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Secretary for
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California Regional Water Quality Control Board

San Francisco Bay Region

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Edmund G. Brown, Jr.
Governor

TENTATIVE ORDER NO. R2-2012-00XX
NPDES NO. CA0038776

The following discharger and discharges from the discharge point identified below are subject to waste discharge requirements set forth in this Order.

Table 1. Discharger Information

Discharger	City of Pacifica
Name of Facility	Calera Creek Water Recycling Plant and its wastewater collection system
Facility Address	700 Coast Highway, Pacifica CA 94044, San Mateo County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Advanced Secondary Treated Municipal Wastewater	37º 36′ 53″ N	122º 29′ 16″ W	Calera Creek

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	
This Order shall become effective on:	March 1, 2012
This Order shall expire on:	February 28, 2017
CIWQS Regulatory Measure Number.	
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:	September 2, 2016

I, Bruce H. Wolfe, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on the date indicated above.

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Bruce H. Wolfe**,** Executive Officer

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Attachments

I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	City of Pacifica
Name of Facility	Calera Creek Water Recycling Plant and its associated wastewater collection system
Facility Address	700 Coast Highway, Pacifica CA 94044, San Mateo County
CIWQS Place Number	212585
Facility Contact, Title, and Phone	David Gromm, Director of Wastewater, (650) 738-4663. Email: grommd@ci.pacifica.ca.us
Mailing Address	700 Coast Highway, Pacifica CA 94004
CIWQS Party Number	303554
Type of Facility	Publicly Owned Treatment Works (POTW)
Facility Permitted Flow	4.0 million gallons per day (MGD) average daily dry weather flow
Facility Design Flow	4.0 million gallons per day (MGD) (average dry weather design flow) 7.0 MGD (peak dry weather design flow) 20 MGD (peak wet weather design flow)
Service Area	City of Pacifica
Service Population	39,000

II. FINDINGS

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter the Regional Water Board), finds:

A. Background. The City of Pacifica (hereinafter the Discharger) is currently discharging under Order No. R2-2006-0067 (CIWQS Regulatory Measure Number 313377), National Pollutant Discharge Elimination System (NPDES) Permit No. CA0038776. The Discharger submitted a Report of Waste Discharge, dated May 2, 2011, and applied for an NPDES permit reissuance to discharge treated wastewater from its Calera Creek Water Recycling Plant to waters of the State and the United States.

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

B. Facility Description and Discharge Location

1. **Facility Description.** The Discharger owns and operates the Calera Creek Water Recycling Plant (Plant) and its associated wastewater collection system (hereinafter collectively the Facility). The Plant provides advanced secondary treatment of domestic and commercial wastewater for a community of approximately 39,000.

   The Facility includes screens at two pump stations (Sharp Park and Linda Mar), grit removal, sequencing batch reactors for primary and secondary treatment and nutrient removal, sand filters, and ultraviolet (UV) disinfection.

2. **Discharge Description.** The Plant has an average dry weather flow design capacity of 4.0 MGD. From November 2006 through December 2010, the daily average and maximum flow rates from the Plant at Discharge Point 001 during the discharge period were 2.9 and 16.9 MGD, respectively.

3. **Discharge Location.** Treated wastewater is discharged at Discharge Point 001 over a cascade aerator to Calera Creek. Calera Creek flows 0.52 miles through a constructed wetland to the Pacific Ocean. The elevation of the discharge at the cascade aerator is approximately 2 to 3 feet above the surface water elevation of Calera Creek based on a 100-year storm event.

4. **Reclamation Activities.** The Discharger restored and maintains approximately 8.7 acres of wetlands in a former rock quarry and restored the lower stream channel of Calera Creek as part of the Regional Water Board's exception for the shallow water discharge. The wetlands provide habitat for the endangered San Francisco garter snake and threatened California red-legged frog.

5. **Collection System.** The Facility's wastewater collection system includes approximately 82 miles of gravity sewer main, 4.2 miles of force main and five pump stations.

6. **Biosolids Management.** Biosolids generated from the treatment process are stored in waste activated sludge storage basins, which are aerated prior to thickening with gravity belt thickeners. Thickened solids are digested in autothermophilic aerobic digesters, dewatered with centrifuges, and then hauled for land disposal at authorized sites. In 2010, biosolids were land applied to 34 fields in Merced, Sacramento, and Solano Counties and placed in a landfill in Solano County.

7. **Storm Water Discharge.** The Discharger is not required to be covered under the State Water Board's statewide NPDES permit for storm water discharges associated with industrial activities (NPDES General Permit No. CAS000001) because all storm water flows in contact with equipment or wastewater at the Plant and the pump stations serving the Plant are collected and directed to the headworks for treatment.

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

C. Legal Authorities. This Order is issued pursuant to Clean Water Act (CWA) section 402 and implements regulations adopted by the USEPA and California Water Code (CWC) chapter 5.5, division 7 (commencing with section 13370). It serves as an NPDES permit for point source discharges from the Facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to CWC article 4, chapter 4, division 7 (commencing with section 13260).

D. Background and Rationale for Requirements. This Order's requirements are based on information provided in the application and on data submitted to comply with the previous permit. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements of the Order, is hereby incorporated into this Order and constitutes part of the findings for this Order. Attachments A through E, and G, are also incorporated into this Order.

E. California Environmental Quality Act (CEQA). Under CWC section 13389, this action to adopt an NPDES permit is exempt from CEQA Chapter 3.

F. Technology-Based Effluent Limitations. CWA section 301(b) and Title 40 of the Code of Federal Regulations (40 CFR) section 122.44 require that permits include conditions meeting applicable technology-based requirements at minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR 133. Further discussion of the technology-based effluent limitation development is included in the Fact Sheet (Attachment F).

G. Water Quality-Based Effluent Limitations (WQBELs). CWA section 301(b) and 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. NPDES regulations at 40 CFR 122.44(d)(1)(i) mandate that permits include effluent limitations for all pollutants that are or may be discharged at levels that have a 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, 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 (WQC), 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 Plan. *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 (WQOs) for waters of the State, including surface and groundwater. It also includes implementation programs to achieve WQOs. The Basin Plan was duly adopted by the Regional Water Board and approved by the State Water Resources Control Board (hereinafter the State Water Board), the Office of Administrative Law, and USEPA. Requirements of this Order implement the Basin Plan.

The Regional Water Board adopted Resolution No. 2010-0100 on July 14, 2010, amending Basin Plan Table 2-1. This Basin Plan amendment adds nearly 275 surface water bodies to Table 2-1 and designates beneficial uses for the newly added and some existing water bodies. The State Water Board, Office of Administrative Law, and USEPA have yet to consider this Basin Plan amendment. The revised Basin Plan beneficial uses for Calera Creek are listed in the table below. Regional Water Board staff examined actual uses of Calera Creek downstream of the discharge point and determined that the beneficial use of Municipal and Domestic Water Supply does not apply.

Table 5. Basin Plan Beneficial Uses

Receiving Water Name	Beneficial Uses
Calera Creek	Preservation of Rare and Endangered Species (RARE) Warm Freshwater Habitat (WARM) Wildlife Habitat (WILD) Water Contact Recreation (REC1) Non-Contact Water Recreation (REC2)

I. National Toxics Rule (NTR) and California Toxics Rule (CTR). USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995, and November 9, 1999. About 40 criteria in the NTR apply in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that applied in the State. The CTR was amended on February 13, 2001. These rules contain WQC for priority pollutants.

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

K Alaska Rule. On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards 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 already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

L 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 total ammonia. Derivation of these technology-based limitations is discussed in the Fact Sheet (Attachment F). This Order's technology-based pollutant restrictions on BOD and TSS implement the minimum applicable federal technology-based requirements and are more stringent than those requirements to justify an exception to Basin Plan Discharge Prohibition 1 (Fact Sheet section IV.B).

WQBELs have been derived to implement WQOs that protect beneficial uses. Both the beneficial uses and the WQOs have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The procedures for calculating individual WQBELs for priority pollutants are based on the SIP, which USEPA approved on May 18, 2000. Most beneficial uses and WQOs contained in the Basin Plan were approved under State law and

submitted to USEPA. Any WQOs and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for the purposes of the CWA" pursuant to 40 CFR 131.21(c)(1).

M. 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, which incorporates the federal antidegradation policy where the federal policy applies under federal law and requires that the existing quality of waters be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies.

N. Anti-Backsliding Requirements. CWA sections 402(o)(2) and 303(d)(4) and 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 order, with some exceptions where limitations may be relaxed.

O. 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.

P. Monitoring and Reporting. NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. CWC sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP, Attachment E) establishes monitoring and reporting requirements to implement federal and State requirements.

Q. Standard and Special Provisions. 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 standard provisions and with those additional conditions that apply under 40 CFR 122.42. The Discharger must also comply with the Regional Standard Provisions provided in Attachment G. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. The attached Fact Sheet (Attachment F) provides rationale for the special provisions.

R. Provisions and Requirements Implementing State Law. None of the requirements in this Order are included to implement State law only.

S. Notification of Interested Parties. The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided them with an opportunity to submit written comments and recommendations. The Fact Sheet (Attachment F) provides details of the notification.

T. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. The Fact Sheet (Attachment F) provides details of the public hearing.

IT IS HEREBY ORDERED, that this Order supersedes Order No. R2-2006-0067, except for enforcement purposes, and, in order to meet the provisions contained in CWC Division 7 (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

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

B. The bypass of untreated or partially treated wastewater to waters of the United States is prohibited, except as provided for in the conditions stated in Attachment D Subsections I.G.2 and I.G.4 of this Order.

C. The average dry weather effluent flow, measured at monitoring station EFF-001 as described in the attached MRP (Attachment E), shall not exceed 4.0 MGD. Actual average dry weather flow shall be determined for compliance with this prohibition over three consecutive dry weather months each year.

D. Any sanitary sewer overflow that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

In this section, the term "effluent" refers to treated wastewater effluent from the Discharger's wastewater treatment facility, as discharged to Calera Creek.

A. Effluent Limitations for Conventional and Non-Conventional Pollutants

1. The Discharger shall maintain compliance with the effluent limitations below at Discharge Point 001, with compliance measured at Monitoring Location EFF-001, as described in the attached MRP (Attachment E).

Table 6. Conventional and Non-Conventional Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
BOD 5-day @ 20°C (BOD_5)	mg/L	10	---	20	---	---
Total Suspended Solids (TSS)	mg/L	10	---	20	---	---
BOD and TSS percent removal [1]	%	85(min.)	---	---	---	---

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Oil and Grease	mg/L	5	---	10	---	---
pH[2]	Standard units	---	---	---	6.5	8.5
Turbidity	Nephelometric turbidity units	---	---	---	---	10
Ammonia [3]	mg/L	3.1		7.1		

Footnotes to Table 6:

[1] 85 Percent Removal. The arithmetic mean of the biochemical oxygen demand (BOD_5, 20°C) and total suspended solids values (TSS), by concentration, for effluent samples collected in each calendar month shall not exceed 15 percent of the arithmetic mean of the respective values, by concentration, for influent samples collected at approximately the same times during the same period.

[2] pH. If the Discharger monitors pH continuously, pursuant to 40 CFR 401.17, the Discharger shall be in compliance with the pH limitation specified herein provided that both of the following conditions are satisfied: (i) the total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (ii) no individual excursion from the range of pH values shall exceed 60 minutes.

[3] Performance based limits calculated from performance data during term of previous permit when the Plant was in normal operation and in compliance with the previous permit's water quality based limits.

2. **Fecal Coliform Bacteria:** Discharges at Discharge Point 001 shall meet the following limitation of bacteriological quality at all times, with compliance measured at Monitoring Location EFF-001:

   a. The five-sample moving geometric mean value for fecal coliform density shall not exceed a Most Probable Number (MPN) of 200 per 100 milliliters (mL).

   b. The ten-sample moving 90th percentile for fecal coliform density shall not exceed an MPN of 400 per 100 mL.

B. Effluent Limitations for Toxic Substances

The Discharger shall maintain compliance with the effluent limitations below at Discharge Point 001, with compliance determined at Monitoring Location EFF-001, as described in the attached MRP (Attachment E).

Table 7. Effluent Limitations for Priority Pollutants

Constituent	Units	Effluent Limitations[1]	
		Average Monthly	Maximum Daily
Copper	µg/L	10	15
Lead	µg/L	2.4	6.0
Cyanide	µg/L	4.4	7.8

Footnote to Table 7:

[1] a. Limitations apply to the average concentration of all samples collected during the averaging period (daily = 24-hour period; monthly = calendar month)

b. All limitations for metals are expressed as total recoverable metals.

C. Whole Effluent Toxicity

1. Whole Effluent Acute Toxicity

a. Representative samples of the effluent at Discharge Point 001, with compliance measured at EFF-001 as described in the MRP (Attachment E), shall meet the following limits for acute toxicity. Bioassays shall be conducted in accordance with MRP section V.A (Attachment E.)

(1) An eleven (11) – sample median value of not less than 90 percent survival; and

(2) An eleven (11) – sample 90th percentile value of not less than 70 percent survival.

b. These acute toxicity limitations are further defined as follows:

(1) **11-sample median**. A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if five or more of the past ten or less bioassay tests show less than 90 percent survival.

