to fulfill the water quality-based requirements of the Clean Water Act. The Discharger's program is consistent with the USEPA *Combined Sewer Overflow Control Policy* Presumptive Approach, which presumes that an adequate level of

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control is provided to meet the water quality requirements of the CWA contingent upon the satisfaction of any of the following criteria: (1) no more than an average of four overflow events per year, provided that the permitting authority may allow up to two additional overflow events per year (for the purpose of this criterion, an overflow event is one or more CSOs as a result of a precipitation event that does not receive the minimum treatment provided below); (2) the elimination or capture for treatment of no less than 85 percent by volume of the combined sewage collected in the system during precipitation events on a system-wide annual average basis; or (3) the elimination or removal of no less than the mass of pollutants, identified as causing water quality impairment through the sewer system characterization, monitoring, and modeling effort, for the volumes that would be eliminated or captured for treatment under (2) above. Combined sewer overflow treatment shall be a minimum of primary clarification for removal of floatables and settleable solids, solids and floatables disposal, and if necessary to meet water quality standards, disinfection.

The Discharger will continue to implement the Long-Term Control Plan and will characterize combined sewer discharges and the efficacy of the Long-Term-Control-Plan controls through combined sewer discharge monitoring, a requirement that is carried over from the previous permit.

The CSODs are consistent with the requirements of the Presumptive Approach because the Discharger captures and provides treatment to 100 percent of the combined sewer flow, which is greater than the minimum treatment requirement of 85 percent specified under the Presumptive Approach, and results in zero untreated CSOs per year. The effluent is not disinfected because State Water Board Order No.79-16 concluded that allowing an average of eight CSODs per year from Ocean Plan requirements would serve the public interest and would not compromise beneficial uses of the receiving waters.

7. Sensitive Areas Feasibility Report for Overflows

Under the Combined Sewer Overflow Control Policy, the combined sewer discharge points for the Oceanside plant are located in a sensitive area where primary contact recreation occurs. Section II. C. 3 of the Combined Sewer Overflow Control Policy, “Consideration of Sensitive Areas,” states that the Discharger’s long-term combined sewer overflow control plan should:

a. Prohibit new or significantly increased overflows;

b. (1) Eliminate and relocate overflows that discharge to sensitive areas wherever physically possible and economically achievable, except where elimination or relocation would provide less environmental protection than additional treatment.

(2) Where elimination or relocation is not physically possible and economically achievable, or would provide less environmental protection than additional treatment, provide the level of treatment for remaining

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overflows deemed necessary to meet WQS for full protection of existing and designated uses. In any event, the level of control should not be less than those described in Evaluation of Alternatives below; and

c. Where elimination or relocation has been proven not to be physically possible and economically achievable, permitting authorities should require, for each subsequent permit term, a reassessment based on new or improved techniques to eliminate or relocate, or on changed circumstances that influence economic achievability."

The Discharger is to submit a report, no later than two years after the effective date of this Order, implementing the "consideration of sensitive areas" section of the Combined Sewer Overflow Control Policy. At a minimum, the discharger is to assess techniques to eliminate or relocate CSODs to sensitive areas, and discuss the level of treatment for any remaining CSODs necessary to meet water quality standards.

VIII. PUBLIC PARTICIPATION

The 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 City and County of San Francisco Oceanside Water Pollution Control Plant and Collection System, including the Westside Wet Weather Facilities. As a step in the WDR adoption process, 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 WDRs for the discharge and has provided an opportunity to submit their written comments and recommendations. Notification was provided through a public notice in the San Francisco Recorder during the time period June 8 to June 14, 2009.

Staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail or email to

Derek Whitworth
San Francisco Bay Regional Water Quality Control Board
1515 Clay St., Suite 1400
Oakland, CA 994612

Phone: 510 622 2349
Email: DWhitworth@waterboards.ca.gov

Written comments must be received at the Regional Water Board offices by 5:00 p.m. on July 6, 2009, to be given full consideration and to be fully responded to by Regional Water Board staff.

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B. Public Hearings

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

Date: August 12, 2009
Time: 9:00 a.m.
Location: Elihu Harris State Office Building
1515 Clay Street, 1st Floor Auditorium
Oakland, CA 94612

Interested persons are invited to attend. At this public hearing, the Regional Water Board will hear testimony, if any, on this Tentative Order.. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

The Order may then be adopted by the Regional Water Board and USEPA at the subsequent hearing to be held on September 9, 2009, at the same time and place.

Please be aware that dates and venues may change. One can access the current agenda for any changes at: www.waterboards.gov/sanfranciscobay.

C. 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

D. Information and Copying

The Report of Waste Discharge, 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 by calling 510-622-2300.

E. Register of Interested Persons

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

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F. Additional Information

Requests for additional information or questions regarding this order should be directed to Derek Whitworth at 510-622-2349 or email DWhitworth@waterboards.ca.gov.

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Appendix 1

Ocean Discharge Criteria Evaluation
NPDES Permit CA0037681
City and County of San Francisco
Oceanside Water Pollution Control Plant (Southwest Ocean Outfall)
Prepared by EPA, Region 9 Water Division
April 27, 2009

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Background and Purpose

The purpose of this analysis is to provide supporting documentation for the EPA's evaluation of unreasonable degradation of the marine environment under Section 403 of the Clean Water Act (CWA) for the City and County of San Francisco's Oceanside draft permit. This draft permit is jointly proposed by the EPA and the State of California's San Francisco Bay Regional Water Quality Control Board (Water Board). This analysis applies to the discharge to Federal waters from the Southwest Ocean Outfall.

EPA Region 9 is proposing to comply with the CWA evaluation of unreasonable degradation for this discharge by applying State water quality standards contained in the California Ocean Plan (COP) to the discharge from the Southwest Ocean Outfall, with the exception of the pollutant TCDD equivalents (dioxin). In calculating NPDES permit limitations and conditions for dioxin for this discharge, EPA is using the COP numeric criterion for this pollutant, as well as the COP standard implementation procedures, such as dilution procedures. However, we are proposing to use additional, more recent scientific information that has not yet been considered for inclusion in the COP water quality standards, based on EPA's ocean discharge criteria regulations at 40 CFR 125.122(a). For the calculation of NPDES permit limitations for dioxin, we are proposing to use recently updated toxicity equivalency factors (TEFs), published by the World Health Organization in 2005, as well as the congener-specific bioconcentration equivalency factors (BEFs) used for the Great Lakes System. This approach to developing NPDES permit limits for dioxin was recommended in the "Bay Area Clean Water Agencies' Draft Dioxin Issue Paper: Expert Panel Response and Recommendations," dated April 4, 2008. It incorporates recent scientific information for dioxins on a congener-specific basis, while continuing to use the COP criterion and standards implementation procedures. Region 9's use of the TEFs and BEFs in the draft permit at this time does not constitute EPA endorsement of this approach in other situations.

Because we are proposing to supplement the State water quality standards with some additional information for dioxin, we have developed an analysis of the 10 factors under 40 CFR 125.122(a) to determine unreasonable degradation of the marine environment. The definition of unreasonable degradation of the marine environment in 40 CFR 125.121(e) states:

Unreasonable degradation of the marine environment means:

(1) Significant adverse changes in ecosystem diversity, productivity and stability of the biological community within the area of discharge and surrounding biological communities,
(2) Threat to human health through direct exposure to pollutants or through consumption of exposed aquatic organisms, or
(3) Loss of esthetic, recreational, scientific or economic values which is unreasonable in relation to the benefit derived from the discharge.

The remainder of this evaluation discusses each of the 10 factors and describes our conclusion that the discharge of dioxin will not cause unreasonable degradation of the marine environment under the Federal regulations.

Evaluation of the Ten Ocean Discharge Criteria under 40 CFR 125.122(a)(1)-(10)

Factor 1: Quantities, Composition, and Potential for Bioaccumulation or Persistence of Pollutants to be Discharged

The quantities and composition of the discharge reflect the main source of dioxins to the plant influent, which appears to be stormwater collected in the combined sewer system. In addition to effluent monitoring, the prior NPDES permit for the Southwest Ocean Outfall required a sampling program to assess dioxin in the City's wastewater discharged to the ocean, and the discharger completed a City-wide dioxin monitoring and assessment report in 2000 (Rourke et. al., 2000). The City's combined sewer system commingles wastewater from homes and businesses with stormwater. The sampling results show that stormwater has significantly higher concentrations of dioxins than dry weather wastewater influent flowing to the plant.

Because all of the City's stormwater receives some level of treatment prior to discharge, the discharge of dioxin to the environment is less than would be expected in a similar community with separate storm sewers. In fact the City's monitoring report (Rourke et. al., 2000) estimated that the wastewater control facilities remove more than 80% of dioxin contained in all stormwater runoff from the City. Communities with separate storm sewers are not categorically required to provide treatment and therefore generally remove no dioxin from their stormwater.

According to the discharger's report, influent to the City's Southeast plant was significantly higher in dioxin on wet weather days than the influent to the Oceanside plant. The sampling report attributed this result to the fact that the service area for the Southeast plant is primarily industrial, so the eastern side of the City would be expected to have a heavier loading due to emissions from diesel engines and other combustion sources. Influent to the Southeast plant during wet weather was on average 35 pg/l TEQ. The report measured average untreated dry weather influent to the Oceanside plant as 1.3 pg/l TEQ, while the average influent during wet weather was 16 pg/l TEQ. At the Oceanside Plant, wet weather effluent (primary/secondary blend) averaged 1.7 pg/l TEQ, while dry weather effluent was less than 0.06 pg/l.

The quantities and composition of the dioxin discharge from the Southwest Ocean Outfall are fairly well characterized, as the discharger has monitored Southwest Ocean Outfall effluent for the dioxin congeners specified in the COP for over 10 years. However, because the detection levels for available quantitation methods (EPA method 1613 is typically used) are often one or more orders of magnitude higher than the water quality criterion, there is some scientific

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uncertainty associated with the analysis. Of the 18 sample points used to develop this draft permit, the sample taken on February 13, 2007 contained the highest measured level of TCDD equivalents at 1.35x10-7ug/l with the BEFs and TEFs applied, and 1.0x10-6 ug/l with only TEFs applied. On this day, 6 dioxin congeners were detected: 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 2,3,4,6,7,8-HxCDF, OCDD, and OCDF. The most toxic congener, 2,3,7,8-TCDD, was not detected on any of the days. On most days, most of the congeners were not detected, with the exception of OCDD, which is the most commonly detected congener in the effluent.

Results from the dry weather effluent monitoring data required as a condition of the previous NPDES permit show levels of dioxin consistent with dry weather data from other wastewater treatment plants. Using EPA method 1613, the samples shows a majority of non-detect values, with the congener OCDD most commonly detected. The Water Board and EPA applied COP reasonable potential procedures to the dry weather effluent data, with the addition of updated TEF values and the use of the default Great Lakes BEF values. The result of the analysis was no reasonable potential for the discharge of dioxin to cause or contribute to a water quality exceedance, and thus a water quality-based effluent limitation for TCDD equivalents is not required.

Factor 1 also includes the potential for bioaccumulation or persistence. Dioxin is a bioaccumulative and persistent pollutant. The COP water quality criterion was developed to take this into account, and the BEFs quantify the bioaccumulative properties of each congener regulated under the COP. EPA and the Water Board appropriately considered the bioaccumulative properties of the dioxin congeners in the development of the proposed NPDES permit provisions. Additionally, the location of the outfall along with the diffuser ensures that mixing and dispersion occur, and thus it is unlikely that dioxin in the water column or sediments will build to levels expected to threaten human health due to the consumption of exposed aquatic organisms.

In summary, because the main source of dioxin to the Southwest Ocean Outfall discharge appears to be stormwater and because all the stormwater receives treatment, EPA believes the discharge of dioxin to the environment is less than that from other similar communities with separate storm sewers. While the introduction of dioxins continues to be of concern on a global scale, the dioxin contribution from the Southwest Ocean Outfall discharge is not likely to be a significant source in comparison to that from other urban communities.