(2) **11-sample 90th percentile**. A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit, if one or more of the past ten or less bioassay tests show less than 70 percent survival.

c. Bioassays shall be performed using the most up-to-date USEPA protocol and the most sensitive species as specified in writing by the Executive Officer based on the most recent screening test results. Bioassays shall be conducted in compliance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms," currently 5th Edition (EPA-821-R-02-012), with exceptions granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP) upon the Discharger's request with justification.

2. Whole Effluent Chronic Toxicity

There shall be no chronic toxicity in the discharge as discharged. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, or any other relevant measure of the health of an organism population or community. Compliance with this limit shall be determined by analyses of indicator organisms and toxicity tests. Compliance shall be measured at EFF-001, as described in the MRP (Attachment E).

V. RECEIVING WATER LIMITATIONS

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:

a. Floating, suspended, or deposited macroscopic particulate matter or foams;

b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;

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

d. Visible, floating, suspended, or deposited oil or other products of petroleum origin; and

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

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State at any place within 1 foot of the water surface:

a. Dissolved Oxygen	5.0 mg/L, minimum Furthermore, the median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, the discharge shall not cause further reduction in ambient dissolved oxygen concentrations.
b. Dissolved Sulfide	Natural background levels
c. pH	The pH shall not be depressed below 6.5 or raised above 8.5. The discharge shall not cause changes greater than 0.5 pH units in normal ambient pH levels.
d. Un-ionized ammonia	0.025 mg/L, as N, annual median
e. Nutrients	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

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

VI. PROVISIONS

A. Standard Provisions

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

2. **Regional Standard Provisions.** 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 (Attachment G), including amendments thereto. Attachment G, section V.C.1.h, "Reporting data in electronic

format," shall not apply. Regarding Section IV.E.2, "Unauthorized Discharges from Municipal Wastewater Treatment Plants," 2-hour notification of the California Emergency Management Agency shall constitute 2-hour notification of the Regional Water Board. No reports shall be submitted to www.wbers.net. The Discharger shall submit 5-day reports in hard copy to the Regional Water Board case manager.

B. MRP Requirements

The Discharger shall comply with the MRP (Attachment E), and future revisions thereto, including applicable sampling and reporting requirements in the standard provisions listed in VI.A above.

C. Special Provisions

1. Reopener Provisions

The Regional Water Board may modify or reopen this Order prior to its expiration date in any of the following circumstances as allowed by law:

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

b. If new or revised WQOs or total maximum daily loads (TMDLs) come into effect for the San Francisco Bay Estuary and contiguous water bodies (whether Statewide, regional, or site-specific). In such cases, effluent limitations in this Order will be modified as necessary to reflect updated WQOs and waste load allocations in TMDLs. Adoption of effluent limitations contained in this Order is not intended to restrict in any way future modifications based on legally adopted WQOs or TMDLs, or as otherwise permitted under federal regulations governing NPDES permit modifications.

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

d. If State Water Board precedential decisions, new policies, new laws, or new regulations on chronic toxicity or total chlorine residual become available.

e. If an administrative or judicial decision on a separate NPDES permit or WDRs addresses requirements similar to this discharge.

f. Or as otherwise authorized by law.

The Discharger may request permit modification based on any of the circumstances described above. In any such request, the Discharger shall include an antidegradation and anti-backsliding analysis.

2. Effluent Characterization Study and Report

a. Study Elements

The Discharger shall continue to characterize and evaluate effluent discharges from the following discharge point to verify that the "no" or "cannot determine" reasonable potential analysis conclusions of this Order remain valid and to inform the next permit reissuance. The Discharger shall collect representative samples of the discharge at the following monitoring station, as defined in the MRP (Attachment E):

Discharge Point	Monitoring Station	Frequency
001	EFF-001	Once per year

The samples shall be analyzed for the priority pollutants listed in Table C of the Regional Standard Provisions (Attachment G), except for those priority pollutants with effluent limitations where the MRP already requires monitoring. Compliance with this requirement shall be achieved in accordance with the specifications of Regional Standard Provisions (Attachment G) sections III.A.1 and III.A.2.

The Discharger shall evaluate on an annual basis if concentrations of any of these priority pollutants increase over past performance. The Discharger shall investigate the cause of any increase. The investigation may include, but need not be limited to, an increase in monitoring frequency, monitoring of internal process streams, and monitoring of influent sources. The Discharger shall establish remedial measures addressing any increase resulting in reasonable potential to cause or contribute to an excursion above applicable water quality objectives. This requirement may be satisfied through identification of the constituent as a "pollutant of concern" in the Discharger's Pollutant Minimization Program, described in Provision VI.C.3.

b. Reporting Requirements

(1) Routine Reporting

The Discharger shall, within 30 days of receipt of analytical results, report in the transmittal letter for the appropriate monthly self-monitoring report the following:

(a) Indication that a sample or samples for this characterization study was or were collected; and

(b) Identity of priority pollutants detected at or above their applicable water quality criteria (see Fact Sheet [Attachment F] Table F-9 for the criteria), together with the detected concentrations of those pollutants.

(2) Annual Reporting

The Discharger shall provide a summary of the annual data evaluation and source investigation in the annual self-monitoring report.

(3) Final Report

The Discharger shall submit a final report that presents all these data to the Regional Water Board no later than 180 days prior to the Order expiration date. The final report shall be submitted with the application for permit reissuance.

3. Ambient Background Study and Report

The Discharger shall also collect background ambient receiving water monitoring data for priority pollutants that are required to perform an RPA and to calculate effluent limitations. The data on the conventional water quality parameters (pH, salinity, and hardness) shall also be sufficient to characterize these parameters in the ambient receiving water at a point after the discharge has mixed with the receiving waters. These data shall be collected once during the permit term within 12 months prior to applying to reissue the permit. The Discharger shall submit a report that presents all these data to the Regional Water Board no later than 180 days prior to the Order expiration date. The report shall be submitted with the application for permit reissuance.

4. Best Management Practices and Pollutant Minimization Program

a. The Discharger shall continue to improve, in a manner acceptable to the Executive Officer, its existing Pollutant Minimization Program to promote minimization of pollutant loads to the treatment plant and therefore to the receiving waters.

b. The Discharger shall submit an annual report, acceptable to the Executive Officer, no later than August 31 of each calendar year.. Each annual report shall include at least the following information:

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

(ii) *Discussion of the current pollutants of concern.* Periodically, the discharger shall analyze its own situation to determine which pollutants are currently a problem and which pollutants may be potential future problems. This discussion shall include the reasons for choosing the pollutants.

(iii) *Identification of sources of pollutants of concern*. This discussion shall include how the Discharger intends to estimate and identify sources of pollutants of concern. The Discharger shall also identify sources or potential sources not directly within the ability or authority of the Discharger to control, such as pollutants in the potable water supply and air deposition.

(iv) *Identification of tasks to reduce sources of pollutants of concern.* This discussion shall identify and prioritize tasks to address the Discharger's pollutants of concern. The Discharger may implement the tasks by itself or participate in group, regional, or national actions that will address its pollutants of concern. The Discharger is strongly encouraged to participate in group, regional, or national actions that will 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.

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

(vi) *Continuation of Public Outreach Program.* The Discharger shall prepare a public outreach program to communicate pollution prevention messages 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 newspaper articles or advertisements, radio or television stories or spots, newsletters, utility bill inserts, or web sites. Information shall be specific to target audiences. The Discharger shall coordinate with other agencies as appropriate.

(vii) *Discussion of criteria used to measure Pollutant Minimization Program and task effectiveness*. The Discharger shall establish criteria to evaluate the effectiveness of its Pollutant Minimization Program. This section shall also discuss the specific criteria used to measure the effectiveness of each task in sections VI.C.3.b.iii, iv, v, and vi.

(viii) *Documentation of efforts and progress*. This discussion shall detail all the Discharger's Pollutant Minimization Program activities during the reporting year.

(ix) E*valuation of Pollutant Minimization Program ~~Program's~~ and task effectiveness.* This Discharger shall use the criteria established in section VI.C.3.b.vii. to evaluate the Program's and tasks' effectiveness.

(x) *Identification of specific tasks and time schedules for future efforts.* Based on the evaluation, the Discharger shall detail how it intends to continue or change its tasks to more effectively reduce the amount of pollutants to the treatment plant, and subsequently in its effluent.

c. Pollutant Minimization Program for Pollutants with Effluent Limitations

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

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

(ii) A sample result is reported as ND and the effluent limitation is less than the MDL, using SIP definitions.

d. Pollutant Minimization Program Submittals for Pollutants with Effluent Limitations

If triggered by the reasons in section VI.C.3.c, above, the Discharger's Pollutant Minimization Program shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

(i) Annual review and semi-annual monitoring of potential sources of the reportable priority pollutants, 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 priority pollutants 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 priority pollutants in the effluent at or below effluent limitations;

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

(v) Annual report required by section VI.C.3.b, above, which shall specifically include the following items:

1. All Pollutant Minimization Program monitoring results for the previous year;

2. List of potential sources of the reportable priority pollutants;

3. Summary of all actions undertaken pursuant to the control strategy; and

4. Description of actions to be taken in the following year.

5. Facility Reliability Assurance Plan and Status Report

a. The Discharger shall maintain a Facility Reliability Assurance Status Plan that describes measures in place (e.g., treatment/storage capacities, especially during high weather inflows, critical system redundancies and spare parts, warning alarms, etc.) to assure the reliability of the Discharger's system in preventing inadequately treated wastewater from being discharged into the receiving waters. Inadequately treated wastewater includes wastewater that bypasses any portion of the Plant. The Facility Reliability Assurance Plan shall be maintained in usable condition and be available for reference and use by all relevant personnel.

b. The Discharger shall regularly review, revise, or update, as necessary, the Reliability Assurance Plan to ensure that the document remains useful and relevant to current equipment and operational practices. Reviews shall be conducted annually, and revisions or updates shall be completed as necessary. For any significant changes in treatment facility equipment or operation practices, relevant revisions shall be completed as soon as practicable.

c. The Discharger shall submit a summary describing the current status of its Facility Reliability Assurance Plan, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall submit this Facility Reliability Assurance Status Report by February 1 each year.

6. Special Provisions for Municipal Facilities (POTWs Only)

a. Biosolids Management Practices Requirements

(1) All biosolids must be disposed of, managed or reused in a municipal solid waste landfill, through land application, as a Class A compost, through a waste to energy facility, or other recognized and approved technology, or disposed of in a sludge-only landfill in accordance with 40 CFR Part 503. If the Discharger desires to dispose of biosolids by a different method, a request for permit modification shall be submitted to USEPA 180 days before start-up of the alternative disposal practice. All the requirements in 40 CFR Part 503 are enforceable by USEPA whether or not they are stated in an NPDES permit or other permit issued to the Discharger. The Regional Water Board shall be copied on relevant correspondence and reports forwarded to USEPA regarding sludge management practices.

(2) Biosolids 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 biosolid 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 State.

(5) The biosolids 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 biosolids applied to the land, placed on a surface disposal site, or fired in an incinerator as defined in 40 CFR Part 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 Part

503, postmarked February 15 of each year, for the period of the previous calendar year.

(7) Biosolids disposed of in a municipal solid waste landfill shall meet the requirements of 40 CFR Part 258. In the annual Self-Monitoring Report, the Discharger shall include the amount of biosolids disposed and the landfill to which it was sent.

(8) Permanent on-site biosolids 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) Biosolids Monitoring and Reporting Provisions of this Regional Water Board's Standard Provisions (Attachment G) apply to sludge handling, disposal and reporting practices.

(10) The Regional Water Board may amend this Order prior to expiration if changes occur in applicable State and federal biosolids regulations.

b. Sanitary Sewer Overflows and Sewer System Management Plan

The Discharger's collection system is part of the facility that is subject to this Order. As such, the Discharger shall properly operate and maintain its collection system (Attachment D, Standard Provisions - Permit Compliance, subsection I.D). The Discharger shall report any noncompliance (Attachment D, Standard Provision - Reporting, subsections V.E.1 and V.E.2) and mitigate any discharge from the Discharger's collection system in violation of this Order (Attachment D, Standard Provisions - Permit Compliance, subsection I.C).

The General Waste Discharge Requirements for Wastewater Collection Agencies, State Water Board Order No. 2006-0003 DWQ, (General Collection System WDRs) has requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. While the Discharger must comply with both the General Collection System WDRs and this Order, the General Collection System WDRs more clearly and specifically stipulates requirements for operation and maintenance and for reporting and mitigating sanitary sewer overflows.

Implementation of the General Collection System WDRs requirements for proper operation and maintenance and mitigation of spills will satisfy the corresponding federal NPDES requirements specified in Attachment D (as supplemented by Attachment G) of this Order. Following notification and reporting requirements in the General Collection System WDRs will satisfy NPDES reporting requirements specified in Attachment D (as supplemented by Attachment G) of the Order for wastewater spills from the collection system upstream of the Plant boundaries. Attachments D and G of this Order specify reporting requirements for unauthorized discharges from anywhere within the Plant downstream of the Plant boundaries.

VII.COMPLIANCE DETERMINATION

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in Attachment A—Definitions, the MRP (Attachment E), Fact Sheet section VI, and the Regional Standard Provisions (Attachment G). For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

ATTACHMENT A – DEFINITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to California Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

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

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

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

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

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

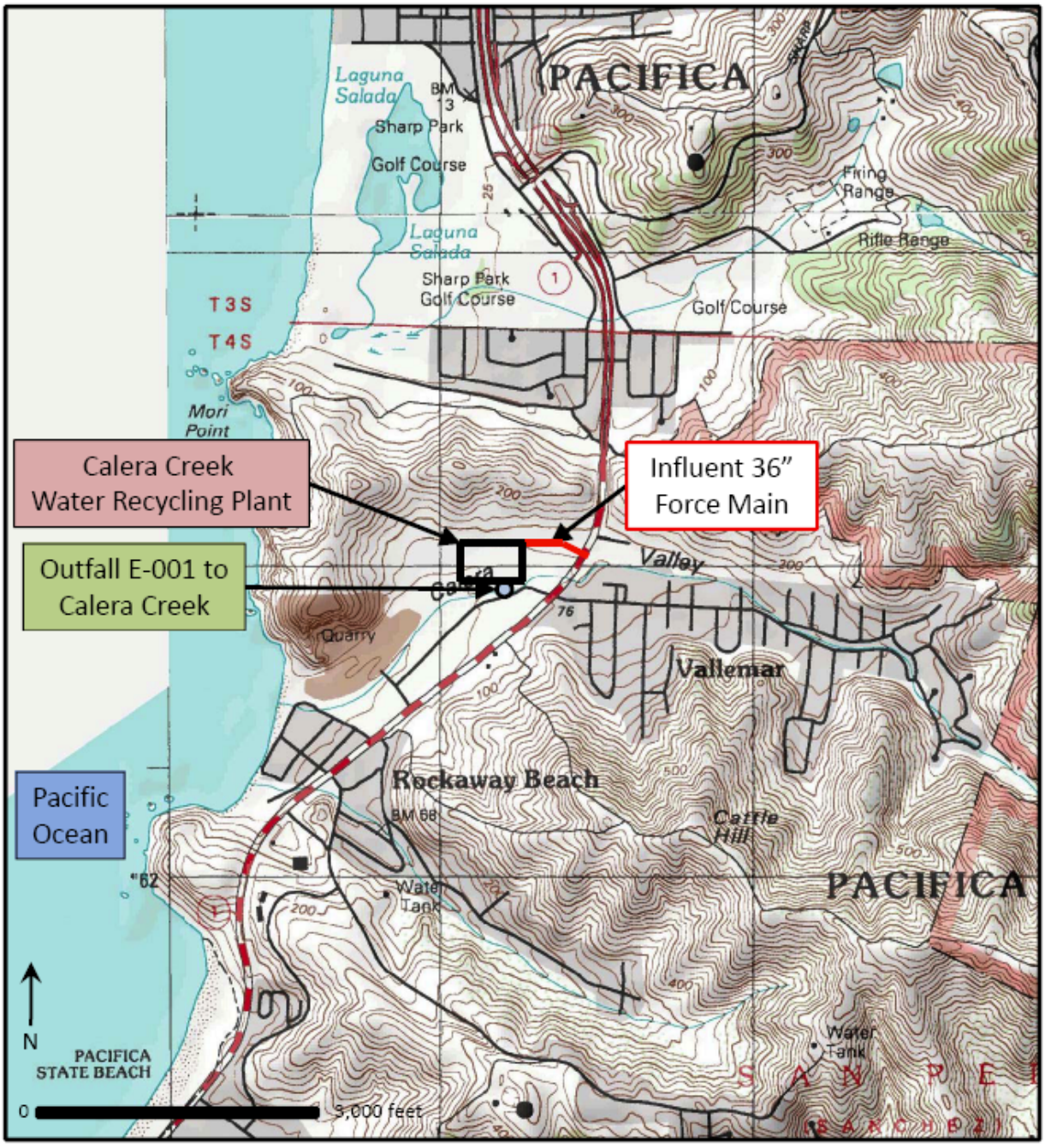
$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

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

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

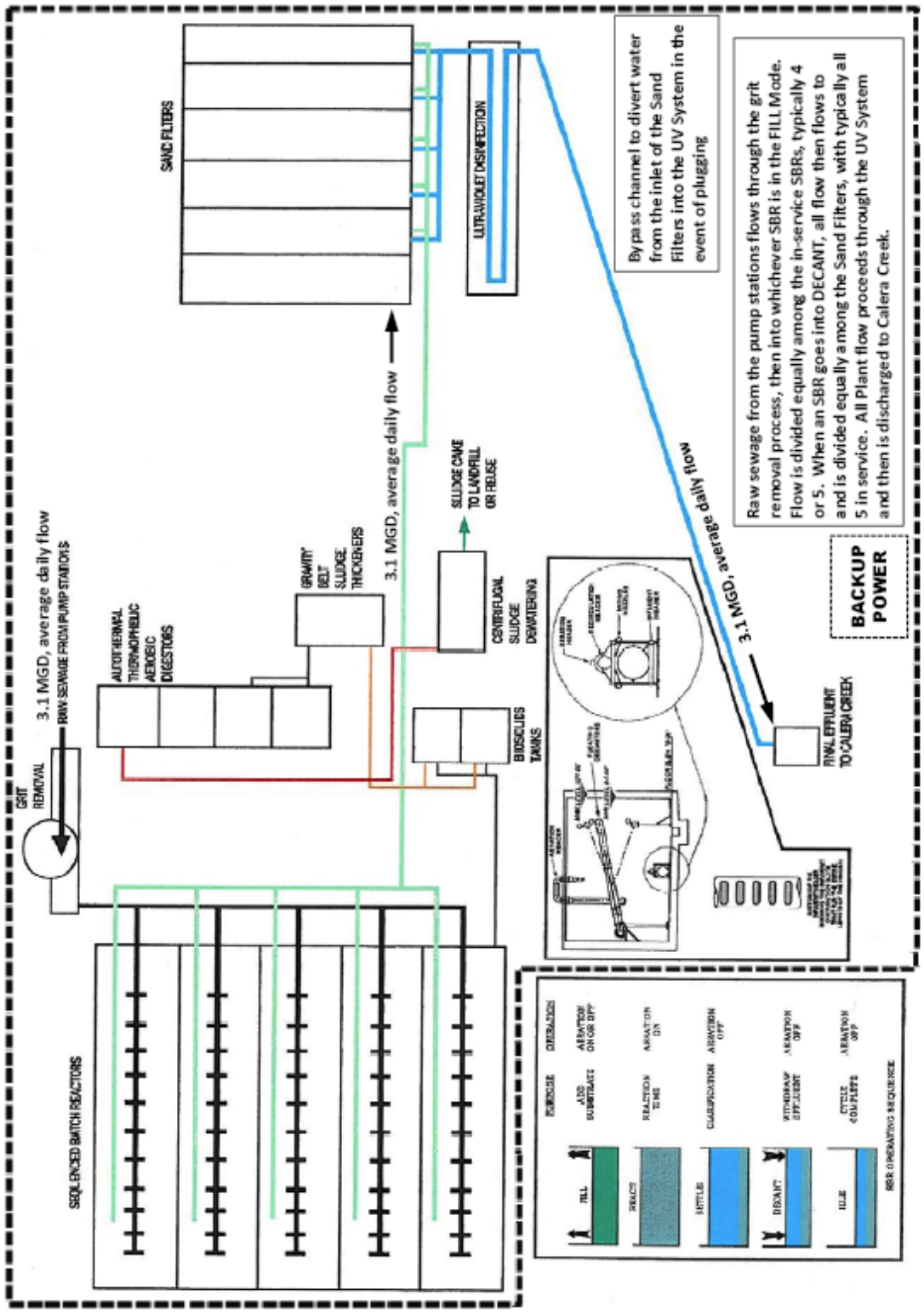
chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

ATTACHMENT B – FACILITY MAP



Background USGS Quad Sheet from mytopo.com

ATTACHMENT C – PROCESS FLOW DIAGRAM



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 122.41(c).)

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

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

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

F. Inspection and Entry

The Discharger shall allow the Regional Water 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); Wat. Code, § 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 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 122.41(m)(4)(i)(A));

   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent

a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 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).)

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).).

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

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

b. The permitted facility was, at the time, being properly operated (40 CFR 122.41(n)(3)(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).)

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of this 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).)

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); Wat. Code, § 13267.)

B. Signatory and Certification Requirements

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

   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).)

VI. STANDARD PROVISIONS – ENFORCEMENT

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

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

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 CFR 122.42(b)(1)); and

2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of this 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).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Contents

Tables

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

National Pollutant Discharge Elimination System (NPDES) regulations at 40 CFR 122.48 require that all NPDES permits specify monitoring and reporting requirements. California Water Code (CWC) sections 13267 and 13383 also authorize the Regional Water Quality Control Board (hereinafter the Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement the federal and State regulations.

I. GENERAL MONITORING PROVISIONS

A. The Discharger shall comply with this MRP. The Executive Officer may amend this MRP pursuant to 40 CFR 122.62, 122.63, and 124.5. If any discrepancies exist between the MRP and Regional Standard Provisions (Attachment G), this MRP prevails.

B. The Discharger shall conduct all monitoring in accordance with Attachment D, section III, as supplemented by Attachment G of this Order. Equivalent test methods must be more sensitive than those specified in 40 CFR 136 and must be specified in the permit.

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

Type of Sampling Location	Monitoring Location Name	Monitoring Location Description	Approximate Latitude Longitude
Influent	INF-001	At any point in the Plant's headworks at which all waste tributary to the system is present and preceding any phase of treatment.	37 º 36' 57" N 122º 29' 17" W
Effluent	EFF-001	At a point in the Plant's outfall following all treatment including disinfection, where all waste tributary to Discharge Point 001 is present.	37 º 36' 56" N 122º 29' 15" W
Receiving Water	RSW-001	At a point in Calera Creek approximately ten feet upstream of the discharge point; formerly C-1.	37 º 36' 52" N 122º 29' 17" W
Receiving Water	RSW-002	A point in Calera Creek immediately downstream of the discharge point, where the effluent and receiving water are completely mixed across the creek's cross section; formerly C-2.	37 º 36' 53" N 122º 29' 20" W
Receiving Water	RSW-003	At a point in Calera Creek at the elevation of mean high-high water, where ocean water mixes with creek water at high tide; formerly C-3.	37 º 36' 48" N 122º 29' 37" W
Receiving Water	RSW-004	At a point in the Pacific Ocean at the elevation of mean low-low water where water from Calera Creek mixes with ocean water; formerly C-4.	37 º 36' 42" N 122º 29' 47" W
Biosolids	BIO-001	Biosolids monitoring	37 º 36' 56" N 122º 29' 16" W

III. INFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor influent to the Plant at INF-001, as follows.

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
BOD_5	mg/L	C-24 (24-hr flow weighted composite)	1/Week
TSS	mg/L	C-24	1/Week

IV. EFFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor treated wastewater effluent from the Plant to Calera Creek at EFF-001, as follows.

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow Rate[1]	MGD	Continuous	Continuous/Recorded Daily
BOD_5	mg/L	C-24	1/Week
TSS	mg/L	C-24	1/Week
BOD and TSS % Removal[2]	%	Calculate	1/Month
Oil and Grease[3]	mg/L	Ggrab	1/2 months
pH [4]	Standard units.	Grab	1/Day or Continuous/Recorded Daily
Fecal Coliform Bacteria	Most Probable Number/100 mL	Grab	5/Week
Turbidity	nephelometric turbidity units	C-24	1/Day
Temperature	°C	Grab	1/Day
Salinity	parts per thousand	Grab	1/Week
Dissolved Oxygen (D.O.)	mg/L	Grab	1/Day
	% Saturation	Grab	1/Day
Dissolved Sulfides (if D.O. < 5.0 mg/L)	mg/L	Grab	1/Day
Acute Toxicity[5]	% Survival	Flow through	1/Month
Chronic Toxicity[6]	chronic toxicity units	C-24	1/Year
Total Ammonia[7]	mg/L as Nitrogen	C-24	1/Week
Copper	µg/L	C-24	1/Month
Lead	µg/L	C-24	1/Month
Cyanide	µg/L	Grab	1/Month
Standard Observations[9]	---	---	1/Month

Footnotes to Table E-3:

[1] Flow Monitoring. Flow shall be monitored continuously, and the following information shall be reported in self-monitoring reports for each month:

- Daily average flow, Million Gallons per Day (MGD)
- Monthly average flow (MGD)

- Maximum and minimum daily flow rates (MGD) and time of occurrence

[2] BOD and TSS % Removal. The percent removal for BOD and TSS shall be reported for each calendar month in accordance with Effluent Limitations IV.A.1. Samples for BOD and TSS shall be collected simultaneously with influent samples.

[3] Oil and Grease. Each oil and grease sampling and analysis event shall be conducted in accordance with EPA Method 1664.

[4] pH. If pH is monitored continuously, the minimum and maximum pH values for each day shall be reported in monthly Self-Monitoring Reports (SMRs).

[5] Acute toxicity. Acute bioassay tests shall be performed in accordance with MRP section V.A.

[6] Chronic toxicity. Critical life stage toxicity tests shall be performed and reported in accordance with the Chronic Toxicity Requirements of specified in MRP section V.B.