Factor 2: Potential for Biological, Physical, or Chemical Transport

Biological transport could occur through the bioaccumulative properties of dioxin. This is taken into account by the COP criterion, as human health impacts through the consumption of aquatic organisms are the bases for the most limiting COP criterion for dioxin relevant to this discharge.

As is the case for many organic pollutants in wastewater, dioxin is associated with effluent suspended solids. Thus, physical transport can occur through the movement of sediment, as well as through the water column. The Westside Wet Weather Facilities treatment, which

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consists of solids settling, is effective in removing some dioxin from the discharge (Rourke et. al., 2000).

Because dioxins are persistent compounds that remain stable in the environment, chemical transport is not significant.

The Southwest Ocean Outfall discharges 3.4 to 3.6 nautical miles from the shore, which provides dilution, mixing, and dispersion of pollutants into the open ocean environment. These processes decrease the likelihood that dioxin concentrations in the water column or in sediment would build to levels of concern. The San Francisco Bay is listed as impaired for dioxins under section 303(d) of the CWA, but the receiving waters for the Southwest Ocean Outfall are not listed as impaired. The San Francisco Bay is surrounded by urban development, with more sources of dioxins and fewer opportunities for dispersion into the ocean than the Southwest Ocean Outfall discharge. A comparison of data from the San Francisco Bay's Regional Monitoring Program to sediment and fish tissue data collected as part of the prior NPDES permit's Southwest Ocean Outfall receiving water monitoring requirements concludes that organic pollutants in fish and sediments from San Francisco Bay were higher than those in fish and sediments on the coast (Melwani, undated).

Although the Southwest Ocean Outfall receiving water monitoring does not directly measure dioxins in the sediment and fish tissue of the receiving waters, analysis of bioaccumulative compounds such as mercury and PCBs, including dioxin-like PCBs, was conducted. Based on data collected over ten years, the discharger's analysis did not find any upward trends in the levels of bioaccumulative pollutants in sediments or fish tissue, or any differences between the outfall stations and the reference stations that would indicate an outfall effect (SFPUC, 2006). Thus, EPA does not believe the potential for biological, physical, or chemical transport will cause unreasonable degradation of the ocean environment.

Factor 3: Composition and Vulnerability of Biological Communities

The discharger has conducted benthic infauna community monitoring as well as trawl studies. Fishes collected in the study area represent a general assortment of native species common to central California near-shore waters, with occasional occurrences of species from warmer, southern waters. The biological communities in the vicinity of the discharge appear to be similar to those in other sandy bottom ocean environments off the coast of central California. Federally-listed species under the Endangered Species Act as well as Essential Fish Habitat species under the Magnuson-Stevens Fishery Conservation and Management Act occur in the vicinity of the discharge. EPA is in the process of informal consultation with NOAA Fisheries for this permit reissuance. EPA received a "not likely to adversely affect" determination from NOAA Fisheries for the last two re-issuances of this NPDES permit. Accordingly, EPA is unaware of any specific concerns regarding dioxin for species of concern in the vicinity of the discharge.

Factor 4: Importance of the Receiving Water to the Surrounding Biological Community

EPA is unaware of any unique habitat in the area of the discharge, such as spawning sites, kelp beds, or "hauling out" sites for marine mammals.

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Factor 5: Existence of Special Aquatic Sites

The Monterey Bay National Marine Sanctuary (MBNMS) is located in the vicinity of the discharge. However, the Southwest Ocean Outfall discharge itself is not located within the sanctuary boundary. Instead, it is located within an exclusion zone that extends from off the north coast of San Mateo County and the City and County of San Francisco between Point Bonita and Point San Pedro (NOAA 1992, 1999a). Accordingly, the discharge from the Southwest Ocean Outfall is not expected to have a significant adverse effect on the MBNMS.

Factor 6: Potential Impacts on Human Health

As described in factor 10 below, the proposed NPDES permit is based on a water quality criterion for dioxin TEQ developed for the COP which considers the risk to human health from consuming fish and shellfish. Because dioxin congeners are persistent, bioaccumulative pollutants, the discharger will continue to monitor Southwest Ocean Outfall effluent for the presence of dioxin congeners. However, the reasonable potential analysis conducted using reasonable potential procedures developed for COP water quality objectives indicate that dioxin in the Southwest Ocean Outfall effluent has no reasonable potential to cause or contribute to the exceedance of the receiving water quality standard for dioxin.

Factor 7: Recreational and Commercial Fisheries

Recreational and commercial fishing is common in the Pacific Ocean right outside the San Francisco Bay. For this reason, the discharger has been monitoring sediments and fish tissue for bioaccumulative pollutants for over 10 years as part of the Southwest Ocean Outfall monitoring program. No significant outfall effects or upward trends in pollutant concentrations have been found.

Factor 8: Coastal Zone Management Plan

The California Coastal Zone Management Plan (CZMP) incorporates the COP. Because the COP implements water quality standards for dioxin in the Southwest Ocean Outfall discharge, the COP contains the most relevant and specific CZMP requirements. As previously stated, this draft permit proposes to implement the COP criteria and policies, including the policy on dilution, with the addition of the application of TEFs and BEFs for determining reasonable potential for dioxin under the NPDES program.

The Coastal Zone Management Act requires that states make consistency determinations for any federally licensed or permitted activity affecting the coastal zone of a state with an approved CZMP. California's Coastal Management Program was approved in 1978 and established the California Coastal Commission (CCC) as lead agency for program implementation. However, CCC staff has stated that the CCC does not conduct consistency reviews for wastewater treatment plants that operate at secondary treatment levels and thus the CCC will not be providing a consistency determination for the proposed permit

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Factor 9: Other Factors Relating to Effects of the Discharge

EPA is proposing to include additional, more recent scientific information that has not yet been considered for inclusion in the COP water quality standards, based on EPA's ocean discharge criteria regulations at 40 CFR 125.122(a). For the calculation of NPDES permit limitations for dioxin, we are proposing to use recently updated toxicity equivalency factors (TEFs), published by the World Health Organization in 2005, as well as the congener-specific bioconcentration equivalency factors (BEFs) used for the Great Lakes System. As explained above, this approach for developing NPDES permit limits for dioxin was recommended in the "Bay Area Clean Water Agencies' Draft Dioxin Issue Paper: Expert Panel Response and Recommendations," dated April 4, 2008, and it incorporates updated scientific information for dioxins on a congener-specific basis, while continuing to use the COP criterion and standards implementation procedures. While Region 9 has the discretion to use these factors under the ocean discharge regulations, Region 9's use of the TEFs and BEFs in the draft permit at this time does not constitute EPA endorsement of this approach in other situations.

Factor 10: Marine Water Quality Criteria Under CWA 304(a)(1)

The current recommended EPA marine water quality criteria for dioxin are 5.1E-09 ug/l for consumption of organisms only, and 5.0E-09 ug/l for consumption of water and organisms. These recommended criteria are based on a carcinogenicity of 10-6 risk. The water quality criteria adopted for dioxin in the COP is 3.9E-09 ug/l for TCDD equivalents on a 30 day average basis. Applying the TEFs and BEFs as well as a conservative 76:1 dilution, under the COP reasonable potential (RP) procedure, which closely parallels the RP procedure in "EPA's Technical Support Document for Water Quality-Based Toxics Control (TSD, USEPA 1991)," EPA and the Water Board conclude the discharge does not have RP for dioxin, and thus the draft permit contains no numeric limits for dioxin. Because the COP criterion for dioxin is more stringent than the EPA recommended criteria, this discharge would not be expected to cause exceedances of the EPA criteria.

<u>Conclusion: Determination of No Unreasonable Degradation of the Marine Environment</u>

Based on consideration of the ten factors discussed above, Region 9 has determined that no unreasonable degradation of the marine environment will result from the discharges of dioxin through the Southwest Ocean Outfall as proposed under NPDES permit CA003768, with all the limitations, conditions, and monitoring requirements in effect.

EPA recognizes that bioaccumulative pollutants such as dioxin are of concern in the receiving waters of the Pacific Ocean, as commercial and recreational fishing takes place in these waters. However, monitoring over a 10 year period has not shown increasing concentrations of bioaccumulative substances in sediment or fish tissue in the vicinity of the discharge. Further, EPA expects that the contribution of dioxins from the Southwest Ocean Outfall discharge is lower than in other urban areas of similar size, due to the City's stormwater treatment facilities and residential service area which, unlike industrial areas, is expected to generate fewer dioxins. The proposed NPDES permit will require continued effluent monitoring for dioxin congeners. The Southwest Ocean Outfall monitoring program will continue to monitor for selected bioaccumulative pollutants in sediment and fish tissue, including dioxin-like PCBs. Finally, because stormwater is significantly higher in dioxin than dry-weather flows, the

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proposed permit requirement that the discharger develop options to reduce pollutant loading in stormwater, such as green infrastructure efforts, is expected to reduce dioxin loading to the receiving water.

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ATTACHMENT G
REGIONAL STANDARD PROVISIONS, AND MONITORING AND REPORTING REQUIREMENTS
(SUPPLEMENT TO ATTACHMENT D)

For

NPDES WASTEWATER DISCHARGE PERMITS

July 2009

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

REGIONAL STANDARD PROVISIONS, AND MONITORING AND REPORTING REQUIREMENTS (SUPPLEMENT TO ATTACHMENT D)

FOR

NPDES WASTEWATER DISCHARGE PERMITS

APPLICABILITY

This document applies to dischargers covered by a National Pollutant Discharge Elimination System (NPDES) permit. This document does not apply to Municipal Separate Storm Sewer System (MS4) NPDES permits.

The purpose of this document is to supplement the requirements of Attachment D, Standard Provisions. The requirements in this supplemental document are designed to ensure permit compliance through preventative planning, monitoring, recordkeeping, and reporting. In addition, this document requires proper characterization of issues as they arise, and timely and full responses to problems encountered. To provide clarity on which sections of Attachment D this document supplements, this document is arranged in the same format as Attachment D.

I. STANDARD PROVISIONS - PERMIT COMPLIANCE

A. Duty to Comply – Not Supplemented

B. Need to Halt or Reduce Activity Not a Defense – Not Supplemented

C. Duty to Mitigate – This supplements I.C. of Standard Provisions (Attachment D)

1. **Contingency Plan -** The Discharger shall maintain a Contingency Plan as originally required by Regional Water Board Resolution 74-10 and as prudent in accordance with current municipal facility emergency planning. The Contingency Plan shall describe procedures to ensure that existing facilities remain in, or are rapidly returned to, operation in the event of a process failure or emergency incident, such as employee strike, strike by suppliers of chemicals or maintenance services, power outage, vandalism, earthquake, or fire. The Discharger may combine the Contingency Plan and Spill Prevention Plan into one document. Discharge in violation of the permit where the Discharger has failed to develop and implement a Contingency Plan as described below will be the basis for considering the discharge a willful and negligent violation of the permit pursuant to California Water Code Section 13387. The Contingency Plan shall, at a minimum, contain the provisions of a. through g. below.

    a. Provision of personnel for continued operation and maintenance of sewerage facilities during employee strikes or strikes against contractors providing services.

b. Maintenance of adequate chemicals or other supplies and spare parts necessary for continued operations of sewerage facilities.

c. Provisions of emergency standby power.

d. Protection against vandalism.

e. Expeditious action to repair failures of, or damage to, equipment and sewer lines.

f. Report of spills and discharges of untreated or inadequately treated wastes, including measures taken to clean up the effects of such discharges.

g. Programs for maintenance, replacement, and surveillance of physical condition of equipment, facilities, and sewer lines.