[7] Total Ammonia. Monitoring for total ammonia shall occur concurrently with monitoring for temperature and pH, for determination of the un-ionized ammonia fraction.

[8]

[9] Standard observations. Standard Observations are specified in the Regional Standard Provisions (Attachment G).

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

The Discharger shall monitor whole effluent acute and chronic toxicity at EFF-001, as follows.

A. Whole Effluent Acute Toxicity

1. Compliance with the acute toxicity effluent limitations of this Order shall be evaluated by measuring survival of test organisms exposed to 96-hour continuous flow-through bioassays at EFF-001.

2. Test organisms shall be rainbow trout (*Oncorhynchus mykiss*) unless the Executive Officer specifies otherwise in writing.

3. All bioassays shall be performed according to the most up-to-date protocols in 40 CFR 136, currently in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms,* 5th Edition.

4. If specific identifiable substances in the discharge can be demonstrated by the Discharger as being rapidly rendered harmless upon discharge to the receiving water, compliance with the acute toxicity limit may be determined after the test samples are adjusted to remove the influence of those substances. Written approval from the Executive Officer must be obtained to authorize such an adjustment.

5. The sample may be taken from final secondary effluent prior to disinfection. Monitoring of the bioassay water shall include, on a daily basis, the following parameters: pH, dissolved oxygen, ammonia (if toxicity is observed), temperature, hardness, and alkalinity. These results shall be reported. If a violation of acute toxicity requirements occurs, the bioassay test shall be repeated with new fish as soon as practical and shall be repeated until a test fish survival rate of 90 percent or greater is observed. If the control fish survival rate is less than 90 percent, the bioassay test shall be restarted with new fish and shall continue as soon as practical until an acceptable test is completed (i.e., control fish survival rate is 90 percent or greater).

B. Whole Effluent Chronic Toxicity

1. Chronic Toxicity Monitoring Requirements

a. Sampling. The Discharger shall collect 24-hour composite samples of the effluent at monitoring location EFF-001 for critical life stage toxicity testing as indicated below. For toxicity tests requiring renewals, 24-hour composite samples collected on consecutive days are required.

b. Test Species. The test species shall be the water flea (*Ceriodaphnia dubia*.) The Discharger shall conduct a screening chronic toxicity test as described in Appendix E-1 following any significant change in the nature of the effluent or prior to application for permit reissuance. The most sensitive species shall be used thereafter for routine chronic toxicity monitoring. The Executive Officer may change to another test species if data suggest that another test species is more sensitive to the discharge.

c. Frequency. The frequency of routine and accelerated chronic toxicity monitoring shall be as specified below.

(1) Routine monitoring shall occur once per year.

(2) The Discharger shall accelerate monitoring to monthly after exceeding a three-sample median of 1 TU_c[1] or a single sample maximum of 2 TU_c. The Executive Officer may specify a different frequency for accelerated monitoring based on the TU_c results.

(3) The Discharger shall return to routine monitoring if accelerated monitoring does not exceed either "trigger" in (2), above.

(4) If accelerated monitoring confirms consistent toxicity in excess of either "trigger" in (2), above, the Discharger shall continue accelerated monitoring and initiate toxicity reduction evaluation (TRE) procedures in accordance with section B.3, below.

(5) The Discharger shall return to routine monitoring after implementing appropriate elements of the TRE, and either the toxicity drops below both "triggers" in (2), above, or, based on the TRE results, the Executive Officer authorizes a return to routine monitoring.

Monitoring conducted pursuant to a TRE effort shall satisfy the requirements for routine and accelerated monitoring while the TRE investigation is underway.

d. 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-1. These are *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms,* currently third edition (EPA-821-R-02-014), and *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to*

[1] A TU_c equals 100 divided by the no observable effect level (NOEL). The NOEL is determined from IC_{25}, EC_{25}, or NOEC values. These terms, their usage, and other chronic toxicity monitoring program requirements are defined in the MRP (Attachment E).

Freshwater Organisms, currently fourth Edition (EPA-821-R-02-013), with exceptions granted the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP). If specific identifiable substances in the discharge can be demonstrated by the Discharger as being rapidly rendered harmless upon discharge to the receiving water, compliance with the chronic toxicity performance goal may be determined after the test samples are adjusted to remove the influence of those substances. Written approval from the Executive Officer must be obtained to authorize such an adjustment.

e. Dilution Series. The Discharger shall conduct tests with a control and five effluent concentrations (including 100% effluent) and using a dilution factor ≥0.5. Test sample pH in each dilution in the series may be controlled to the level of the effluent sample as received prior to being salted up.

2. Chronic Toxicity Reporting Requirements

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

(1) Sample dates

(2) Test initiation date

(3) Test species

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

(5) NOEC values in percent effluent

(6) IC_{15}, IC_{25}, IC_{40}, and IC_{50} values (or EC_{15}, EC_{25} ... etc.) as percent effluent

(7) TUc values (100/NOEC, 100/IC_{25}, or 100/EC_{25})

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

(9) NOEC and LOEC values for reference toxicant tests

(10) IC_{50} or EC_{50} values for reference toxicant tests

(11) Available water quality measurements for each test (pH, dissolved oxygen, temperature, conductivity, hardness, salinity, ammonia)

b. 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 2.a, specifically item numbers (1), (3), (5), (6) (IC_{25} or EC_{25}), (7), and (8).

3. Chronic Toxicity Reduction Evaluation (TRE)

a. The Discharger shall prepare a generic TRE work plan within 90 days of the effective date of this Order to be ready to respond to toxicity events. The Discharger shall review

and update the work plan as necessary so that it remains current and applicable to the discharge and discharge facilities.

b. Within 30 days of the date of completion of the accelerated monitoring tests showing consistent exceedance of either trigger, the Discharger shall submit to the Regional Water Board a TRE work plan, which should be the generic work plan revised as appropriate for this toxicity event after consideration of available discharge data.

c. Within 30 days of the date of completion of the accelerated monitoring tests showing consistent exceedance of either trigger, the Discharger shall initiate a TRE in accordance with a TRE work plan that incorporates any and all comments from the Executive Officer.

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

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

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

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

(4) Tier 4 consists of evaluation of options for additional effluent treatment processes.

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

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

e. The TRE may be ended at any stage if monitoring finds there is no longer consistent toxicity (complying with requirements of section IV.C.2 of the Order).

f. The objective of the 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.

g. 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 chronic toxicity evaluation parameters.

h. Many recommended TRE elements parallel required or recommended efforts of source control, pollution prevention and storm water 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.

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

VI. RECEIVING WATER MONITORING REQUIREMENTS

The Discharger shall monitor ambient receiving water conditions in Calera Creek at Monitoring Locations RSW-001, RSW-002, RSW-003, and RSW-004, as specified below.

Table E-4. Receiving Water Monitoring [1]

Parameter	Units	Sample Type	Minimum Sampling Frequency
pH	Standard units.	Grab	1 time/2 months
Temperature	°C	Grab	1 time/2 months
Total Ammonia[2]	mg/L as N	Grab	1 time/2 months
Dissolved Oxygen (D.O.)	mg/L	Grab	1 time/2 months
	% Saturation	Grab	1 time/2 months
Dissolved Sulfide (if D.O. < 2.0 mg/L)	mg/L	Grab	1 time/2 months
Hardness	mg/L	Grab	1 time/2 months
Salinity	Parts per thousand	Grab	1 time/2 months
Standard Observations[3]	---	---	1 time/2 months

Footnotes to Table E-4:

[1] Concurrent monitoring. Monitoring locations RSW-001, RSW-002, RSW-003, and RSW-004 shall be monitored on the same day.

[2] Ammonia. Monitoring for total ammonia shall occur concurrently with monitoring for temperature and pH, for determination of the un-ionized ammonia fraction.

[3] Standard Observations. Standard observations are specified in the Regional Standard Provisions (Attachment G).

VII. BIOSOLIDS MONITORING REQUIREMENTS

The Discharger shall adhere to sludge monitoring requirements at BIO-001 as required by 40 CFR 503 (for land application) or 40 CFR 258 (for landfill disposal).

VIII. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

B. Self Monitoring Reports (SMRs)

1. **SMR Format.** The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS website will provide additional directions for SMR submittal in the event of a service interruption for electronic submittal.

2. **SMR Due Dates and Contents.** The Discharger shall submit SMRs by the due dates, and with the contents, specified below:

   a. **Monthly SMRs —** Monthly SMRs shall be due 30 days after the end of each calendar month, covering that calendar month. The monthly SMR shall contain the applicable items described in sections V.B and V.C of both Attachments D and G of this Order. See Provision VI.C.2 (Effluent Characterization Study and Report) of this Order for information that must also be reported with the monthly SMR.

   b. **Annual SMR —**
   Annual SMRs shall be due February 1 each year, covering the previous calendar year. The annual SMR shall contain the items described in section V.C.1.f.(2), V.C.1.f.(6) as applicable, and V.C.1.f.(7) of the Regional Standard Provisions (Attachment G). Information described in the other subsections of V.C.1.f of Attachment G is not required. See also Provisions VI.C.2.b.(2) (*Effluent Characterization Study and Report – Discharge Point 001*) and VI.C.4.c. (*Facility Reliability Assurance Plan and Status Report*) of the Order for requirements to submit reports with the annual SMR.

   c. **Additional Specifications for Submitting SMRs to CIWQS —** If the Discharger submits SMRs to CIWQS, it shall submit analytical results and other information using one of the following methods:

Table E-5. SMR Reporting for CIWQS

Parameter	Method of Reporting	
	EDF/CDF data upload or manual entry	Attached File
All parameters identified in influent, effluent, and receiving water monitoring tables (except Dissolved Oxygen and Temperature)	Required for All Results	
Dissolved Oxygen Temperature	Required for Monthly Maximum and Minimum Results Only (1)	Discharger may use this method for all results or keep records
Cyanide Arsenic Cadmium Chromium Copper Lead Mercury Nickel Selenium	Required for All Results (2)	

Parameter	Method of Reporting	
	EDF/CDF data upload or manual entry	**Attached File**
Silver Zinc Dioxins and Furans (by U.S. EPA Method 1613)		
Antimony Beryllium Thallium Pollutants by U.S. EPA Methods 601, 602, 608, 610, 614, 624, and 625	Not Required (unless identified in influent, effluent, or receiving water monitoring tables), But Encouraged [1]	Discharger may use this method and submit results with application for permit reissuance, unless data submitted by CDF/EDF upload
Analytical Method	Not Required (Discharger may select "data unavailable") [1]	
Collection Time Analysis Time	Not Required (Discharger may select "0:00") [1]	

Footnotes for Table E-5:

[1] The Discharger shall continue to monitor at the minimum frequency specified in the monitoring tables, keep records of the measurements, and make the records available upon request.

[2] These parameters require EDF/CDF data upload or manual entry regardless of whether monitoring is required by this MRP or other provisions of this Order (except for biosolids, sludge, or ash provisions).

3. **Monitoring Periods.** Monitoring periods for all required monitoring shall be completed as set forth in the table below:

Table E-6. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period
Continuous	Permit effective date	All
1/Day	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.
1/Week 5/Week	Permit effective date	Sunday through Saturday
1/Month 2/Month	Permit effective date	First day of calendar month through last day of calendar month
1/Quarter	Permit effective date	November 1 – January 31, February 1 – April 30, May 1 – July 31, August 1 – October 31
1/Year	Permit effective date	January 1through December 31
2/Year	Permit effective date	Once during the wet season (typically November 1 – April 30) and once during the dry season (typically May 1 through October 31)

4. **ML and MDL Reporting.** The Discharger shall report with each sample result the Reporting Level (RL) and Method Detection Limit (MDL) as determined by the procedure in 40 CFR 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 RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported. For purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+/- a percentage of the reported value), numerical ranges (low to high), or any other means the laboratory considers appropriate.

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

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

C. Discharge Monitoring Reports

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

2. Once notified by the State or Regional Water Board, the Discharger shall submit hard copy DMRs. 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 one of the addresses 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.

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, or

2. Prior to permit reissuance. 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:

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 of 100%, 50%, 25%, 12.5%, 6.25%, and 0 %, where "%" is percent effluent as discharged, or as otherwise approved the Executive Officer.

C. The Discharger shall submit a screening phase proposal acceptable to the Executive Officer. The proposal shall address each of the elements listed above. If within 30 days, the Executive Officer does not comment, the Discharger shall commence with screening phase monitoring.

APPENDIX E-2
SUMMARY OF TOXICITY TEST SPECIES REQUIREMENTS

Table AE-1. Critical Life Stage Toxicity Tests for 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	1 hour	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.

Table AE-2. Critical Life Stage Toxicity Tests for Fresh Waters

Species	(Scientific Name)	Effect	Test Duration	Reference
Fathead minnow	*(Pimephales promelas)*	Survival; growth rate	7 days	4
Water flea	*(Ceriodaphnia dubia)*	Survival; number of young	7 days	4
Alga	*(Selenastrum capricornutum)*	Final cell density	4 days	4

Toxicity Test Reference:

4. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, fourth Edition Chronic manual (EPA-821-R-02-013, October 2002).