2. **Spill Prevention Plan -** The Discharger shall maintain a Spill Prevention Plan to prevent accidental discharges and minimize the effects of such events. The Spill Prevention Plan shall:

   a. Identify the possible sources of accidental discharge, untreated or partially treated waste bypass, and polluted drainage;

   b. Evaluate the effectiveness of present facilities and procedures, and state when they became operational; and

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

   This Regional Water Board, after review of the Contingency and Spill Prevention Plans or their updated revisions, may establish conditions it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions may be incorporated as part of the permit upon notice to the Discharger.

D. Proper Operation & Maintenance – This supplements I.D of Standard Provisions (Attachment D)

1. **Operation and Maintenance (O&M) Manual -** The Discharger shall maintain an O&M Manual to provide the plant and regulatory personnel with a source of information describing all equipment, recommended operational strategies, process control monitoring, and maintenance activities. To remain a useful and relevant document, the O&M Manual shall be kept updated to reflect significant changes in treatment facility equipment and operational practices. The O&M Manual shall be maintained in usable condition and be available for reference and use by all relevant personnel and Regional Water Board staff.

2. **Wastewater Facilities Status Report -** The Discharger shall regularly review, revise, or update, as necessary, its Wastewater Facilities Status Report. This report shall document how the Discharger operates and maintains its wastewater collection, treatment, and disposal facilities to ensure that all facilities are adequately staffed, supervised, financed, operated,

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maintained, repaired, and upgraded as necessary to provide adequate and reliable transport, treatment, and disposal of all wastewater from both existing and planned future wastewater sources under the Discharger's service responsibilities.

3. **Proper Supervision and Operation of Publicly Owned Treatment Works (POTWs) -** POTWs shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Division 4, Chapter 14, Title 23 of the California Code of Regulations.

E. Property Rights – Not Supplemented

F. Inspection and Entry – Not Supplemented

G. Bypass – Not Supplemented

H. Upset – Not Supplemented

I. Other – This section is an addition to Standard Provisions (Attachment D)

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

2. Collection, treatment, storage, and disposal systems shall be operated in a manner that precludes public contact with wastewater, except in cases where excluding the public is infeasible, such as private property. If public contact with wastewater could reasonably occur on public property, warning signs shall be posted.

3. If the Discharger submits a timely and complete Report of Waste Discharge for permit reissuance, this permit continues in force and effect until a new permit is issued or the Regional Water Board rescinds the permit.

J. Storm Water – This section is an addition to Standard Provisions (Attachment D)

These provisions apply to facilities that do not direct all storm water flows from the facility to the wastewater treatment plant headworks.

1. **Storm Water Pollution Prevention Plan (SWPP Plan)**

The SWPP Plan shall be designed in accordance with good engineering practices and shall address the following objectives:

a. To identify pollutant sources that may affect the quality of storm water discharges; and

b. To identify, assign, and implement control measures and management practices to reduce pollutants in storm water discharges.

The SWPP Plan may be combined with the existing Spill Prevention Plan as required in accordance with Section C.2. The SWPP Plan shall be retained on-site and made available upon request of a representative of the Regional Water Board.

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2. Source Identification

The SWPP Plan shall provide a description of potential sources that may be expected to add significant quantities of pollutants to storm water discharges, or may result in non-storm water discharges from the facility. The SWPP Plan shall include, at a minimum, the following items:

a. A topographical map (or other acceptable map if a topographical map is unavailable), extending one-quarter mile beyond the property boundaries of the facility, showing the wastewater treatment facility process areas, surface water bodies (including springs and wells), and discharge point(s) where the facility's storm water discharges to a municipal storm drain system or other points of discharge to waters of the State. The requirements of this paragraph may be included in the site map required under the following paragraph if appropriate.

b. A site map showing the following:

   1) Storm water conveyance, drainage, and discharge structures;

   2) An outline of the storm water drainage areas for each storm water discharge point;

   3) Paved areas and buildings;

   4) Areas of actual or potential pollutant contact with storm water or release to storm water, including but not limited to outdoor storage and process areas; material loading, unloading, and access areas; and waste treatment, storage, and disposal areas;

   5) Location of existing storm water structural control measures (i.e., berms, coverings, etc.);

   6) Surface water locations, including springs and wetlands; and

   7) Vehicle service areas.

c. A narrative description of the following:

   1) Wastewater treatment process activity areas;

   2) Materials, equipment, and vehicle management practices employed to minimize contact of significant materials of concern with storm water discharges;

   3) Material storage, loading, unloading, and access areas;

   4) Existing structural and non-structural control measures (if any) to reduce pollutants in storm water discharges; and

   5) Methods of on-site storage and disposal of significant materials.

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d. A list of pollutants that have a reasonable potential to be present in storm water discharges in significant quantities.

3. Storm Water Management Controls

The SWPP Plan shall describe the storm water management controls appropriate for the facility and a time schedule for fully implementing such controls. The appropriateness and priorities of controls in the SWPP Plan shall reflect identified potential sources of pollutants. The description of storm water management controls to be implemented shall include, as appropriate:

a. Storm water pollution prevention personnel

Identify specific individuals (and job titles) that are responsible for developing, implementing, and reviewing the SWPP Plan.

b. Good housekeeping

Good housekeeping requires the maintenance of clean, orderly facility areas that discharge storm water. Material handling areas shall be inspected and cleaned to reduce the potential for pollutants to enter the storm drain conveyance system.

c. Spill prevention and response

Identify areas where significant materials can spill into or otherwise enter storm water conveyance systems and their accompanying drainage points. Specific material handling procedures, storage requirements, and cleanup equipment and procedures shall be identified, as appropriate. The necessary equipment to implement a cleanup shall be available, and personnel shall be trained in proper response, containment, and cleanup of spills. Internal reporting procedures for spills of significant materials shall be established.

d. Source control

Source controls include, for example, elimination or reduction of the use of toxic pollutants, covering of pollutant source areas, sweeping of paved areas, containment of potential pollutants, labeling of all storm drain inlets with “No Dumping” signs, isolation or separation of industrial and non-industrial pollutant sources so that runoff from these areas does not mix, etc.

e. Storm water management practices

Storm water management practices are practices other than those that control the sources of pollutants. Such practices include treatment or conveyance structures, such as drop inlets, channels, retention and detention basins, treatment vaults, infiltration galleries, filters, oil/water separators, etc. Based on assessment of the potential of various sources to contribute pollutants to storm water discharges in significant quantities, additional storm water management practices to remove pollutants from storm water discharges shall be implemented and design criteria shall be described.

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f. Sediment and erosion control

Measures to minimize erosion around the storm water drainage and discharge points, such as riprap, revegetation, slope stabilization, etc., shall be described.

g. Employee training

Employee training programs shall inform all personnel responsible for implementing the SWPP Plan. Training shall address spill response, good housekeeping, and material management practices. New employee and refresher training schedules shall be identified.

h. Inspections

All inspections shall be done by trained personnel. Material handling areas shall be inspected for evidence of, or the potential for, pollutants entering storm water discharges. A tracking or follow up procedure shall be used to ensure appropriate response has been taken in response to an inspection. Inspections and maintenance activities shall be documented and recorded. Inspection records shall be retained for five years.

i. Records

A tracking and follow-up procedure shall be described to ensure that adequate response and corrective actions have been taken in response to inspections.

4. Annual Verification of SWPP Plan

An annual facility inspection shall be conducted to verify that all elements of the SWPP Plan are accurate and up-to-date. The results of this review shall be reported in the Annual Report to the Regional Water Board described in Section V.C.f.

K. Biosolids Management – This section is an addition to Standard Provisions (Attachment D)

Biosolids must meet the following requirements prior to land application. The Discharger must either demonstrate compliance or, if it sends the biosolids to another party for further treatment or distribution, must give the recipient the information necessary to ensure compliance.

1. Exceptional quality biosolids meet the pollutant concentration limits in Table III of 40 CFR Part 503.13, Class A pathogen limits, and one of the vector attraction reduction requirements in 503.33(b)(1)-(b)(8). Such biosolids do not have to be tracked further for compliance with general requirements (503.12) and management practices (503.14).

2. Biosolids used for agricultural land, forest, or reclamation shall meet the pollutant limits in Table I (ceiling concentrations) and Table II or Table III (cumulative loadings or pollutant concentration limits) of 503.13. They shall also meet the general requirements (503.12) and management practices (503.14) (if not exceptional quality biosolids) for Class A or Class B pathogen levels with associated access restrictions (503.32) and one of the 10 vector attraction reduction requirements in 503.33(b)(1)-(b)(10).

3. Biosolids used for lawn or home gardens must meet exceptional quality biosolids limits.

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4. Biosolids sold or given away in a bag or other container must meet the pollutant limits in either Table III or Table IV (pollutant concentration limits or annual pollutant loading rate limits) of 503.13. If Table IV is used, a label or information sheet must be attached to the biosolids packing that explains Table IV (see 503.14). The biosolids must also meet the Class A pathogen limits and one of the vector attraction reduction requirements in 503.33(b)(1)-(b)(8).

II. STANDARD PROVISIONS – PERMIT ACTION – Not Supplemented

III. STANDARD PROVISIONS – MONITORING

A. Sampling and Analyses – This section is a supplement to III.A and III.B of Standard Provisions (Attachment D)

1. Use of Certified Laboratories

Water and waste analyses shall be performed by a laboratory certified for these analyses in accordance with California Water Code Section 13176.

2. Use of Appropriate Minimum Levels

Table C lists the suggested analytical methods for the 126 priority pollutants and other toxic pollutants that should be used, unless a particular method or minimum level (ML) is required in the MRP.

For priority pollutant monitoring, when there is more than one ML value for a given substance, the Discharger may select any one of those cited analytical methods for compliance determination provided the ML is below the effluent limitation and the water quality objective. If no ML value is below the effluent limitation and water quality objective, then the Regional Water Board will assign the lowest ML value indicated in Table C, and its associated analytical method for inclusion in the MRP. For effluent monitoring, this alternate method shall also be U.S. EPA-approved (such as the 1600 series) or one of those listed in Table C. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

3. Frequency of Monitoring

The minimum schedule of sampling analysis is specified in the MRP portion of the permit.

a. Timing of Sample Collection

i. The Discharger shall collect samples of influent on varying days selected at random and shall not include any plant recirculation or other sidestream wastes, unless otherwise stipulated by the MRP.

ii. The Discharger shall collect samples of effluent on days coincident with influent sampling unless otherwise stipulated by the MRP or the Executive Officer. The Executive Officer may approve an alternative sampling plan if it is demonstrated to be representative of plant discharge flow and in compliance with all other permit requirements.

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iii. The Discharger shall collect grab samples of effluent during periods of day-time maximum peak effluent flows (or peak flows through secondary treatment units for facilities that recycle effluent flows).

iv. Effluent sampling for conventional pollutants shall occur on at least one day of any multiple-day bioassay test the MRP requires. During the course of the test, on at least one day, the Discharger shall collect and retain samples of the discharge. In the event a bioassay test does not comply with permits limits, the Discharger shall analyze these retained samples for pollutants that could be toxic to aquatic life and for which it has effluent limits.

1) The Discharger shall perform bioassay tests on final effluent samples; when chlorine is used for disinfection, bioassay tests shall be performed on effluent after chlorination-dechlorination; and

2) The Discharger shall analyze for total ammonia nitrogen and calculate the amount of un-ionized ammonia whenever test results fail to meet the percent survival specified in the permit.

b. Conditions Triggering Accelerated Monitoring

i. If the results from two consecutive samples of a constituent monitored in a 30-day period exceed the monthly average limit for any parameter (or if the required sampling frequency is once per month and the monthly sample exceeds the monthly average limit), the Discharger shall, within 24 hours after the results are received, increase its sampling frequency to daily until the results from the additional sampling shows that the parameter is in compliance with the monthly average limit.

ii. If any maximum daily limit is exceeded, the Discharger shall increase its sampling frequency to daily within 24 hours after the results are received that indicate the exceedance of the maximum daily limit until two samples collected on consecutive days show compliance with the maximum daily limit.

iii. If final or intermediate results of an acute bioassay test indicate a violation or threatened violation (e.g., the percentage of surviving test organisms of any single acute bioassay test is less than 70 percent), the Discharger shall initiate a new test as soon as practical, and the Discharger shall investigate the cause of the mortalities and report its findings in the next self-monitoring report (SMR).

iv. The Discharger shall calibrate chlorine residual analyzers against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, the Discharger shall collect grab samples at least every 30 minutes until compliance with the limit is achieved, unless the Discharger monitors chlorine residual continuously. In such cases, the Discharger shall continue to conduct continuous monitoring as required by its permit.

v. When any type of bypass occurs, the Discharger shall collect samples on a daily basis for all constituents at affected discharge points that have effluent limits for the duration of the bypass, unless otherwise stipulated by the MRP.

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c. Storm Water Monitoring

The requirements of this section only apply to facilities that are not covered by an NPDES permit for storm water discharges and where not all site storm drainage from process areas (i.e., areas of the treatment facility where chemicals or wastewater could come in contact with storm water) is directed to the headworks. For storm water not directed to the headworks during the wet season (October 1 to April 30), the Discharger shall:

i. Conduct visual observations of the storm water discharge locations during daylight hours at least once per month during a storm event that produces significant storm water discharge to observe the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor, etc.

ii. Measure (or estimate) the total volume of storm water discharge, collect grab samples of storm water discharge from at least two storm events that produce significant storm water discharge, and analyze the samples for oil and grease, pH, TSS, and specific conductance.

    The grab samples shall be taken during the first 30 minutes of the discharge. If collection of the grab samples during the first 30 minutes is impracticable, grab samples may be taken during the first hour of the discharge, and the Discharger shall explain in the Annual Report why the grab sample(s) could not be taken in the first 30 minutes.

iii. Testing for the presence of non-storm water discharges shall be conducted no less than twice during the dry season (May 1 to September 30) at all storm water discharge locations. Tests may include visual observations of flows, stains, sludges, odors, and other abnormal conditions; dye tests; TV line surveys; or analysis and validation of accurate piping schematics. Records shall be maintained describing the method used, date of testing, locations observed, and test results.

iv. Samples shall be collected from all locations where storm water is discharged. Samples shall represent the quality and quantity of storm water discharged from the facility. If a facility discharges storm water at multiple locations, the Discharger may sample a reduced number of locations if it establishes and documents through the monitoring program that storm water discharges from different locations are substantially identical.

v. Records of all storm water monitoring information and copies of all reports required by the permit shall be retained for a period of at least three years from the date of sample, observation, or report.

d. Receiving Water Monitoring

The requirements of this section only apply when the MRP requires receiving water sampling.

i. Receiving water samples shall be collected on days coincident with effluent sampling for conventional pollutants.

ii. Receiving water samples shall be collected at each station on each sampling day during the period within one hour following low slack water. Where sampling during lower slack water is impractical, sampling shall be performed during higher slack water. Samples shall be collected within the discharge plume and down current of the discharge point so as to be representative, unless otherwise stipulated in the MRP.

iii. Samples shall be collected within one foot of the surface of the receiving water, unless otherwise stipulated in the MRP.

B. Biosolids Monitoring – This section supplements III.B of Standard Provisions (Attachment D)

When biosolids are sent to a landfill, sent to a surface disposal site, or applied to land as a soil amendment, they must be monitored as follows:

1. Biosolids Monitoring Frequency

Biosolids disposal must be monitored at the following frequency:

Metric tons biosolids/365 days	Frequency
0-290	Once per year
290-1500	Quarterly
1500-15,000	Six times per year
Over 15,000	Once per month

(Metric tons are on a dry weight basis)

2. Biosolids Pollutants to Monitor

Biosolids shall be monitored for the following constituents:

Land Application: arsenic, cadmium, chromium, copper, mercury, molybdenum, nickel, lead, selenium, and zinc

Municipal Landfill: Paint filter test (pursuant to 40 CFR 258)

Biosolids-only Landfill or Surface Disposal Site (if no liner and leachate system): arsenic, chromium, and nickel

C. Standard Observations – This section is an addition to III of Standard Provisions (Attachment D)

1. Receiving Water Observations

The requirements of this section only apply when the MRP requires standard observations of the receiving water. Standard observations shall include the following:

a. *Floating and suspended materials* (e.g., oil, grease, algae, and other macroscopic particulate matter): presence or absence, source, and size of affected area.

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b. *Discoloration and turbidity*: description of color, source, and size of affected area.

c. *Odor*: presence or absence, characterization, source, distance of travel, and wind direction.

d. *Beneficial water use*: presence of water-associated waterfowl or wildlife, fisherpeople, and other recreational activities in the vicinity of each sampling station.

e. *Hydrographic condition*: time and height of corrected high and low tides (corrected to nearest National Oceanic and Atmospheric Administration location for the sampling date and time of sample collection).

f. *Weather conditions*:

1) Air temperature; and

2) Total precipitation during the five days prior to observation.

2. Wastewater Effluent Observations

The requirements of this section only apply when the MRP requires wastewater effluent standard observations. Standard observations shall include the following:

a. *Floating and suspended material of wastewater origin* (e.g., oil, grease, algae, and other macroscopic particulate matter): presence or absence.

b. *Odor*: presence or absence, characterization, source, distance of travel, and wind direction.

3. Beach and Shoreline Observations

The requirements of this section only apply when the MRP requires beach and shoreline standard observations. Standard observations shall include the following:

a. *Material of wastewater origin*: presence or absence, description of material, estimated size of affected area, and source.

b. *Beneficial use*: estimate number of people participating in recreational water contact, non-water contact, or fishing activities.

4. Land Retention or Disposal Area Observations

The requirements of this section only apply to facilities with on-site surface impoundments or disposal areas that are in use. This section applies to both liquid and solid wastes, whether confined or unconfined. The Discharger shall conduct the following for each impoundment:

a. Determine the amount of freeboard at the lowest point of dikes confining liquid wastes.

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b. Report evidence of leaching liquid from area of confinement and estimated size of affected area. Show affected area on a sketch and volume of flow (e.g., gallons per minute [gpm]).

c. Regarding odor, describe presence or absence, characterization, source, distance of travel, and wind direction.

d. Estimate number of waterfowl and other water-associated birds in the disposal area and vicinity.

5. Periphery of Waste Treatment and/or Disposal Facilities Observations

The requirements of this section only apply when the MRP specifies periphery standard observations. Standard observations shall include the following:

a. *Odor*: presence or absence, characterization, source, and distance of travel.

b. *Weather conditions*: wind direction and estimated velocity.

IV. STANDARD PROVISIONS – RECORDS

A. Records to be Maintained – This supplements IV.A of Standard Provisions (Attachment D)

The Discharger shall maintain records in a manner and at a location (e.g., wastewater treatment plant or Discharger offices) such that the records are accessible to Regional Water Board staff. The minimum period of retention specified in Section IV, Records, of the Federal Standard Provisions shall be extended during the course of any unresolved litigation regarding the subject discharge, or when requested by the Regional Water Board or Regional Administrator of USEPA, Region IX.

A copy of the permit shall be maintained at the discharge facility and be available at all times to operating personnel.

B. Records of monitoring information shall include – This supplements IV.B of Standard Provision (Attachment D)

1. Analytical Information

Records shall include analytical method detection limits, minimum levels, reporting levels, and related quantification parameters**.**

2. Flow Monitoring Data

For all required flow monitoring (e.g., influent and effluent flows), the additional records shall include the following, unless otherwise stipulated by the MRP:

a. Total volume for each day; and

b. Maximum, minimum, and average daily flows for each calendar month.

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3. **Wastewater Treatment Process Solids**

a. For each treatment unit process that involves solids removal from the wastewater stream, records shall include the following:

1) Total volume or mass of solids removed from each unit (e.g., grit, skimmings, undigested biosolids) for each calendar month or other time period as appropriate, but not to exceed annually; and

2) Final disposition of such solids (e.g., landfill, other subsequent treatment unit).

b. For final dewatered biosolids from the treatment plant as a whole, records shall include the following:

1) Total volume or mass of dewatered biosolids for each calendar month;

2) Solids content of the dewatered biosolids; and

3) Final disposition of dewatered biosolids (disposal location and disposal method).

4. **Disinfection Process**

For the disinfection process, these additional records shall be maintained documenting process operation and performance:

a. For bacteriological analyses:

1) Wastewater flow rate at the time of sample collection; and

2) Required statistical parameters for cumulative bacterial values (e.g., moving median or geometric mean for the number of samples or sampling period identified in this Order).

b. For the chlorination process, when chlorine is used for disinfection, at least daily average values for the following:

1) Chlorine residual of treated wastewater as it enters the contact basin (mg/L);

2) Chlorine dosage (kg/day); and

3) Dechlorination chemical dosage (kg/day).

5. **Treatment Process Bypasses**

A chronological log of all treatment process bypasses, including wet weather blending, shall include the following:

a. Identification of the treatment process bypassed;

b. Dates and times of bypass beginning and end;

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c. Total bypass duration;

d. Estimated total bypass volume; and

e. Description of, or reference to other reports describing, the bypass event, the cause, the corrective actions taken (except for wet weather blending that is in compliance with permit conditions), and any additional monitoring conducted.

6. **Treatment Facility Overflows**

This section applies to records for overflows at the treatment facility. This includes the headworks and all units and appurtenances downstream. The Discharger shall retain a chronological log of overflows at the treatment facility and records supporting the information provided in section V.E.2.

C. Claims of Confidentiality – Not Supplemented

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information – Not Supplemented

B. Signatory and Certification Requirements – Not Supplemented

C. Monitoring Reports – This section supplements V.C of Standard Provisions (Attachment D)

1. Self-Monitoring Reports

For each reporting period established in the MRP, the Discharger shall submit an SMR to the Regional Water Board in accordance with the requirements listed in this document and at the frequency the MRP specifies. The purpose of the SMR is to document treatment performance, effluent quality, and compliance with the waste discharge requirements of this Order.

a. Transmittal letter

Each SMR shall be submitted with a transmittal letter. This letter shall include the following:

1) Identification of all violations of effluent limits or other waste discharge requirements found during the reporting period;

2) Details regarding violations: parameters, magnitude, test results, frequency, and dates;

3) Causes of violations;

4) Discussion of corrective actions taken or planned to resolve violations and prevent recurrences, and dates or time schedule of action implementation (if previous reports have been submitted that address corrective actions, reference to the earlier reports is satisfactory);

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5) Data invalidation (Data should not be submitted in an SMR if it does not meet quality assurance/quality control standards. However, if the Discharger wishes to invalidate any measurement after it was submitted in an SMR, a letter shall identify the measurement suspected to be invalid and state the Discharger's intent to submit, within 60 days, a formal request to invalidate the measurement. This request shall include the original measurement in question, the reason for invalidating the measurement, all relevant documentation that supports invalidation [e.g., laboratory sheet, log entry, test results, etc.], and discussion of the corrective actions taken or planned [with a time schedule for completion] to prevent recurrence of the sampling or measurement problem.);

6) If the Discharger blends, the letter shall describe the duration of blending events and certify whether blended effluent was in compliance with the conditions for blending; and

7) Signature (The transmittal letter shall be signed according to Section V.B of this Order, Attachment D – Standard Provisions.).

b. Compliance evaluation summary

Each report shall include a compliance evaluation summary. This summary shall include each parameter for which the permit specifies effluent limits, the number of samples taken during the monitoring period, and the number of samples that exceed applicable effluent limits.

c. Results of analyses and observations

1) Tabulations of all required analyses and observations, including parameter, date, time, sample station, type of sample, test result, method detection limit, method minimum level, and method reporting level, if applicable, signed by the laboratory director or other responsible official.

2) When determining compliance with an average monthly effluent limitation and more than one sample result is available in a month, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of detected but not quantified (DNQ) or nondetect (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

ii. 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.