Table AE-3. Toxicity Test Requirements for Stage One Screening Phase

Requirements	Receiving Water Characteristics		
	Discharges to Coast	Discharges to San Francisco Bay[1]	
	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[2] Marine/Estuarine	0 4	1 or 2 3 or 4	3 0
Total number of tests	4	5	3

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

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

(b) Estuarine refers to receiving water salinities that fall between those of marine and freshwater, as described above.

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

(a) The salinity of the effluent is above 1 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.

ATTACHMENT F - FACT SHEET

Contents

Tables

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 this Order's requirements.

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the City of Pacifica Calera Creek Water Recycling Plant.

Table F-1. Facility Information

WDID	2 417022002
CIWQS Place ID	212585
Discharger	City of Pacifica
CIWQS Party Number	336649
Name of Facility	Calera Creek Water Recycling Plant and its associated collection system
Facility Address	700 Coast Highway, Pacifica CA 94044
	San Mateo County
CIWQS Place Number	212585
Facility Contact, Title, Phone	David Gromm, Director of Wastewater, (650) 738-4663
CIWQS Party Number	303554
Authorized Person to Sign and Submit Reports	Same as above
Mailing Address	700 Coast Highway, Pacifica CA 94044
Billing Address	Same as Mailing Address
Type of Facility	Publicly Owned Treatment Works (POTW)
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	No
Reclamation Requirements	No
Facility Permitted Flow	4.0 million gallons per day (MGD) (average daily dry weather flow)
Facility Design Flow	4.0 MGD (average dry weather design flow) 7.0 MGD (peak dry weather flow) 20 MGD (peak wet weather flow)
Watershed	San Mateo Coastal
Receiving Water	Calera Creek
Receiving Water Type	Freshwater
Service Area	City of Pacifica
Service Area Population	39,000

A. The City of Pacifica (hereinafter the Discharger) is the owner and operator of the Calera Creek Water Recycling Plant (Plant) and its associated wastewater collection system (hereinafter collectively the Facility). The Plant provides advanced secondary treatment of wastewater collected from its service area and discharges to Calera Creek.

B. Discharge of treated wastewater from the Plant to Calera Creek, a water of the State and the United States, is currently regulated by Order No. R2-2006-0067 (CIWQS Regulatory Measure Number 313377, NPDES Permit No. CA0038776), which was adopted on October 11, 2006, became effective on November 1, 2006, and expired on October 31, 2011.

C. The Discharger filed a Report of Waste Discharge and submitted a complete application for renewal of its waste discharge requirements (WDRs) and NPDES permit on May 2, 2011. The application was deemed complete and the previous order was administratively extended.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment

1. **Facility Description.** The Plant provides advanced secondary treatment of domestic and commercial wastewater from a community of approximately 39,000. Treatment consists of screens at two pump stations (Sharp Park and Linda Mar), grit removal, sequencing batch reactors for primary and secondary treatment and nutrient removal, sand filters, and ultraviolet (UV) disinfection. The Plant, except for the filters and control building, are built into a hillside covered with native vegetation.

2. **Discharge Description.** The Plant has an average dry weather flow design capacity of 4.0 MGD. From November 2006 through December 2010, the daily average and maximum flow rates at Discharge Point 001 were 2.9 and 16.9 MGD, respectively.

3. **Discharge Location.** Treated wastewater is discharged at Discharge Point 001 over a cascade aerator to Calera Creek, which flows approximately 0.52 miles through a constructed wetland to the Pacific Ocean. The elevation of the discharge at the cascade aerator is approximately 2-3 feet above the surface water elevation of Calera Creek during the 100-year storm event.

4. **Reclamation Activities.** The Discharger restored and maintains 8.7 acres of wetlands in a former rock quarry and restored the lower stream channel of Calera Creek as part of the Regional Water Board's exception for shallow water discharges. The wetlands provide habitat for the endangered San Francisco garter snake and threatened California red-legged frog.

5. **Collection System.** The Discharger's wastewater collection system includes 82 miles of gravity sewer main, 4.2 miles of force main, and five pump stations.

6. **Biosolids Management.** Biosolids generated during the treatment process are stored in waste activated sludge storage basins, which are aerated prior to thickening with gravity belt thickeners. Thickened solids are digested in autothermophilic aerobic digesters, dewatered with centrifuges, and then hauled for land disposal at authorized sites. In 2010, biosolids were placed in a landfill in Solano County and land applied to 34 fields in Merced, Sacramento, and Solano Counties.

7. **Storm Water Discharge.** The Discharger is not required to be covered under the State Water Board's statewide NPDES permit for storm water discharges associated with industrial activities (NPDES General Permit No. CAS000001) because all storm water flows in contact with equipment or wastewater at the Plant and the pump stations serving the Plant are collected and directed to the headworks for treatment.

B. Discharge Point and Receiving Waters

The location of the discharge point and the receiving water is shown below.

Table F-2. Outfall Locations

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Advanced Secondary Treated Municipal Wastewater	37º 36′ 53″ N	122º 29′ 16″ W	Calera Creek

Calera Creek is located within the San Mateo Coastal watershed. Prior to restoration, Calera Creek was a man-made ditch that ran through a former quarry. The Discharger restored the ditch to a natural meandering stream, and restored 8.7 acres of adjacent wetlands, including two ponds, downstream from the discharge point. The ponds provide habitat for the endangered San Francisco garter snake and the threatened California Red-Legged Frog. The wetland design was based on a hydrogeomorphic approach that incorporated data from similar coastal creeks along the San Mateo coastline and set quantifiable design and monitoring targets for restoration.

Calera Creek is freshwater at the point of discharge and transitions to brackish and saltwater before flowing to the Pacific Ocean. The discharge to Calera Creek is a shallow water discharge because the discharge does not receive 10:1 dilution.

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

Effluent limitations applicable to Discharge Point 001 contained in the previous permit (Order No. R2-2006-0067) and representative monitoring data from the term of the previous permit are presented below.

Table F-3. Historic Effluent Limitations and Monitoring Data for Conventional and Non-Conventional Pollutants

Parameter	Units	Effluent Limitations				Monitoring Data (Nov/06 - Dec/10)
		Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum	Highest Daily Discharge
5-day Biological Oxygen Demand (BOD_5)	mg/L	10	---	20	---	13
Total Suspended Solids (TSS)	mg/L	10	---	20	---	69
Oil and Grease	mg/L	5	---	10	---	3.4 (estimated value)
Turbidity	nephelometric turbidity units	---	---	---	10	49
pH	units	6.5 – 8.5 at all times				Between 6.0 – 7.5
Ammonia:	mg N/L	2	---	5	---	8.1

Parameter	Units	Effluent Limitations				Monitoring Data (Nov/06 - Dec/10)
		Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum	Highest Daily Discharge
June – September						
Ammonia: October - May	mg N/L	5	---	10	---	16
Fecal Coliform Bacteria	Most Probable Number/100mL	200[1]	---	400[2]	---	210 (90th percentile of ten consecutive samples)

Footnotes to Table F-3:

[1] The fecal coliform limitation is expressed as a geometric mean of the last five consecutive samples.

[2] The fecal coliform limitation is expressed as the 90th percentile value of the last ten consecutive samples.

Table F-4. Historic Effluent Limitations and Monitoring Data for Toxic Pollutants

Parameter	Units	Effluent Limitations		Monitoring Data (Nov/06 - Dec/10)
		Monthly Average	Daily Maximum	Highest Daily
Copper	µg/L	10	16	16
Lead	µg/L	3.2	6.0	6.2
Mercury	µg/L	0.017	0.046	0.010
Cyanide	µg/L	7.0	14	6.4
Bis(2-ethylhexyl)phthalate	µg/L	6.0	15	ND (MDL=0.6)

D. Compliance Summary

1. **Compliance with Numeric Effluent Limits.** The Discharger reported twenty-five exceedances that resulted in permit violations of numeric effluent limits during the previous permit term, and these violations are listed below.

Table F-5. Numeric Effluent Limitation Violations

Date of Violation	Exceeded Parameter	Units	Effluent Limitation	Reported Concentration
1/31/2007	Cyanide Monthly Average	mg/L	4.5	5.7
4/18/2007	Ammonia Maximum Daily (Wet Weather)	mg/L	10	11
6/13/2007	Ammonia Maximum Daily	mg/L	5	5.4
7/29/2007	pH Minimum	s.u.	6.5	6.0
1/25/2008	Turbidity Instantaneous Maximum	NTU	10	49
1/25/2008	TSS Maximum Daily	mg/L	20	69
2/12/2008	Ammonia Maximum Daily Wet Weather	mg/L	10	14
2/19/2008	Ammonia Maximum Daily Wet Weather	mg/L	10	16
2/28/2008	Ammonia Monthly Average Wet Weather	mg/L	5	7.9
6/10/2008	Ammonia Maximum Daily	mg/L	5	5.2
6/17/2008	Ammonia Maximum Daily	mg/L	5	5.2
6/24/2008	Ammonia Maximum Daily	mg/L	5	6.5
6/30/2008	Ammonia Monthly Average	mg/L	2	5.0
9/2/2008	Ammonia Maximum Daily	mg/L	5	6
9/6/2008	Ammonia Maximum Daily	mg/L	5	6

Date of Violation	Exceeded Parameter	Units	Effluent Limitation	Reported Concentration
9/8/2008	Ammonia Maximum Daily	mg/L	5	6
9/10/2008	Ammonia Maximum Daily	mg/L	5	7
9/11/2008	Ammonia Maximum Daily	mg/L	5	7
9/30/2008	Ammonia Monthly Average	mg/L	2	3
3/8/2009	TSS Daily Maximum	mg/L	20	35
3/8/2009	Turbidity Instantaneous Maximum	NTU	10	15
4/28/2009	Bis(2-ethylhexyl)phthalate Maximum Daily (Interim)	µg/L	21	26
2/16/2010	Bis(2-ethylhexylphthalate) Maximum Daily (Interim)	µg/L	21	22
7/8/2010	Ammonia Maximum Daily	mg/L	5	6
7/11/2010	Ammonia Maximum Daily	mg/L	5	7
9/21/2010	Ammonia Maximum Daily	mg/L	5	8
9/23/2010	Ammonia Maximum Daily	mg/L	5	7
9/24/2010	Ammonia Maximum Daily	mg/L	5	7
9/30/2010	Ammonia Monthly Average	mg/L	2	4
12/19/2010	Lead	µg/L	6.0	6.2

Administrative Civil Liability (ACL) Complaint No. R2-2008-0075 proposed penalties for r the numeric violations that occurred between January 31, 2007, and September 30, 2008. ACL Order No. R2-2011-022 settled the violations alleged in the Complaint and also addressed the violations that occurred between March 8, 2009, and February 16, 2010. For the ammonia violations between July 8, 2010, and September 30, 2010, the Regional Water Board offered to settle them with mandatory minimum penalties (CIWQS Regulatory Measure No. 378078), and the Discharger accepted and paid a penalty of $18,000, dated July 11, 2011

There have been no acute toxicity effluent limitation violations during the previous permit term. The Discharger's acute toxicity monitoring data show that bioassay results from November 2006 through December 2010 were a minimum of 100% survival as an 11-sample median, and a minimum 100% survival as a 11-sample 90th percentile.

2. **Compliance with Previous Permit Provisions.** The table below presents a list of special activities required by the previous permit and the status of those requirements.

Table F-6. Compliance with Previous Permit Provisions

Provision Number	Requirement	Status of Completion
VI.C.2.a.	Wetlands Monitoring	On-going
VI.C.2.d.	Translator Special Study (Optional)	Discharger chose not to conduct study
VI.C.4.	Technical Report – Bis(2-ethylhexylphthalate)	Submitted with Report of Waste Discharge May 2, 2011

3. **Compliance with Discharge Prohibitions.** During the term of the permit, the Discharger had several sanitary sewer overflows from its collection system and Plant. There were significant discharges during heavy storms in January 2008 when 100,000 gallons of untreated sewage were discharged at different points in the collection system, and on January

25 and 26 when 6.9 million gallons of partially treated sewage were discharged to surface waters. To prevent future occurrences, the Regional Water Board issued the Discharger a Cease and Desist Order No. R2-2011-0031 specifying compliance measures focused on improving collection system operation and maintenance and rehabilitation., and ACL Order No. R2-2011-022 with a total assessed penalty of $1.7 million for the alleged violations of discharge prohibitions and effluent limits cited in ACL Complaint R2-2008-0075, plus additional violations that occurred since issuance of the Complaint.

E. Planned Changes

No changes are planned during this Order's term.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

This Order's requirements are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order is issued pursuant to federal Clean Water Act (CWA) section 402 and implementing regulations adopted by the USEPA and California Water Code (CWC) chapter 5.5, division 7, commencing with section 13370. It serves 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 section 13260).

B. California Environmental Quality Act (CEQA)

Under CWC section 13389, this action to issue an NPDES permit is exempt from CEQA chapter 3.

C. State and Federal Regulations, Policies, and Plans

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

   The Regional Water Board adopted Resolution No. 2010-0100 on July 14, 2010, amending Basin Plan Table 2-1. This Basin Plan amendment adds nearly 275 surface water bodies to Table 2-1 and designates beneficial uses for the newly added and some existing water bodies, The State Water Board and USEPA have yet to consider this Basin Plan amendment. The revised Basin Plan beneficial uses of Calera Creek are listed in the table below. Regional Water Board staff examined actual uses of Calera Creek downstream of the discharge point and determined that the beneficial use of Municipal and Domestic Water Supply does not apply.