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If a sample result, or the arithmetic mean or median of multiple sample results, is below the reporting limit, and there is evidence that the priority pollutant is present in the effluent above an effluent limitation and the Discharger conducts a Pollutant Minimization Program, the Discharger shall not be deemed out of compliance.

3) Dioxin-TEQ Reporting: The Discharger shall report for each dioxin and furan congener the analytical results of effluent monitoring, including the quantifiable limit (reporting level), and the method detection limit, and the measured concentration. Estimated concentrations shall be reported for individual congeners, but shall be set equal to zero in determining the dioxin-TEQ value. The Discharger shall multiply each measured or estimated congener concentration by its respective toxicity equivalency factor (TEF) shown in Table A and report the sum of these values.

Table A: Toxic Equivalency Factors for 2,3,7,8-TCDD Equivalents

Congener	**TEF**
2,3,7,8-TetraCDD	1
1,2,3,7,8-PentaCDD	1.0
1,2,3,4,7,8-HexaCDD	0.1
1,2,3,6,7,8-HexaCDD	0.1
1,2,3,7,8,9-HexaCDD	0.1
1,2,3,4,6,7,8-HeptaCDD	0.01
OctaCDD	0.0001
2,3,7,8-TetraCDF	0.1
1,2,3,7,8-PentaCDF	0.05
2,3,4,7,8-PentaCDF	0.5
1,2,3,4,7,8-HexaCDF	0.1
1,2,3,6,7,8-HexaCDF	0.1
1,2,3,7,8,9-HexaCDF	0.1
2,3,4,6,7,8-HexaCDF	0.1
1,2,3,4,6,7,8-HeptaCDF	0.01
1,2,3,4,7,8,9-HeptaCDF	0.01
OctaCDF	0.0001

d. Data reporting for results not yet available

The Discharger shall make all reasonable efforts to obtain analytical data for required parameter sampling in a timely manner. Certain analyses require additional time to complete analytical processes and report results. For cases where required monitoring parameters require additional time to complete analytical processes and reports, and results are not available in time to be included in the SMR for the subject monitoring period, the Discharger shall describe such circumstances in the SMR and include the data for these parameters and relevant discussions of any observed exceedances in the next SMR due after the results are available.

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e. Flow data

The Discharger shall provide flow data tabulation pursuant to Section IV.B.2.

f. Annual self-monitoring report requirements

By the date specified in the MRP, the Discharger shall submit an annual report to the Regional Water Board covering the previous calendar year. The report shall contain the following:

1) Annual compliance summary table of treatment plant performance, including documentation of any blending events;

2) Comprehensive discussion of treatment plant performance and compliance with the permit (This discussion shall include any corrective actions taken or planned, such as changes to facility equipment or operation practices that may be needed to achieve compliance, and any other actions taken or planned that are intended to improve performance and reliability of the Discharger's wastewater collection, treatment, or disposal practices.);

3) Both tabular and graphical summaries of the monitoring data for the previous year if parameters are monitored at a frequency of monthly or greater;

4) List of approved analyses, including the following:

   (i) List of analyses for which the Discharger is certified;

   (ii) List of analyses performed for the Discharger by a separate certified laboratory and copies of reports signed by the laboratory director of that laboratory shall not be submitted but retained onsite;

   (iii) List of "waived" analyses, as approved;

5) Plan view drawing or map showing the Discharger's facility, flow routing, and sampling and observation station locations;

6) Results of annual facility inspection to verify that all elements of the SWPP Plan are accurate and up to date (only required if the Discharger does not route all storm water to the headworks of its wastewater treatment plant); and

7) Results of facility report reviews (The Discharger shall regularly review, revise, and update, as necessary, the O&M Manual, the Contingency Plan, the Spill Prevention Plan, and Wastewater Facilities Status Report so that these documents remain useful and relevant to current practices. At a minimum, reviews shall be conducted annually. The Discharger shall include, in each Annual Report, a description or summary of review and evaluation procedures, recommended or planned actions, and an estimated time schedule for implementing these actions. The Discharger shall complete changes to these documents to ensure they are up-to-date.).

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g. Report submittal

The Discharger shall submit SMRs to:

California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612
Attn: NPDES Wastewater Division

h. Reporting data in electronic format

The Discharger has the option to submit all monitoring results in an electronic reporting format approved by the Executive Officer. If the Discharger chooses to submit SMRs electronically, the following shall apply:

1) *Reporting Method*: The Discharger shall submit SMRs electronically via a process approved by the Executive Officer (see, for example, the letter dated December 17, 1999, "Official Implementation of Electronic Reporting System [ERS]" and the progress report letter dated December 17, 2000).

2) *Monthly or Quarterly Reporting Requirements*: For each reporting period (monthly or quarterly as specified in the MRP), the Discharger shall submit an electronic SMR to the Regional Water Board in accordance with the provisions of Section V.C.1.a-e, except for requirements under Section V.C.1.c(1) where ERS does not have fields for dischargers to input certain information (e.g., sample time). However, until USEPA approves the electronic signature or other signature technologies, Dischargers that use ERS shall submit a hard copy of the original transmittal letter, an ERS printout of the data sheet, and a violation report (a receipt of the electronic transmittal shall be retained by the Discharger). This electronic SMR submittal suffices for the signed tabulations specified under Section V.C.1.c(1).

3) *Annual Reporting Requirements*: Dischargers who have submitted data using the ERS for at least one calendar year are exempt from submitting the portion of the annual report required under Section V.C.1.f(1) and (3).

D. Compliance Schedules – Not supplemented

E. Twenty-Four Hour Reporting – This section supplements V.E of Standard Provision (Attachment D)

1. Spill of Oil or Other Hazardous Material Reports

a. Within 24 hours of becoming aware of a spill of oil or other hazardous material that is not contained onsite and completely cleaned up, the Discharger shall report by telephone to the Regional Water Board at (510) 622-2369.

b. The Discharger shall also report such spills to the State Office of Emergency Services [telephone (800) 852-7550] only when the spills are in accordance with applicable reporting quantities for hazardous materials.

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c. The Discharger shall submit a written report to the Regional Water Board within five working days following telephone notification unless directed otherwise by Regional Water Board staff. A report submitted electronically is acceptable. The written report shall include the following:

1) Date and time of spill, and duration if known;

2) Location of spill (street address or description of location);

3) Nature of material spilled;

4) Quantity of material involved;

5) Receiving water body affected, if any;

6) Cause of spill;

7) Estimated size of affected area;

8) Observed impacts to receiving waters (e.g., oil sheen, fish kill, water discoloration);

9) Corrective actions taken to contain, minimize, or clean up the spill;

10) Future corrective actions planned to be taken to prevent recurrence, and schedule of implementation; and

11) Persons or agencies notified.

2. Unauthorized Discharges from Municipal Wastewater Treatment Plants[1]

The following requirements apply to municipal wastewater treatment plants that experience an unauthorized discharge at their treatment facilities and are consistent with and supercede requirements imposed on the Discharger by the Executive Officer by letter of May 1, 2008, issued pursuant to California Water Code Section 13383.

a. Two (2)-Hour Notification

For any unauthorized discharges that result in a discharge to a drainage channel or a surface water, the Discharger shall, as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the State Office of Emergency Services (telephone 800-852-7550), the local health officers or directors of environmental health with jurisdiction over the affected water bodies, and the Regional Water Board. The notification to the Regional Water Board shall be via the Regional Water Board's online reporting system at www.wbers.net, and shall include the following:

[1] California Code of Regulations, Title 23, Section 2250(b), defines an unauthorized discharge to be a discharge, not regulated by waste discharge requirements, of treated, partially treated, or untreated wastewater resulting from the intentional or unintentional diversion of wastewater from a collection, treatment or disposal system.

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1) Incident description and cause;

2) Location of threatened or involved waterway(s) or storm drains;

3) Date and time the unauthorized discharge started;

4) Estimated quantity and duration of the unauthorized discharge (to the extent known), and the estimated amount recovered;

5) Level of treatment prior to discharge (e.g., raw wastewater, primary treated, undisinfected secondary treated, and so on); and

6) Identity of the person reporting the unauthorized discharge.

b. 24-hour Certification

Within 24 hours, the Discharger shall certify to the Regional Water Board, at www.wbers.net, that the State Office of Emergency Services and the local health officers or directors of environmental health with jurisdiction over the affected water bodies have been notified of the unauthorized discharge.

c. 5-Day Written Report

Within five business days, the Discharger shall submit a written report, via the Regional Water Board's online reporting system at www.wbers.net, that includes, in addition to the information required above, the following:

1) Methods used to delineate the geographical extent of the unauthorized discharge within receiving waters;

2) Efforts implemented to minimize public exposure to the unauthorized discharge;

3) Visual observations of the impacts (if any) noted in the receiving waters (e.g., fish kill, discoloration of water) and the extent of sampling if conducted;

4) Corrective measures taken to minimize the impact of the unauthorized discharge;

5) Measures to be taken to minimize the chances of a similar unauthorized discharge occurring in the future;

6) Summary of Spill Prevention Plan or O&M Manual modifications to be made, if necessary, to minimize the chances of future unauthorized discharges; and

7) Quantity and duration of the unauthorized discharge, and the amount recovered.

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d. Communication Protocol

To clarify the multiple levels of notification, certification, and reporting, the current communication requirements for unauthorized discharges from municipal wastewater treatment plants are summarized in Table B that follows.

F. Planned Changes – Not supplemented

G. Anticipated Noncompliance – Not supplemented

H. Other Noncompliance – Not supplemented

I. Other Information – Not supplemented

VI. STANDARD PROVISIONS – ENFORCEMENT – Not Supplemented

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS – Not Supplemented

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Table B

Summary of Communication Requirements for Unauthorized Discharges[1] from Municipal Wastewater Treatment Plants

Discharger is required to:	Agency Receiving Information	Time frame	Method for Contact
1. Notify	State Office of Emergency Services (OES)	As soon as possible, but not later than **2 hours** after becoming aware of the unauthorized discharge.	Telephone – (800) 852-7550 (obtain a control number from OES)
	Local health department	As soon as possible, but not later than **2 hours** after becoming aware of the unauthorized discharge.	Depends on local health department
	Regional Water Board	As soon as possible, but not later than **2 hours** after becoming aware of the unauthorized discharge.	Electronic[2] www.wbers.net
2. Certify	Regional Water Board	As soon as possible, but not later than **24 hours** after becoming aware of the unauthorized discharge.	Electronic[3] www.wbers.net
3. Report	Regional Water Board	Within **5 business days** of becoming aware of the unauthorized discharge.	Electronic[4] www.wbers.net

[1] California Code of Regulations, Title 23, Section 2250(b), defines an unauthorized discharge to be a discharge, not regulated by waste discharge requirements, of treated, partially treated, or untreated wastewater resulting from the intentional or unintentional diversion of wastewater from a collection, treatment or disposal system.

[2] In the event that the Discharger is unable to provide online notification within 2 hours of becoming aware of an unauthorized discharge, it shall phone the Regional Water Board's spill hotline at (510) 622-2369 and convey the same information contained in the notification form. In addition, within 3 business days of becoming aware of the unauthorized discharge, the Discharger shall enter the notification information into the Regional Water Board's online system in electronic format.

[3] In most instances, the 2-hour notification will also satisfy 24-hour certification requirements. This is because the notification form includes fields for documenting that OES and the local health department have been contacted. In other words, if the Discharger is able to complete all the fields in the notification form within 2 hours, certification requirements are also satisfied. In the event that the Discharger is unable to provide online certification within 24 hours of becoming aware of an unauthorized discharge, it shall phone the Regional Water Board's spill hotline at (510) 622-2369 and convey the same information contained in the certification form. In addition, within 3 business days of becoming aware of the unauthorized discharge, the Discharger shall enter the certification information into the Regional Water Board's online system in electronic format.

[4] If the Discharger cannot satisfy the 5-day reporting requirements via the Regional Water Board's online reporting system, it shall submit a written report (preferably electronically in pdf) to the appropriate Regional Water Board case manager. In cases where the Discharger cannot satisfy the 5-day reporting requirements via the online reporting system, it must still complete the Regional Water Board's online reporting requirements within 15 calendar days of becoming aware of the unauthorized discharge.

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VIII. DEFINITIONS – This section is an addition to Standard Provisions (Attachment D)

More definitions can be found in Attachment A of this NPDES Permit.

1. Arithmetic Calculations

   a. Geometric mean is the antilog of the log mean or the back-transformed mean of the logarithmically transformed variables, which is equivalent to the multiplication of the antilogarithms. The geometric mean can be calculated with either of the following equations:

   $$\text{Geometric Mean} = Anti\log\left(\frac{1}{N}\sum_{i=1}^{N} Log(C_i)\right)$$

   or

   $$\text{Geometric Mean} = (C_1 * C_2 * \ldots * C_N)^{1/N}$$

   Where "N" is the number of data points for the period analyzed and "C" is the concentration for each of the "N" data points.

   b. Mass emission rate is obtained from the following calculation for any calendar day:

   $$\text{Mass emission rate (lb/day)} = \frac{8.345}{N}\sum_{i=1}^{N} Q_i C_i$$

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

   In which "N" is the number of samples analyzed in any calendar day and "Q_i" and "C_i" are the flow rate (MGD) and the constituent concentration (mg/L) associated with each of the "N" grab samples that may be taken in any calendar day. If a composite sample is taken, "C_i" is the concentration measured in the composite sample and "Q_i" is the average flow rate occurring during the period over which the samples are composited. The daily concentration of a constituent measured over any calendar day shall be determined from the flow-weighted average of the same constituent in the combined waste streams as follows:

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

   In which "N" is the number of component waste streams and "Q" and "C" are the flow rate (MGD) and the constituent concentration (mg/L) associated with each of the "N" waste streams. "Q_t" is the total flow rate of the combined waste streams.

   c. Maximum allowable mass emission rate, whether for a 24-hour, weekly 7-day, monthly 30-day, or 6-month period, is a limitation expressed as a daily rate determined with the

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formulas in the paragraph above, using the effluent concentration limit specified in the permit for the period and the specified allowable flow.

d. POTW removal efficiency is the ratio of pollutants removed by the treatment facilities to pollutants entering the treatment facilities (expressed as a percentage). The Discharger shall determine removal efficiencies using monthly averages (by calendar month unless otherwise specified) of pollutant concentration of influent and effluent samples collected at about the same time and using the following equation (or its equivalent):

Removal Efficiency (%) = 100 × [1-(Effluent Concentration/Influent Concentration)]

2. Biosolids 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 and underflow in the solids handling parts of the wastewater treatment system.

3. Blending is the practice of recombining wastewater that has been biologically treated with wastewater that has bypassed around biological treatment units.

4. Bottom sediment sample is (1) a separate grab sample taken at each sampling station for the determination of selected physical-chemical parameters, or (2) four grab samples collected from different locations in the immediate vicinity of a sampling station while the boat is anchored and analyzed separately for macroinvertebrates.

5. Composite sample is a sample composed of individual grab samples collected manually or by an automatic sampling device on the basis of time or flow as specified in the MRP. For flow-based composites, the proportion of each grab sample included in the composite sample shall be within plus or minus five percent (+/-5%) of the representative flow rate of the waste stream being measured at the time of grab sample collection. Alternatively, equal volume grab samples may be individually analyzed with the flow-weighted average calculated by averaging flow-weighted ratios of each grab sample analytical result. Grab samples comprising time-based composite samples shall be collected at intervals not greater than those specified in the MRP. The quantity of each grab sample comprising a time-based composite sample shall be a set of flow proportional volumes as specified in the MRP. If a particular time-based or flow-based composite sampling protocol is not specified in the MRP, the Discharger shall determine and implement the most representative sampling protocol for the given parameter subject to Executive Officer approval.

6. Depth-integrated sample is defined as a water or waste sample collected by allowing a sampling device to fill during a vertical traverse in the waste or receiving water body being sampled. The Discharger shall collect depth-integrated samples in such a manner that the collected sample will be representative of the waste or water body at that sampling point.

7. Flow sample is an accurate measurement of the average daily flow volume using a properly calibrated and maintained flow measuring device.

8. Grab sample is an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples represent only the condition that exists at the time the wastewater is collected.

9. Initial dilution is the process that results in the rapid and irreversible turbulent mixing of wastewater with receiving water around the point of discharge.

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10. Overflow is the intentional or unintentional spilling or forcing out of untreated or partially treated wastes from a transport system (e.g., through manholes, at pump stations, and at collection points) upstream from the treatment plant headworks or from any part of a treatment plant facility.

11. Priority pollutants are those constituents referred to in 40 CFR Part 122 as promulgated in the Federal Register, Vol. 65, No. 97, Thursday, May 18, 2000, also known as the California Toxics Rule, the presence or discharge of which could reasonably be expected to interfere with maintaining designated uses.

12. Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage. It excludes infiltration and runoff from agricultural land.

13. Toxic pollutant means any pollutant listed as toxic under federal Clean Water Act section 307(a)(1) or under 40 CFR 401.15.

14. Untreated waste is raw wastewater.

15. Waste, waste discharge, discharge of waste, and discharge are used interchangeably in the permit. The requirements of the permit apply to the entire volume of water, and the material therein, that is disposed of to surface and ground waters of the State of California.

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Table C

List of Monitoring Parameters and Analytical Methods

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
1.	Antimony	204.2					10	5	50	0.5	5	0.5		1000
2.	Arsenic	206.3				20		2	10	2	2	1		1000
3.	Beryllium						20	0.5	2	0.5	1			1000
4.	Cadmium	200 or 213				10	0.5	10	0.25	0.5				1000
5a.	Chromium (III)	SM 3500												
5b.	Chromium (VI)	SM 3500				10	5							1000
6.	Copper	200.9					25	5	10	0.5	2			1000
7.	Lead	200.9					20	5	5	0.5	2			10,000
8.	Mercury	1631 (note)[3]												
9.	Nickel	249.2					50	5	20	1	5			1000
10.	Selenium	200.8 or SM 3114B or C						5	10	2	5	1		1000
11.	Silver	272.2					10	1	10	0.25	2			1000
12.	Thallium	279.2					10	2	10	1	5			1000
13.	Zinc	200 or 289					20		20	1	10			
14.	Cyanide	SM 4500 CN^- C or I				5								
15.	Asbestos (only required for dischargers to MUN waters)[4]	0100.2 [5]												
16.	2,3,7,8-TCDD and 17 congeners (Dioxin)	1613												
17.	Acrolein	603	2.0	5										
18.	Acrylonitrile	603	2.0	2										
19.	Benzene	602	0.5	2										
33.	Ethylbenzene	602	0.5	2										

[1] The suggested method is the USEPA Method unless otherwise specified (SM = Standard Methods). The discharger may use another USEPA-approved or recognized method if that method has a level of quantification below the applicable water quality objective. Where no method is suggested, the Discharger has the discretion to use any standard method.

[2] Minimum levels are from the *State Implementation Policy*. They are the concentration of the lowest calibration standard for that technique based on a survey of contract laboratories. Laboratory techniques are defined as follows: GC = Gas Chromatography; GCMS = Gas Chromatography/Mass Spectrometry; LC = High Pressure Liquid Chromatography; Color = Colorimetric; FAA = Flame Atomic Absorption; GFAA = Graphite Furnace Atomic Absorption; ICP = Inductively Coupled Plasma; ICPMS = Inductively Coupled Plasma/Mass Spectrometry; SPGFAA = Stabilized Platform Graphite Furnace Atomic Absorption (i.e., U.S. EPA 200.9); Hydride = Gaseous Hydride Atomic Absorption; CVAA = Cold Vapor Atomic Absorption; DCP = Direct Current Plasma.

[3] The Discharger shall use ultra-clean sampling (USEPA Method 1669) and ultra-clean analytical methods (USEPA Method 1631) for mercury monitoring. The minimum level for mercury is 2 ng/l (or 0.002 ug/l).

[4] MUN = Municipal and Domestic Supply. This designation, if applicable, is in the Findings of the permit.

[5] *Determination of Asbestos Structures over 10 [micrometers] in Length in Drinking Water Using MCE Filters*, U.S. EPA 600/R-94-134, June 1994.

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CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
39.	Toluene	602	0.5	2										
20.	Bromoform	601	0.5	2										
21.	Carbon Tetrachloride	601	0.5	2										
22.	Chlorobenzene	601	0.5	2										
23.	Chlorodibromomethane	601	0.5	2										
24.	Chloroethane	601	0.5	2										
25.	2-Chloroethylvinyl Ether	601	1	1										
26.	Chloroform	601	0.5	2										
75.	1,2-Dichlorobenzene	601	0.5	2										
76.	1,3-Dichlorobenzene	601	0.5	2										
77.	1,4-Dichlorobenzene	601	0.5	2										
27.	Dichlorobromomethane	601	0.5	2										
28.	1,1-Dichloroethane	601	0.5	1										
29.	1,2-Dichloroethane	601	0.5	2										
30.	1,1-Dichloroethylene or 1,1-Dichloroethene	601	0.5	2										
31.	1,2-Dichloropropane	601	0.5	1										
32.	1,3-Dichloropropylene or 1,3-Dichloropropene	601	0.5	2										
34.	Methyl Bromide or Bromomethane	601	1.0	2										
35.	Methyl Chloride or Chloromethane	601	0.5	2										
36.	Methylene Chloride or Dichlorormethane	601	0.5	2										
37.	1,1,2,2-Tetrachloroethane	601	0.5	1										
38.	Tetrachloroethylene	601	0.5	2										
40.	1,2-Trans-Dichloroethylene	601	0.5	1										
41.	1,1,1-Trichloroethane	601	0.5	2										
42.	1,1,2-Trichloroethane	601	0.5	2										
43.	Trichloroethene	601	0.5	2										
44.	Vinyl Chloride	601	0.5	2										
45.	2-Chlorophenol	604	2	5										
46.	2,4-Dichlorophenol	604	1	5										
47.	2,4-Dimethylphenol	604	1	2										
48.	2-Methyl-4,6-Dinitrophenol or Dinitro-2-methylphenol	604	10	5										
49.	2,4-Dinitrophenol	604	5	5										
50.	2-Nitrophenol	604		10										
51.	4-Nitrophenol	604	5	10										
52.	3-Methyl-4-Chlorophenol	604	5	1										
53.	Pentachlorophenol	604	1	5										
54.	Phenol	604	1	1		50								
55.	2,4,6-Trichlorophenol	604	10	10										
56.	Acenaphthene	610 HPLC	1	1	0.5									
57.	Acenaphthylene	610 HPLC		10	0.2									
58.	Anthracene	610 HPLC		10	2									
60.	Benzo(a)Anthracene or 1,2 Benzanthracene	610 HPLC	10	5										
61.	Benzo(a)Pyrene	610 HPLC		10	2									
62.	Benzo(b)Fluoranthene or 3,4 Benzofluoranthene	610 HPLC		10	10									