Table F-7 Basin Plan Beneficial Uses

Receiving Water Name	Beneficial Uses
Calera Creek	Preservation of Rare and Endangered Species (RARE) Warm Freshwater Habitat (WARM) Wildlife Habitat (WILD) Water Contact Recreation (REC1) Non-Contact Water Recreation (REC2)

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and amended it on May 4, 1995, and November 9, 1999. About 40 criteria in the NTR and apply in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that applied in the State. The CTR was amended on February 13, 2001. These rules contain water quality criteria (WQC) for priority toxic pollutants.

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

4 **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (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 already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

5 **Antidegradation Policy.** 40 CFR 131.12 requires that state WQS include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which incorporates the federal antidegradation policy where the federal policy applies under federal law and requires that the existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies.

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

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

In 2010, pursuant to CWA section 303(d), USEPA approved a revised list of impaired water bodies prepared 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. Where it has not done so already, the Regional Water Board plans to adopt Total Maximum Daily Loads (TMDLs) for pollutants on the 303(d) list. Calera Creek is not on the 303(d) list but is tributary to the Pacific Ocean, which is on the list at Rockaway Beach for coliform bacteria, due to nonpoint sources, including urban runoff.

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 discharged into 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 NPDES regulations: 40 CFR 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 122.44(d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative WQOs to protect the beneficial uses of the receiving water.

Several specific factors affecting the development of limitations and requirements in this Order are discussed as follows.

A. Discharge Prohibitions

1. **Discharge Prohibition III.A (No discharge other than as described in this Order):** This prohibition is based on 40 CFR 122.21(a), Duty to Apply, and CWC section 13260, which requires filing an application and Report of Waste Discharge before discharges can occur. Discharges not described in the permit application and Report of Waste Discharge, and subsequently in this Order, are prohibited.

2. **Discharge Prohibition III.B (Bypass or overflow of untreated or partially treated wastewaters to waters of the U.S. prohibited):** This prohibition is based on 40 CFR 122.41(m). See federal Standard Provisions, Attachment D, section G.

3. **Discharge Prohibition III.C (Average dry weather flow not to exceed dry weather design capacity):** This prohibition is based on the design treatment capacity of the Facility treatment system. Exceedance of the Plant's average dry weather flow design capacity may result in lowering the reliability of achieving compliance with water quality requirements.

4. **Discharge Prohibition III. D (No sanitary sewer overflows):** Basin Plan Discharge Prohibition No. 15 and the CWA prohibit the discharge of wastewater to surface waters except as authorized under an NPDES permit. Publicly owned treatment works must achieve secondary treatment at a minimum and any more stringent limitations necessary to meet water quality standards (33 U.S.C. § 1311[b][1][B and C]). Therefore, the CWA and Basin Plan prohibit a sanitary sewer overflow that results in the discharge of raw wastewater, or wastewater not meeting effluent limitations required by the Order, to surface waters.

B. Shallow Water Discharge and Basin Plan Discharge Prohibition 1

Basin Plan Discharge Prohibition 1 prohibits discharges not receiving a minimum 10:1 initial dilution or to dead end sloughs. In accordance with the Basin Plan, this Order continues to grant the Discharger an exception to this discharge prohibition for discharges to Calera Creek. The basis for allowing the exception is described below.

The Basin Plan states that exceptions to Prohibition 1 will be considered for discharges where:

- an inordinate burden would be placed on the discharger relative to the beneficial uses protected and an equivalent level of environmental protection can be achieved by alternate means;
- a discharge is approved as part of a reclamation project; or
- net environmental benefits will be derived as a result of the discharge.

The Basin Plan further states:

> Significant factors to be considered by the Regional Water Board in reviewing requests for exceptions will be the reliability of the discharger's system in preventing inadequately treated wastewater from being discharged to the receiving water and the environmental consequences of such discharges.

This Order continues to grant an exception to Prohibition 1 for discharges to Calera Creek based on these factors, as explained below.

1. An inordinate burden would be placed on the Discharger relative to the beneficial uses protected to require the discharge to achieve a 10:1 dilution. Constructing and operating a deep water ocean outfall would place a demonstrably inordinate burden on the Discharger relative to the beneficial uses protected. The advanced level of treatment this Order requires, which is greater than secondary treatment requirements, provides a level of protection equivalent to strict adherence to Discharge Prohibition 1. These requirements are discussed in section IV.C, below.

2. The discharge also provides a net environmental benefit to Calera Creek through the restoration of wetlands. The Discharger has restored and continues to maintain 8.67 acres of the lower Calera Creek channel and floodplain, which provides endangered species habitat for the endangered San Francisco garter snake and the threatened California red-legged frog. An additional 8.42 acres of uplands were restored and is maintained to protect endangered species, and a paved bicycle path was constructed along the creek for public use. The Discharger regularly monitors the vegetation and fauna present in these wetlands, and of the hydrology and water quality of the wetlands. Faunal surveys conducted in 2009 showed that the California red-legged frog is maintaining a stable population in the wetland. The Discharger has also increased maintenance of the wetlands in recent years, including removing excess vegetation, dredging sediments, thinning nearby trees, and removal of invasive species.

3. To address the Discharger's treatment reliability, Provision VI.C.4. of the Order requires a Facility Reliability Assurance Plan and Status Report, which requires the Discharger to conduct routine analyses of its collection and treatment system with attention toward preventing discharges of inadequately treated wastewater.

C. Limitations for Conventional and Non-conventional Pollutants

1. Scope and Authority for Technology-Based Effluent Limitations

CWA section 301(b) and 40 CFR 122.44 require that permits include conditions meeting technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR 133 are summarized below. In addition, the 30-day average percent removal for BOD_5 (or $CBOD_5$) and TSS, by concentration, is not to be less than 85 percent. The discharge authorized by this Order must meet more stringent limitations to provide water quality protection equivalent to Basin Plan Discharge Prohibition 1.

Table F-8. Secondary Treatment Requirements

Parameters	30-Day Average	7-Day Average
BOD_5	30 mg/L	45 mg/L
$CBOD_5$ [1]	25 mg/L	40 mg/L
TSS	30 mg/L	45 mg/L
pH	6.0 – 9.0 standard units	

Footnotes for Table F-8:
[1] At the option of the permitting authority, these effluent limitations for $CBOD_5$ may be substituted for limitations for BOD_5.

2. Effluent Limitations for Conventional and Non-conventional Pollutants

a. BOD_5 and TSS: The concentration-based effluent limitations for BOD_5 and TSS, including the 85 percent removal requirement, are more stringent than the secondary treatment standards requirements, but effluent data show they are technologically feasible and they demonstrate a level of equivalent protection to justify an exception to Basin Plan Discharge Prohibition 1 (Basin Plan Table 4-1).

b. Oil and Grease: The effluent limitations established for oil and grease are more stringent than required by Basin Plan Table 4-2. Effluent data show they are technologically feasible and they demonstrate a level of equivalent protection to justify an exception to Basin Plan Discharge Prohibition 1.

c. pH: The pH limitation is required by Basin Plan Table 4-2 for shallow water discharges.

d. Turbidity: The effluent limitation for turbidity ensures that the Plant maintains a consistent level of treatment and achieve a level of protection equivalent to complying with Basin Plan Prohibition 1.

f. Fecal Coliform. Effluent limitations for fecal coliform are the same as the previous permit. Basin Plan Table 4-2A footnote b provides that limitations for total coliform be

imposed for discharges to freshwater with contact beneficial uses (REC1). For total coliform, Basin Plan Table 4-2A footnote c allows fecal coliform to be substituted for the total coliform limits provided that the Discharger demonstrates that the substitution does not negatively affect the beneficial uses of the receiving water. The Discharger conducted a bacterial study in 2001-2002 demonstrating that fecal coliform is a better measure of bacterial contamination in freshwaters with REC1 designation. The limits contained in the Order are based on the fecal coliform WQOs in Basin Plan Table 3-1 for the water contact recreation use.

g. Ammonia: Performance based limits for ammonia are established in this Order to maintain current performance levels. The limits were calculated using ammonia concentration data from 280 effluent samples collected between 2006 and 2010. Typically, ammonia concentrations were reported from samples collected once per week (4 times per month). Prior to statistical analysis, the data set was censored to remove all data that exceeded existing limits (as listed in Table F-5) as those were not representative of proper or normal operation of the Plant. In addition, the data from September 2008 and September 2010 were censored because they did not represent normal operation. Both months' data consisted of an unusually high number of samples and unusually associated high values. For September 2008, 29 daily samples were collected as a consequence of a plant upset, described in themonthly report, which resulted in elevated levels of ammonia in the effluent. Again, in September 2010, as described in the monthly report, an operational upset resulted in the collection of 10 samples. Statistical evaluation of the performance data on a monthly basis, after censoring, did not reveal any significant differences between the wet (October –May) and dry (June-September) season months, and thus separate seasonal limits are not justified. Using a lognormal distribution of the censored data from 2006 until 2010, the 95th percentile (monthly average) was calculated at 3.1 mg/L and the 99th percentile (daily maximum) was calculated at 7.1 mg/L. These performance based limits are incorporated in this Order.

D. WQBELs

WQBELs have been derived to implement WQOs that protect beneficial uses. Both the beneficial uses and the WQOs have been approved pursuant to federal law. The procedures for calculating individual WQBELs are based on the SIP and the Basin Plan. Most Basin Plan beneficial uses and WQOs were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any WQOs and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the [Clean Water] Act" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than those required by CWA water quality standards.

1. Scope and Authority

a. NPDES regulations at 40 CFR 122.44(d)(1)(i) mandate that permits include effluent limitations for all pollutants that are or may be discharged at levels that have reasonable potential to cause or contribute to an excursion of a water quality standard, including numeric and narrative objectives within a standard. As specified in 40 CFR 122.44(d)(1)(i), permits are required to include WQBELs for all pollutants "which the Director determines are or may be discharged at a level which will cause, have the

reasonable potential to cause, or contribute to an excursion above any state water quality standard."

The process for determining "reasonable potential" and calculating WQBELs when necessary is intended to protect the designated beneficial uses of the receiving water as specified in the Basin Plan, and achieve applicable WQOs contained in other state plans and policies, and applicable WQC contained in the CTR and NTR.

b. NPDES regulations and the SIP provide the basis to establish Maximum Daily Effluent Limitations (MDELs).

(1) NPDES regulations at 40 CFR 122.45(d) state, "For continuous discharges all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall *unless impracticable* be stated as maximum daily and average monthly discharge limitations for all discharges other than publicly owned treatment works."

(2) SIP section 1.4 requires WQBELs to be expressed as MDELs and average monthly effluent limitations (AMELs).

c. MDELs are used in this Order to protect against acute water quality effects. The MDELs are necessary for preventing fish kills or mortality to aquatic organisms.

2. Applicable Beneficial Uses and WQOs

The WQOs applicable to the receiving water for this discharge are from the Basin Plan; the CTR, established by USEPA at 40 CFR 131.38; and the NTR, established by USEPA at 40 CFR 131.36. Some pollutants have WQOs established by more than one of these three sources.

a. Basin Plan. The Basin Plan specifies numeric WQOs for 10 priority toxic pollutants, as well as narrative WQOs for toxicity to protect beneficial uses. The pollutants for which the Basin Plan specifies numeric objectives are arsenic, cadmium, chromium (VI), copper in marine and freshwater, lead, mercury, nickel, silver, zinc, and cyanide.

b. CTR. The CTR specifies numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 57 priority toxic pollutants. These criteria apply to all inland surface waters and enclosed bays and estuaries of San Francisco Bay Region, although Basin Plan Tables 3-3 and 3-4 include numeric objectives for certain of these priority toxic pollutants that supersede CTR criteria (except in the South Bay south of the Dumbarton Bridge). Human health criteria are further identified as for "water and organisms" and for "organisms only." The CTR criteria applicable to "organisms only" were used for this reasonable potential analysis (RPA) because the receiving water is not a source of drinking water.

c. NTR. The NTR establishes numeric aquatic life criteria for trivalent chromium and cyanide, and numeric human health criteria for 36 toxic organic pollutants for inland waters of the State without a MUN use designation. These criteria apply to Calera Creek.

d. Basin Plan Receiving Water Salinity Policy. The Basin Plan (like the CTR and the NTR) states that the salinity characteristics (i.e., freshwater vs. saltwater) of the receiving water are to be considered in determining the applicable WQOs. Freshwater criteria apply to discharges to waters with salinities equal to or less than one part per thousand (ppt) at least 95 percent of the time. Saltwater criteria apply to discharges to waters with salinities equal to or greater than 10 ppt at least 95 percent of the time in a normal water year. For discharges to water with salinities between these two categories, or tidally influenced freshwaters that support estuarine beneficial uses, the WQOs are the lower of the salt or freshwater WQOs (the latter calculated based on ambient hardness) for each substance.