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CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
63.	Benzo(ghi)Perylene	610 HPLC		5	0.1									
64.	Benzo(k)Fluoranthene	610 HPLC		10	2									
74.	Dibenzo(a,h)Anthracene	610 HPLC		10	0.1									
86.	Fluoranthene	610 HPLC	10	1	0.05									
87.	Fluorene	610 HPLC		10	0.1									
92.	Indeno(1,2,3-cd) Pyrene	610 HPLC		10	0.05									
100.	Pyrene	610 HPLC		10	0.05									
68.	Bis(2-Ethylhexyl)Phthalate	606 or 625	10	5										
70.	Butylbenzyl Phthalate	606 or 625	10	10										
79.	Diethyl Phthalate	606 or 625	10	2										
80.	Dimethyl Phthalate	606 or 625	10	2										
81.	Di-n-Butyl Phthalate	606 or 625		10										
84.	Di-n-Octyl Phthalate	606 or 625		10										
59.	Benzidine	625		5										
65.	Bis(2-Chloroethoxy)Methane	625		5										
66.	Bis(2-Chloroethyl)Ether	625	10	1										
67.	Bis(2-Chloroisopropyl)Ether	625	10	2										
69.	4-Bromophenyl Phenyl Ether	625	10	5										
71.	2-Chloronaphthalene	625		10										
72.	4-Chlorophenyl Phenyl Ether	625		5										
73.	Chrysene	625		10	5									
78.	3,3'-Dichlorobenzidine	625		5										
82.	2,4-Dinitrotoluene	625	10	5										
83.	2,6-Dinitrotoluene	625		5										
85.	1,2-Diphenylhydrazine (note)[6]	625		1										
88.	Hexachlorobenzene	625	5	1										
89.	Hexachlorobutadiene	625	5	1										
90.	Hexachlorocyclopentadiene	625	5	5										
91.	Hexachloroethane	625	5	1										
93.	Isophorone	625	10	1										
94.	Naphthalene	625	10	1	0.2									
95.	Nitrobenzene	625	10	1										
96.	N-Nitrosodimethylamine	625	10	5										
97.	N-Nitrosodi-n-Propylamine	625	10	5										
98.	N-Nitrosodiphenylamine	625	10	1										
99.	Phenanthrene	625		5	0.05									
101.	1,2,4-Trichlorobenzene	625	1	5										
102.	Aldrin	608	0.005											
103.	α-BHC	608	0.01											
104.	β-BHC	608	0.005											
105.	γ-BHC (Lindane)	608	0.02											
106.	δ-BHC	608	0.005											
107.	Chlordane	608	0.1											
108.	4,4'-DDT	608	0.01											
109.	4,4'-DDE	608	0.05											

[6] Measurement for 1,2-Diphenylhydrazine may use azobenzene as a screen: if azobenzene is measured at >1 ug/l, then the Discharger shall analyze for 1,2-Diphenylhydrazine.

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CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
110.	4,4'-DDD	608	0.05											
111.	Dieldrin	608	0.01											
112.	Endosulfan (alpha)	608	0.02											
113.	Endosulfan (beta)	608	0.01											
114.	Endosulfan Sulfate	608	0.05											
115.	Endrin	608	0.01											
116.	Endrin Aldehyde	608	0.01											
117.	Heptachlor	608	0.01											
118.	Heptachlor Epoxide	608	0.01											
119-125	PCBs: Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260	608	0.5											
126.	Toxaphene	608	0.5											

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ATTACHMENT H

Pretreatment Program Provisions

1. The Discharger shall implement all pretreatment requirements contained in 40 CFR 403, as amended. The Discharger shall be subject to enforcement actions, penalties, and fines as provided in the Clean Water Act (33 USC 1351 et seq.), as amended. The Discharger shall implement and enforce its Approved Pretreatment Program or modified Pretreatment Program as directed by the Regional Water Board's Executive Officer or the USEPA. The USEPA and/or the State may initiate enforcement action against an industrial user for noncompliance with applicable standards and requirements as provided in the Clean Water Act.

2. The Discharger shall enforce the requirements promulgated under Sections 307(b), 307(c), 307(d) and 402(b) of the Clean Water Act. The Discharger shall cause industrial users subject to Federal Categorical Standards to achieve compliance no later than the date specified in those requirements or, in the case of a new industrial user, upon commencement of the discharge.

3. The Discharger shall perform the pretreatment functions as required in 40 CFR Part 403 and amendments or modifications thereto including, but not limited to:

   i) Implement the necessary legal authorities to fully implement the pretreatment regulations as provided in 40 CFR 403.8(f)(1);

   ii) Implement the programmatic functions as provided in 40 CFR 403.8(f)(2);

   iii) Publish an annual list of industrial users in significant noncompliance as provided per 40 CFR 403.8(f)(2)(vii);

   iv) Provide for the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR 403.8(f)(3); and

   v) Enforce the national pretreatment standards for prohibited discharges and categorical standards as provided in 40 CFR 403.5 and 403.6, respectively.

4. The Discharger shall submit annually a report to USEPA Region 9, the State Water Board and the Regional Water Board describing its pretreatment program activities over the previous twelve months. In the event that the Discharger is not in compliance with any conditions or requirements of the Pretreatment Program, the Discharger shall also include the reasons for noncompliance and a plan and schedule for achieving compliance. The report shall contain, but is not limited to, the information specified in Appendix A entitled, "Requirements for Pretreatment Annual Reports," which is made a part of this Order. The annual report is due on the last day of February each year.

5. The Discharger shall submit semiannual pretreatment reports to USEPA Region 9, the State Water Board and the Regional Water Board describing the status of its significant industrial users (SIUs). The report shall contain, but not is limited to, the information specified in Appendix B entitled, "Requirements for Semiannual Pretreatment Reports," which is made part of this Order. The semiannual reports are due July 31st (for the period January through June) and January 31st (for the period July through December) of each year. The Executive Officer may exempt a Discharger from the semiannual reporting requirements on a case by case basis subject to State Water Board and USEPA's comment and approval.

6. The Discharger may combine the annual pretreatment report with the semiannual pretreatment report (for the July through December reporting period). The combined report shall contain all of the information requested in Appendices A and B and will be due on January 31st of each year.

7. The Discharger shall conduct the monitoring of its treatment plant's influent, effluent, and sludge as described in Appendix C entitled, "Requirements for Influent, Effluent and Sludge Monitoring," which is made part of this Order. The results of the sampling and analysis, along with a discussion of any trends, shall be submitted in the semiannual reports. A tabulation of the data shall be included in the annual pretreatment report. The Executive Officer may require more or less frequent monitoring on a case by case basis.

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APPENDIX A

REQUIREMENTS FOR PRETREATMENT ANNUAL REPORTS

The Pretreatment Annual Report is due each year on the last day of February. [If the annual report is combined with the semiannual report (for the July through December period) the submittal deadline is January 31st of each year.] The purpose of the Annual Report is 1) to describe the status of the Publicly Owned Treatment Works (POTW) pretreatment program and 2) to report on the effectiveness of the program, as determined by comparing the results of the preceding year's program implementation. The report shall contain at a minimum, but is not limited to, the following information:

1) Cover Sheet

The cover sheet must contain the name(s) and National Pollutant Discharge Elimination Discharge System (NPDES) permit number(s) of those POTWs that are part of the Pretreatment Program. Additionally, the cover sheet must include: the name, address and telephone number of a pretreatment contact person; the period covered in the report; a statement of truthfulness; and the dated signature of a principal executive officer, ranking elected official, or other duly authorized employee who is responsible for overall operation of the POTW (40 CFR 403.12(j)).

2) Introduction

The Introduction shall include any pertinent background information related to the Discharger, the POTW and/or the industrial user base of the area. Also, this section shall include an update on the status of any Pretreatment Compliance Inspection (PCI) tasks, Pretreatment Performance Evaluation tasks, Pretreatment Compliance Audit (PCA) tasks, Cleanup and Abatement Order (CAO) tasks, or other pretreatment-related enforcement actions required by the Regional Water Board or the USEPA. A more specific discussion shall be included in the section entitled, "Program Changes."

3) Definitions

This section shall contain a list of key terms and their definitions that the Discharger uses to describe or characterize elements of its pretreatment program.

4) Discussion of Upset, Interference and Pass Through

This section shall include a discussion of Upset, Interference or Pass Through incidents, if any, at the POTW(s) that the Discharger knows of or suspects were caused by industrial discharges. Each incident shall be described, at a minimum, consisting of the following information:

a) a description of what occurred;
b) a description of what was done to identify the source;
c) the name and address of the IU responsible
d) the reason(s) why the incident occurred;
e) a description of the corrective actions taken; and
f) an examination of the local and federal discharge limits and requirements for the purposes of determining whether any additional limits or changes to existing requirements may be necessary to prevent other Upset, Interference or Pass Through incidents.

5) Influent, Effluent and Sludge Monitoring Results

This section shall provide a summary of the analytical results from the "Influent, Effluent and Sludge Monitoring" as specified in Appendix C. The results should be reported in a summary matrix that lists monthly influent and effluent metal results for the reporting year.

A graphical representation of the influent and effluent metal monitoring data for the past five years shall also be provided with a discussion of any trends.

6) **Inspection and Sampling Program**

This section shall contain at a minimum, but is not limited to, the following information:

a) Inspections: the number of inspections performed for each type of IU; the criteria for determining the frequency of inspections; the inspection format procedures;
b) Sampling Events: the number of sampling events performed for each type of IU; the criteria for determining the frequency of sampling; the chain of custody procedures.

7) **Enforcement Procedures**

This section shall provide information as to when the approved Enforcement Response Plan (ERP) had been formally adopted or last revised. In addition, the date the finalized ERP was submitted to the Regional Water Board shall also be given.

8) **Federal Categories**

This section shall contain a list of all of the federal categories that apply to the Discharger. The specific category shall be listed including the subpart and 40 CFR section that applies. The maximum and average limits for the each category shall be provided. This list shall indicate the number of Categorical Industrial Users (CIUs) per category and the CIUs that are being regulated pursuant to the category. The information and data used to determine the limits for those CIUs for which a combined waste stream formula is applied shall also be provided.

9) **Local Standards**

This section shall include a table presenting the local limits.

10) **Updated List of Regulated SIUs**

This section shall contain a complete and updated list of the Discharger's Significant Industrial Users (SIUs), including their names, addresses, and a brief description of the individual SIU's type of business. The list shall include all deletions and additions keyed to the list as submitted in the previous annual report. All deletions shall be briefly explained.

11) **Compliance Activities**

a) **Inspection and Sampling Summary:** This section shall contain a summary of all the inspections and sampling activities conducted by the Discharger over the past year to gather information and data regarding the SIUs. The summary shall include:

(1) the number of inspections and sampling events conducted for each SIU;

(2) the quarters in which these activities were conducted; and

(3) the compliance status of each SIU, delineated by quarter, and characterized using all applicable descriptions as given below:

(a) in consistent compliance;

(b) in inconsistent compliance;

(c) in significant noncompliance;

(d) on a compliance schedule to achieve compliance, (include the date final compliance is required);

(e) not in compliance and not on a compliance schedule;

(f) compliance status unknown, and why not.

b) **Enforcement Summary:** This section shall contain a summary of the compliance and enforcement activities during the past year. The summary shall include the names of all the SIUs affected by the following actions:

(1) Warning letters or notices of violations regarding SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.

(2) Administrative Orders regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.

(3) Civil actions regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.

(4) Criminal actions regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.

(5) Assessment of monetary penalties. Identify the amount of penalty in each case and reason for assessing the penalty.

(6) Order to restrict/suspend discharge to the POTW.

(7) Order to disconnect the discharge from entering the POTW.

12) **Baseline Monitoring Report Update**

This section shall provide a list of CIUs that have been added to the pretreatment program since the last annual report. This list of new CIUs shall summarize the status of the respective Baseline Monitoring Reports (BMR). The BMR must contain all of the information specified in 40 CFR 403.12(b). For each of the new CIUs, the summary shall indicate when the BMR was due; when the CIU was notified by the POTW of this requirement; when the CIU submitted the report; and/or when the report is due.

13) **Pretreatment Program Changes**

This section shall contain a description of any significant changes in the Pretreatment Program during the past year including, but not limited to: legal authority, local limits, monitoring/ inspection program and frequency, enforcement protocol, program's administrative structure, staffing level, resource requirements and funding mechanism. If the manager of the pretreatment program changes, a revised organizational chart shall be included. If any element(s) of the program is in the process of being modified, this intention shall also be indicated.

14) **Pretreatment Program Budget**

This section shall present the budget spent on the Pretreatment Program. The budget, either by the calendar or fiscal year, shall show the amounts spent on personnel, equipment, chemical analyses and any other appropriate categories. A brief discussion of the source(s) of funding shall be provided.