The receiving water for the discharge is Calera Creek, an inland freshwater creek; therefore, the RPA and effluent limitations in this Order are based on freshwater WQOs.

e. Receiving Water Hardness. Available ambient hardness values collected in Calera Creek were used to calculate freshwater WQOs that are hardness dependent. New hardness data have not been collected since 2006, so data collected from March 2002 to April 2006 were used to determine the WQOs. Because the receiving water is effluent dominated, hardness data collected downstream from the discharge were used. To calculate the WQOs for hardness dependent metals, the data set was censored to cap hardness values above 400 mg/L as $CaCO_3$ at 400 mg/L. The resulting data set of 45 values was used to calculate an adjusted geometric mean, which is the value that 30 percent of the measurements fall below. The calculated hardness value was 128 mg/L as $CaCO_3$.

f. Site-Specific Metals Translators. NPDES regulations at 40 CFR 122.45(c) require that effluent limitations for metals be expressed as total recoverable metal. Since metals WQOs are typically expressed as dissolved metal, translators must be used to convert metals concentrations from dissolved to total recoverable and vice versa. The CTR includes default translators; however, site-specific conditions, such as water temperature, pH, suspended solids, and organic carbon greatly affect the form of metal (dissolved, non-filterable, or otherwise) present in the water and therefore available to cause toxicity. In general, the dissolved form of the metal is more available and more toxic to aquatic life than non-filterable forms. Site-specific translators can be developed to account for site-specific conditions, thereby preventing exceedingly stringent or under protective WQOs. The Discharger has not developed site-specific translators; therefore, default translators established by the USEPA in the CTR at 40 CFR 131.38 (b) (2), Table 2, were used for determining the need for and calculating WQBELs.

3. Determining the Need for WQBELs

Assessing whether a pollutant has reasonable potential is the fundamental step in determining whether or not a WQBEL is required.

a. Reasonable Potential Methodology

For priority pollutants, the RPA identifies the observed maximum effluent concentration (MEC) for each pollutant based on effluent concentration data. There are three triggers in determining reasonable potential according to SIP section 1.3. (The ammonia RPA is based on a different approach as explained below in section d.)

(1) The first trigger (Trigger 1) is activated if the MEC is greater than or equal to the lowest applicable WQO (MEC ≥ WQO), which has been adjusted, if appropriate, for pH, hardness, and translator data. If the MEC is greater than or equal to the adjusted WQO, then that pollutant has reasonable potential, and a WQBEL is required.

(2) The second trigger (Trigger 2) is activated if the observed maximum ambient background concentration (B) is greater than the adjusted WQO (B > WQO) and the pollutant is detected in any of the effluent samples.

(3) The third trigger (Trigger 3) is activated if a review of other information determines that a WQBEL is required to protect beneficial uses, even though both MEC and B are less than the WQO.

b. Effluent Data

The Discharger's priority pollutant data and the nature of the discharge were analyzed to determine if the discharge has reasonable potential. The RPA is based on effluent monitoring data the Discharger collected from November 2006 through September 2010 for most inorganic pollutants, and from June 2007 through December 2010 for most organic pollutants.

c. Ambient Background Data

The SIP states that, for calculating WQBELs, ambient background concentrations are either the observed maximum ambient water column concentrations or, for objectives intended to protect human health from carcinogenic effects, the arithmetic mean of observed ambient water concentrations. Ambient background concentrations are the observed maximum detected water column concentrations for aquatic life protection. For this RPA, ambient background data for toxics were collected by the Discharger upstream of the discharge from April 2003 to February 2007 for inorganic pollutants and from November 2006 to February 2007 for all other priority pollutants.

d. RPA Determination for Priority Pollutants

The MECs, most stringent applicable WQC, and background concentrations used in the RPA are presented in the following table, along with the RPA results (yes or no) for each pollutant. Reasonable potential was not determined for all pollutants because there are not applicable WQC for all pollutants, and monitoring data are not available for others. Based on a review of the effluent data collected during the previous permit term from November 2006 through December 2010, the pollutants that exhibit reasonable potential are copper, lead, and cyanide by Trigger 1.

Table F-9. Reasonable Potential Analysis Summary

CTR #	Priority Pollutants	Governing WQC (µg/L)	MEC or Minimum DL [1][2] (µg/L)	Maximum Background or Minimum DL [1][2] (µg/L)	RPA Results [3]
1	Antimony	4300	0.51	Not Available	No
2	Arsenic	150	0.71	1.5	No
3	Beryllium	No Criteria	< 0.01	Not Available	Ud
4	Cadmium	1.4	0.02	0.36	No
5a	Chromium (III)	253	0.70	9.4	No
5b	Chromium (VI)	11	< 0.5	1.0	No
6	Copper	11.5	16	7.0	Yes
7	Lead	4.4	6.2	5.4	Yes
8	Mercury	0.025	0.010	0.04	No
9	Nickel	64.3	3.4	10	No
10	Selenium	5.0	0.54	1.0	No
11	Silver	6.2	0.04	< 0.02	No
12	Thallium	6.3	< 0.02	Not Available	No
13	Zinc	148	59	51	No
14	Cyanide	5.2	6.4	3.2	Yes
15	Asbestos	No Criteria	Not Available	Not Available	Ud
16	2,3,7,8-TCDD	1.4E-08	< 3.4E-07	< 8.4E-07	No
	Dioxin TEQ	1.4E-08	7.6E-08	Not Available	No
17	Acrolein	780	< 1.2	< 1.7	No
18	Acrylonitrile	0.66	< 0.58	< 0.69	No
19	Benzene	71	< 0.10	< 0.18	No
20	Bromoform	360	< 0.09	< 0.15	No
21	Carbon Tetrachloride	4.4	< 0.06	< 0.16	No
22	Chlorobenzene	21000	< 0.10	< 0.18	No
23	Chlorodibromomethane	34	< 0.08	< 0.17	No
24	Chloroethane	No Criteria	< 0.11	< 0.38	Ud
25	2-Chloroethylvinyl ether	No Criteria	< 0.28	< 0.28	Ud
26	Chloroform	No Criteria	0.30	< 0.19	Ud
27	Dichlorobromomethane	46	< 0.08	< 0.16	No
28	1,1-Dichloroethane	No Criteria	< 0.06	< 0.19	Ud
29	1,2-Dichloroethane	99	< 0.09	< 0.18	No
30	1,1-Dichloroethylene	3.2	< 0.07	< 0.21	No
31	1,2-Dichloropropane	39	< 0.07	< 0.18	No
32	1,3-Dichloropropylene	1700	< 0.07	< 0.16	No
33	Ethylbenzene	29000	< 0.09	< 0.26	No
34	Methyl Bromide	4000	0.07	< 0.17	No
35	Methyl Chloride	No Criteria	< 0.09	< 0.23	Ud
36	Methylene Chloride	1600	0.5	< 0.20	No
37	1,1,2,2-Tetrachloroethane	11	< 0.07	< 0.10	No
38	Tetrachloroethylene	8.9	< 0.12	< 0.19	No
39	Toluene	200000	0.6	< 0.19	No
40	1,2-Trans-Dichloroethylene	140000	< 0.09	< 0.22	No
41	1,1,1-Trichloroethane	No Criteria	< 0.11	< 0.19	Ud
42	1,1,2-Trichloroethane	42	< 0.06	< 0.16	No
43	Trichloroethylene	81	< 0.07	< 0.20	No
44	Vinyl Chloride	525	< 0.14	< 0.25	No
45	2-Chlorophenol	400	< 0.80	< 0.98	No
46	2,4-Dichlorophenol	790	< 0.70	< 0.99	No
47	2,4-Dimethylphenol	2300	< 0.80	< 0.87	No
48	2-Methyl- 4,6-Dinitrophenol	765	< 0.60	< 0.91	No
49	2,4-Dinitrophenol	14000	< 0.60	< 0.83	No
50	2-Nitrophenol	No Criteria	< 0.60	< 0.89	Ud

CTR #	Priority Pollutants	Governing WQC (µg/L)	MEC or Minimum DL [1][2] (µg/L)	Maximum Background or Minimum DL [1][2] (µg/L)	RPA Results [3]
51	4-Nitrophenol	No Criteria	< 0.70	< 0.83	Ud
52	3-Methyl 4-Chlorophenol	No Criteria	< 0.60	< 0.91	Ud
53	Pentachlorophenol	8.2	< 0.60	< 0.81	No
54	Phenol	4600000	< 0.60	< 0.69	No
55	2,4,6-Trichlorophenol	6.5	< 0.60	< 0.97	No
56	Acenaphthene	2700	< 0.02	< 0.03	No
57	Acenaphthylene	No Criteria	< 0.02	< 0.03	Ud
58	Anthracene	110000	< 0.02	0.03	No
59	Benzidine	0.00054	< 5.0	< 5	No
60	Benzo(a)Anthracene	0.049	< 0.02	0.04	No
61	Benzo(a)Pyrene	0.049	< 0.03	< 0.03	No
62	Benzo(b)Fluoranthene	0.049	< 0.03	< 0.05	No
63	Benzo(ghi)Perylene	No Criteria	< 0.03	< 0.03	Ud
64	Benzo(k)Fluoranthene	0.049	< 0.03	< 0.06	No
65	Bis(2-Chloroethoxy)Methane	No Criteria	< 0.70	< 0.93	Ud
66	Bis(2-Chloroethyl)Ether	1.4	< 0.90	< 0.95	No
67	Bis(2-Chloroisopropyl)Ether	170000	< 0.60	< 0.81	No
68	Bis(2-Ethylhexyl)Phthalate	5.9	< 3	< 0.95	No
69	4-Bromophenyl Phenyl Ether	No Criteria	< 0.97	< 0.97	Ud
70	Butylbenzyl Phthalate	5200	< 0.70	< 0.98	No
71	2-Chloronaphthalene	4300	< 0.98	< 0.98	No
72	4-Chlorophenyl Phenyl Ether	No Criteria	< 0.99	< 0.99	Ud
73	Chrysene	0.049	< 0.02	< 0.03	No
74	Dibenzo(a,h)Anthracene	0.049	0.03	0.04	No
75	1,2-Dichlorobenzene	17000	< 0.11	< 0.95	No
76	1,3-Dichlorobenzene	2600	0.14	< 0.87	No
77	1,4-Dichlorobenzene	2600	0.29	< 0.93	No
78	3,3 Dichlorobenzidine	0.077	< 1	< 5	No
79	Diethyl Phthalate	120000	< 0.06	< 0.86	No
80	Dimethyl Phthalate	2900000	< 0.70	< 0.97	No
81	Di-n-Butyl Phthalate	12000	< 0.60	< 0.91	No
82	2,4-Dinitrotoluene	9.1	< 0.60	< 0.96	No
83	2,6-Dinitrotoluene	No Criteria	< 0.60	< 0.98	Ud
84	Di-n-Octyl Phthalate	No Criteria	< 0.70	< 0.92	Ud
85	1,2-Diphenylhydrazine	0.54	< 0.60	< 0.9	No
86	Fluoranthene	370	0.03	0.05	No
87	Fluorene	14000	< 0.02	0.04	No
88	Hexachlorobenzene	0.00077	< 0.91	< 0.91	No
89	Hexachlorobutadiene	50	< 0.92	< 0.92	No
90	Hexachlorocyclopentadiene	17000	< 0.80	< 0.9	No
91	Hexachloroethane	8.9	< 0.94	< 0.94	No
92	Indeno(1,2,3-cd)Pyrene	0.049	< 0.02	0.04	No
93	Isophorone	600	< 0.80	< 0.93	No
94	Naphthalene	No Criteria	< 0.02	< 0.03	Ud
95	Nitrobenzene	1900	< 0.70	< 0.95	No
96	N-Nitrosodimethylamine	8.1	< 0.80	< 0.88	No
97	N-Nitrosodi-n-Propylamine	1.4	< 0.60	< 0.97	No
98	N-Nitrosodiphenylamine	16	< 0.6	< 0.83	No
99	Phenanthrene	No Criteria	0.05	0.05	Ud
100	Pyrene	11000	0.02	0.05	No
101	1,2,4-Trichlorobenzene	No Criteria	< 0.98	< 0.98	Ud
102	Aldrin	0.00014	< 0.002	< 0.004	No
103	Alpha-BHC	0.013	< 0.002	< 0.005	No

CTR #	Priority Pollutants	Governing WQC (µg/L)	MEC or Minimum DL [1][2] (µg/L)	Maximum Background or Minimum DL [1][2] (µg/L)	RPA Results [3]
104	Beta-BHC	0.046	< 0.002	< 0.003	No
105	Gamma-BHC	0.063	< 0.002	< 0.004	No
106	Delta-BHC	No Criteria	< 0.002	< 0.004	Ud
107	Chlordane	0.00059	< 0.02	< 0.04	No
108	4,4'-DDT	0.00059	< 0.003	< 0.004	No
109	4,4'-DDE (linked to DDT)	0.00059	< 0.003	< 0.004	No
110	4,4'-DDD	0.00084	< 0.003	< 0.004	No
111	Dieldrin	0.00014	< 0.002	< 0.004	No
112	Alpha-Endosulfan	0.056	< 0.003	< 0.005	No
113	beta-Endolsulfan	0.056	< 0.003	< 0.005	No
114	Endosulfan Sulfate	240	< 0.002	< 0.005	No
115	Endrin	0.036	< 0.002	< 0.003	No
116	Endrin Aldehyde	0.81	< 0.002	< 0.005	No
117	Heptachlor	0.00021	< 0.003	< 0.004	No
118	Heptachlor Epoxide	0.00011	< 0.002	< 0.004	No
119-125	PCBs sum	0.00017	<0.02	<0.04	No
126	Toxaphene	0.0002	< 0.19	< 0.2	No
	Tributylin	0.072	Not Available	Not Available	Ud
	Total PAHs	No Criteria	0.05	0.48	Ud

Footnotes to Table F-9:

[1] The Maximum Effluent Concentration (MEC) and maximum background concentration are the actual detected concentrations unless preceded by a "<" sign, in which case the value shown is the minimum detection level (DL).