15) **Public Participation Summary**

This section shall include a copy of the public notice as required in 40 CFR 403.8(f)(2)(vii). If a notice was not published, the reason shall be stated.

16) **Sludge Storage and Disposal Practice**

This section shall have a description of how the treated sludge is stored and ultimately disposed. The sludge storage area, if one is used, shall be described in detail. Its location, a description of the containment features and the sludge handling procedures shall be included.

17) **PCS Data Entry Form**

The annual report shall include the PCS Data Entry Form. This form shall summarize the enforcement actions taken against SIUs in the past year. This form shall include the following information: the POTW name, NPDES Permit number, period covered by the report, the number of SIUs in significant noncompliance (SNC) that are on a pretreatment compliance schedule, the number of notices of violation and administrative orders issued against SIUs, the number of civil and criminal judicial actions against SIUs, the number of SIUs that have been published as a result of being in SNC, and the number of SIUs from which penalties have been collected.

18) **Other Subjects**

Other information related to the Pretreatment Program that does not fit into one of the above categories should be included in this section.

Signed copies of the reports shall be submitted to the Regional Administrator at USEPA, the State Water Board and the Regional Water Board at the following addresses:

Regional Administrator
United States Environmental Protection Agency
Region 9, Mail Code: WTR-7
Clean Water Act Compliance Office
Water Division
75 Hawthorne Street
San Francisco, CA 94105

Pretreatment Program Manager
Regulatory Unit
State Water Resources Control Board
Division of Water Quality
1001 I Street
Sacramento, CA 95814

Pretreatment Coordinator
NPDES Permits Division
SF Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

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APPENDIX B:

REQUIREMENTS FOR SEMIANNUAL PRETREATMENT REPORTS

The semiannual pretreatment reports are due on July 31st (for pretreatment program activities conducted from January through June) and January 31st (for pretreatment activities conducted from July through December) of each year, unless an exception has been granted by the Regional Water Board's Executive Officer. The semiannual reports shall contain, at a minimum, but is not limited to, the following information:

1) **Influent, Effluent and Sludge Monitoring**

The influent, effluent and sludge monitoring results shall be included in the report. The analytical laboratory report shall also be included, with the QA/QC data validation provided upon request. A description of the sampling procedures and a discussion of the results shall be given. (Please see Appendix C for specific detailed requirements.) The contributing source(s) of the parameters that exceed NPDES limits shall be investigated and discussed. In addition, a brief discussion of the contributing source(s) of all organic compounds identified shall be provided.

The Discharger has the option to submit all monitoring results via an electronic reporting format approved by the Executive Officer. The procedures for submitting the data will be similar to the electronic submittal of the NPDES self-monitoring reports as outlined in the December 17, 1999 Regional Water Board letter, Official Implementation of Electronic Reporting System (ERS). The Discharger shall contact the Regional Water Board's ERS Project Manager for specific details in submitting the monitoring data.

If the monitoring results are submitted electronically, the analytical laboratory reports (along with the QA/QC data validation) should be kept at the discharger's facility.

2) **Industrial User Compliance Status**

This section shall contain a list of all Significant Industrial Users (SIUs) that were not in consistent compliance with all pretreatment standards/limits or requirements for the reporting period. The compliance status for the previous reporting period shall also be included. Once the SIU has determined to be out of compliance, the SIU shall be included in the report until consistent compliance has been achieved. A brief description detailing the actions that the SIU undertook to come back into compliance shall be provided.

For each SIU on the list, the following information shall be provided:

a. Indicate if the SIU is subject to Federal categorical standards; if so, specify the category including the subpart that applies.

b. For SIUs subject to Federal Categorical Standards, indicate if the violation is of a categorical or local standard.

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c. Indicate the compliance status of the SIU for the two quarters of the reporting period.

d. For violations/noncompliance occurring in the reporting period, provide (1) the date(s) of violation(s); (2) the parameters and corresponding concentrations exceeding the limits and the discharge limits for these parameters and (3) a brief summary of the noncompliant event(s) and the steps that are being taken to achieve compliance.

3) **POTW's Compliance with Pretreatment Program Requirements**

This section shall contain a discussion of the Discharger's compliance status with the Pretreatment Program Requirements as indicated in the latest Pretreatment Compliance Audit (PCA) Report, Pretreatment Compliance Inspection (PCI) Report or Pretreatment Performance Evaluation (PPE) Report. It shall contain a summary of the following information:

a. Date of latest PCA, PCI or PPE and report.
b. Date of the Discharger's response.
c. List of unresolved issues.
d. Plan and schedule for resolving the remaining issues.

The reports shall be signed by a principal executive officer, ranking elected official, or other duly authorized employee who is responsible for the overall operation of the Publicly Owned Treatment Works (POTW) (40 CFR 403.12(j)). Signed copies of the reports shall be submitted to the Regional Administrator at USEPA, the State Water Board and the Regional Water Board at the following addresses:

Regional Administrator
United States Environmental Protection Agency
Region 9, Mail Code: WTR-7
Clean Water Act Compliance Office
Water Division
75 Hawthorne Street
San Francisco, CA 94105

Pretreatment Program Manager
Regulatory Unit
State Water Resources Control Board
Division of Water Quality
1001 I Street
Sacramento, CA 95814

Pretreatment Coordinator
NPDES Permits Division
SF Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

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APPENDIX C

REQUIREMENTS FOR INFLUENT, EFFLUENT AND SLUDGE MONITORING

The Discharger shall conduct sampling of its treatment plant's influent, effluent and sludge at the frequency as shown in Table E-5 of the Monitoring and Reporting Program (MRP, Attachment E).

The monitoring and reporting requirements of the POTW's Pretreatment Program are in addition to those specified in Table E-2 (influent) and Table E-3 (effluent) of the MRPTable 1 of the SMP. Any subsequent modifications of the requirements specified in Tables E-2 and E-3 shall be adhered to and shall not affect the requirements described in this Appendix unless written notice from the Regional Water Board is received. When sampling periods coincide, one set of test results, reported separately, may be used for those parameters that are required to be monitored by both Tables E-2 and E-3 in the Pretreatment Program. The Pretreatment Program monitoring reports shall be sent to the Pretreatment Program Coordinator.

1. Influent and Effluent Monitoring

The Discharger shall monitor for the parameters using the required test methods listed in Table E-5 (the pretreatment table) Any test method substitutions must have received prior written Regional Water Board approval. Influent and Effluent sampling locations shall be the same as those sites specified in the MRP.

2. Influent and Effluent Monitoring

The Discharger shall monitor for the parameters using the required test methods listed in Table E-5 (the pretreatment table) of the MRP. Any test method substitutions must have received prior written Regional Water Board approval. Influent and Effluent sampling locations shall be the same as those sites specified in the MRP.

The influent and effluent sampled should be taken during the same 24-hour period. All samples must be representative of daily operations. Grab samples shall be used for volatile organic compounds, cyanide and phenol. In addition, any samples for oil and grease, polychlorinated biphenyls, dioxins/furans, and polynuclear aromatic hydrocarbons shall be grab samples. For all other pollutants, 24-hour composite samples must be obtained through flow-proportioned composite sampling. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto. For effluent monitoring, the reporting limits for the individual parameters shall be at or below the minimum levels (MLs) as stated in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (2000) [also known as the State Implementation Policy (SIP)]; any revisions to the MLs shall be adhered to. If a parameter does not have a stated minimum level, then the Discharger shall conduct the analysis using the lowest commercially available and reasonably achievable detection levels.

The following standardized report format should be used for submittal of the influent and effluent monitoring report. A similar structured format may be used but will be subject to Regional Water Board approval. The monitoring reports shall be submitted with the Semiannual Reports.

A. Sampling Procedures – This section shall include a brief discussion of the sample locations, collection times, how the sample was collected (i.e., direct collection using vials or bottles, or other types of collection using devices such as automatic samplers, buckets, or beakers), types of containers used, storage procedures and holding times.

Include description of prechlorination and chlorination/dechlorination practices during the sampling periods.

B. Method of Sampling Dechlorination – A brief description of the sample dechlorination method prior to analysis shall be provided.

C. Sample Compositing – The manner in which samples are composited shall be described. If the compositing procedure is different from the test method specifications, a reason for the variation shall be provided.

D. Data Validation – All quality assurance/quality control (QA/QC) methods to be used shall be discussed and summarized. These methods include, but are not limited to, spike samples, split samples, blanks and standards. Ways in which the QA/QC data will be used to qualify the analytical test results shall be identified. A certification statement shall be submitted with this discussion stating that the laboratory QA/QC validation data has been reviewed and has met the laboratory acceptance criteria. The QA/QC validation data shall be submitted to the Regional Water Board upon request.

E. A tabulation of the test results shall be provided.

F. Discussion of Results – The report shall include a complete discussion of the test results. If any pollutants are detected in sufficient concentration to upset, interfere or pass through plant operations, the type of pollutant(s) and potential source(s) shall be noted, along with a plan of action to control, eliminate, and/or monitor the pollutant(s). Any apparent generation and/or destruction of pollutants attributable to chlorination/dechlorination sampling and analysis practices shall be noted.

3. **Sludge Monitoring**

Sludge should be sampled in the same 24-hour period during which the influent and effluent are sampled except as noted in (C) below. The same parameters required for influent and effluent analysis shall be included in the sludge analysis. The sludge analyzed shall be a composite sample of the sludge for final disposal consisting of:

A. Sludge lagoons – 20 grab samples collected at representative equidistant intervals (grid pattern) and composited as a single grab, or

B. Dried stockpile – 20 grab samples collected at various representative locations and depths and composited as a single grab, or

C. Dewatered sludge- daily composite of 4 representative grab samples each day for 5 days taken at equal intervals during the daily operating shift taken from a) the dewatering units or b) from each truckload, and shall be combined into a single 5-day composite.

The USEPA manual, POTW Sludge Sampling and Analysis Guidance Document, August 1989, containing detailed sampling protocols specific to sludge is recommended as a guidance for sampling procedures. The USEPA manual Analytical Methods of the National Sewage Sludge Survey, September 1990, containing detailed analytical protocols specific to sludge, is recommended as a guidance for analytical methods.

In determining if the sludge is a hazardous waste, the Dischargers shall adhere to Article 2, "Criteria for Identifying the Characteristics of Hazardous Waste," and Article 3, "Characteristics of Hazardous Waste," of Title 22, California Code of Regulations, Sections 66261.10 to 66261.24 and all amendments thereto.

Sludge monitoring reports shall be submitted with the appropriate Semiannual Report. The following standardized report format should be used for submittal of the report. A similarly structured form may be used but will be subject to Regional Water Board approval.

A. Sampling procedures – Include sample locations, collection procedures, types of containers used, storage/refrigeration methods, compositing techniques and holding times. Enclose a map of sample locations if sludge lagoons or stockpiled sludge is sampled.

B. Data Validation – All quality assurance/quality control (QA/QC) methods to be used shall be discussed and summarized. These methods include, but are not limited to, spike samples, split samples, blanks and standards. Ways in which the QA/QC data will be used to qualify the analytical test results shall be identified. A certification statement shall be submitted with this discussion stating that the laboratory QA/QC validation data has been reviewed and has met the laboratory acceptance criteria. The QA/QC validation data shall be submitted to the Regional Water Board upon request.

C. Test Results – Tabulate the test results and include the percent solids.

D. Discussion of Results – The report shall include a complete discussion of test results. If the detected pollutant(s) is reasonably deemed to have an adverse effect on sludge disposal, a plan of action to control, eliminate, and/or monitor the pollutant(s) and the known or potential source(s) shall be included. Any apparent generation and/or destruction of pollutants attributable to chlorination/ dechlorination sampling and analysis practices shall be noted.

The Discharger shall also provide any influent, effluent or sludge monitoring data for nonpriority pollutants that the permittee believes may be causing or contributing to Interference, Pass Through or adversely impacting sludge quality.