[2] The MEC or maximum background concentration is "Not Available" when there are no monitoring data for the constituent.

[3] RPA Results = Yes, if MEC > WQC, B > WQC and MEC is detected, or Trigger 3;
= No, if MEC and B are < WQC or all effluent data are undetected;
= Undetermined (Ud), if no criteria have been promulgated or there are insufficient data.

e. Reasonable Potential Analysis for Ammonia

Ammonia is a toxic pollutant, but not a priority pollutant as defined by the CTR; therefore, the procedures outlined in the *Technical Support Document for Toxics Control* (TSD) (EPA/505/2-90-001, March 1991) were used to determine if ammonia in the discharge has a reasonable potential to cause water quality objectives to be exceeded in the receiving water.

(1) TSD RPA Procedure

The TSD allows using measured receiving water concentrations (RWC) or projected RWC from effluent data to perform an RPA. The following summarizes steps to determine reasonable potential for excursions above ambient criteria using effluent data:

Step 1. Determine the number of total observations (n) for a set of effluent data and determine the highest value from that data set (the maximum effluent concentration or MEC).

Step 2. Determine the coefficient of variation (CV) from the data set. For a data set where n<10, the CV is estimated to equal 0.6. For a data set where n>10, the CV is calculated as the standard deviation divided by the mean.

Step 3. Determine an appropriate ratio for projecting a selected upper bound concentration (e.g., the 99th or 95th percentile) assuming a lognormal distribution.

To do this, the percentile represented by the MEC in a data set of "*n*" samples, p_n, needs to be determined based on the desired confidence interval, e.g., 95% or 99%.

$$p_n = (1 - \text{confidence interval})^{1/n}$$

Then concentrations based on two percentile values, $C_{upper\ bound}$, and C_{Pn} need to be calculated using the following equation.

$$C_p = \exp(Z_p\sigma - 0.5\sigma^2)$$

where $\sigma^2 = \ln(CV^2+1)$, p is the percentile (upper bound or p_n), and Z_p is the standard normal distribution value for the percentile p.

The ratio, R, is then determined to be

$$R = \frac{C_{upper\ bound}}{C_{Pn}}$$

Step 4. Multiply the MEC by the ratio, R, determined by Step 3, and use this value with the appropriate dilution to project the receiving water concentration (RWC).

$$\text{RWC} = \text{MEC} \times \text{R} / \text{dilution ratio}$$

Step 5. Compare the projected RWC to the applicable WQC (CCC, CMC, human health criteria, etc). If a RWC is greater than or equal to a criterion, then there is reasonable potential.

(2) TSD-based RPA for Ammonia

i. *Ammonia Criteria.* The Basin Plan (section 3.3.3.20) contains an un-ionized ammonia WQO of 0.025 mg/L (as N) as an annual median.

Effluent and receiving water monitoring data are available for total ammonia, not un-ionized ammonia, because sampling and laboratory methods are not available to analyze for un-ionized ammonia. The fraction of total ammonia that exists in the un-ionized form depends on pH, temperature, and salinity. The Order translates total ammonia concentrations into un-ionized ammonia (as nitrogen) to compare with the Basin Plan un-ionized ammonia objective using equations found in the *1999 Update of Ambient Water Quality Criteria for Ammonia* (EPA-822-R-99-014, December 1999). In this calculation, the water was assumed to be fresh, with a salinity of less than 1 part per thousand. For purposes of this RPA, no dilution was assumed, i.e., dilution ratio=1. The RWC is therefore the same as the

projected upper bound concentration, i.e., RWC=MEC×R (see Step 4 under TSD RPA Procedure above).

According to the TSD, the RPA can be performed based on the projected receiving water quality using effluent data or measured receiving water concentrations. Both values may be compared directly to the WQOs.

(a) RPA Based on Effluent Data

The annual median of the effluent data is appropriate for comparing with the Basin Plan objective (0.025 mg/L), which is expressed as an annual median. No projection is needed because the observed annual median is generally very close to the population 50th percentile. Un-ionized ammonia concentrations were calculated for each total ammonia sample collected between 2006 and 2010 based on the pH and temperature of each sample. The annual median concentrations for these years were 0.0013 mg/L, 0.0019 mg/L, 0.0088 mg/L, 0.0017 mg/L, and 0.0024 mg/L. All are considerably less than the annual median objective of 0.025 mg/L.

(b) RPA Based on Receiving Water Data

The TSD also allows the RPA to be based on measured receiving water concentrations. The Discharger provided ammonia, pH, and temperature data from upstream and downstream sampling points in Calera Creek from 2006 to 2010. Data from two monitoring locations downstream from the discharge were used to translate, on a sample-by-sample basis, the total ammonia data to un-ionized ammonia concentrations. The highest annual median un-ionized concentration observed was 0.014 mg/L in 2008. This is less than the Basin Plan's un-ionized ammonia objective of 0.025 mg/L; therefore, there is no reasonable potential on the basis of receiving water data.

f. Constituents with limited data. In some cases, reasonable potential cannot be determined because effluent data are limited, or ambient background concentrations are unavailable. The Discharger will continue to monitor for these constituents in the effluent using analytical methods that provide the best feasible detection limits. When additional data become available, further RPA will be conducted to determine whether numeric effluent limitations are necessary.

g. Pollutants with No Reasonable Potential. WQBELs are not included in this Order for constituents that do not demonstrate reasonable potential; however, monitoring for those pollutants is still required (Attachment E, Section IV, Table E-3). If concentrations of these constituents are found to have increased significantly, the Discharger is required to investigate the sources of the increases. Remedial measures are required if the increases pose a threat to receiving water quality.

4. WQBEL Calculations

a. Pollutants with Reasonable Potential. WQBELs were developed for the toxic and priority pollutants determined to have reasonable potential to cause or contribute to

exceedances of the WQOs. The WQBELs were calculated based on WQOs and the procedures specified in SIP section 1.4. The WQOs used for each pollutant with reasonable potential are discussed below.

b. Dilution Credit. Discharge from the Calera Creek Water Recycling Plant to Calera Creek is through a shallow water outfall. The Discharger has not provided evidence to support a dilution credit for the discharge; therefore, WQBELs in this Order are established without credit for dilution.

c. Development of WQBELs for Specific Pollutants

(1) Copper

(a) WQOs. The most stringent WQOs for copper are the Basin Plan freshwater aquatic life objectives of 11.5 and 17.7 micrograms per liter (µg/L), chronic and acute, respectively, expressed as total metal and based on a hardness of 128 mg/L.

(b) RPA Results. This Order establishes effluent limitations for copper because the MEC (16 µg/L) exceeds the governing WQO (11.5 µg/L), demonstrating reasonable potential by Trigger 1.

(c) WQBELs. WQBELs for copper, calculated according to SIP procedures with an effluent data coefficient of variation (CV) of 0.28 and no credit for dilution, are an AMEL of 10 µg/L and an MDEL of 15 µg/L.

(d) Anti-backsliding. Anti-backsliding requirements are satisfied because the new copper limits are slightly more stringent than the limits in the previous permit.

(2) Lead

(a) WQOs. The most stringent WQOs for lead are the Basin Plan freshwater aquatic life objectives of 4.4 and 112 µg/L, chronic and acute, respectively, expressed as total metal and based on a hardness of 128 mg/L.

(b) RPA Results. This Order establishes effluent limitations for lead because the MEC (6.2 µg/L) exceeds the governing WQO (4.4 µg/L), demonstrating reasonable potential by Trigger 1.

(c) WQBELs. WQBELs for lead, calculated according to SIP procedures with an effluent data CV of 2.1and no credit for dilution, are an AMEL of 2.4 µg/L and an MDEL of 7.5 µg/L.

(d) Anti-backsliding. Anti-backsliding requirements are satisfied because the new lead limits are more stringent than the limits in the previous permit. The previous permit included an AMEL of 3.2 µg/L and an MDEL of 6.0 µg/L. The new limits are more stringent because the lower AMEL would limit the discharge to a lower long-term average concentration.

(3) Cyanide

(a) WQC. The most stringent WQC for cyanide are the NTR freshwater aquatic life criteria of 5.2 and 22 µg/L, chronic and acute, respectively.

(b) RPA Results. This Order establishes effluent limitations for cyanide because the MEC (6.4 µg/L) exceeds the governing WQC (5.2 µg/L), demonstrating reasonable potential by Trigger 1.

(c) WQBELs. WQBELs for cyanide, calculated according to SIP procedures with an effluent data CV of 0.48 and no credit for dilution, are an AMEL of 4.4 µg/L and an MDEL of 8.0 µg/L.

(d) Anti-backsliding. Anti-backsliding requirements are satisfied because the new cyanide limits are more stringent than the limits in the previous permit. The previous permit included an AMEL of 4.5 µg/L and an MDEL of 7.8 µg/L. The new cyanide WQBELs are more stringent because the lower AMEL would limit the discharge to a lower long-term average concentration.

d. Effluent Limit Calculations

The following table shows WQBEL calculations for copper, lead, and cyanide.

Table F-10. WQBEL Calculations

PRIORITY POLLUTANTS	Copper	Lead	Cyanide
Units	ug/L	ug/L	ug/L
Basis and Criteria type	BP & CTR FW Aquatic Life	BP & CTR FW Aquatic Life	BP & CTR FW Aquatic Life (from NTR)
Criteria -Acute	17.7	112	22
Criteria -Chronic	11.5	4.4	5.2
SSO Criteria -Acute	-----	-----	-----
SSO Criteria -Chronic	-----	-----	-----
Water Effects ratio (WER)	1	1	1
Lowest WQO	11.5	4.4	5.2
Site Specific Translator - MDEL	-----	-----	-----
Site Specific Translator - AMEL	-----	-----	-----
Dilution Factor (D) (if applicable)	0	0	0
No. of samples per month	4	4	4
Aquatic life criteria analysis required? (Y/N)	Y	Y	Y
HH criteria analysis required? (Y/N)	N	N	Y
Applicable Acute WQO	17.7	112	22
Applicable Chronic WQO	11.5	4.4	5.2
HH criteria	-----	----	220000
Background (Maximum Conc for Aquatic Life calc)	7.0	5.4	3.2
Background (Average Conc for Human Health calc)	-----	----	1.8
Is the pollutant on the 303d list (Y/N)?	N	N	N
ECA acute	18	112	22
ECA chronic	12	4.4	5.2
ECA HH			220000
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	N	N	N
Avg of effluent data points	6.2	0.29	2.2
Std Dev of effluent data points	1.7	0.61	1.0
CV calculated	0.28	2.1	0.48
CV (Selected) - Final	0.28	2.1	0.48
ECA acute mult99	0.55	0.11	0.38
ECA chronic mult99	0.73	0.19	0.59
LTA acute	9.7	12.5	8.4
LTA chronic	8	0.8	3.1
minimum of LTAs	8.4	0.8	3.1
AMEL mult95	1.2	2.9	1.4
MDEL mult99	1.8	8.9	2.6
AMEL (aq life)	10	2.4	4.4
MDEL(aq life)	15	7.5	8.0
MDEL/AMEL Multiplier	1.46	3.11	1.82
AMEL (human hlth)			220000
MDEL (human hlth)			399801
minimum of AMEL for Aq. life vs HH	10	2.4	4.4
minimum of MDEL for Aq. Life vs HH	15	7.5	8.0
Current limit in permit (30-day average)	10	3.2	4.5
Current limit in permit (daily)	16	6.0	7.8
Final limit - AMEL	10	2.4	4.4
Final limit - MDEL	15	6.0	7.8
Max Effl Conc (MEC)	16	6.2	6.4

5. Whole Effluent Acute Toxicity

This Order includes effluent limitations for whole effluent acute toxicity that are based on Basin Plan Table 4-3 and are unchanged from the previous permit. All bioassays are to be performed according to the USEPA approved method in 40 CFR 136, currently *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, 5th Edition. The approved test species currently specified in the Monitoring and Reporting Program (Attachment E) is the rainbow trout.

6. Whole Effluent Chronic Toxicity

a. Toxicity Objective. Basin Plan section 3.3.18 states, "There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community."

b. Reasonable Potential Analysis. The Discharger conducted chronic toxicity screening monitoring during the previous permit term. Three sets of chronic toxicity screening were conducted with three aquatic species: green algae (*Selenastrum capricornatum*); an invertebrate (*Ceriodaphnia dubia*); and a vertebrate (*Pimephales promelas*.) Data from these screening tests indicate that *C. dubia* is the most sensitive species. In addition, the data show that the discharge has reasonable potential to exceed the narrative water quality objective for chronic toxicity because two chronic toxicity results (1.8 TUc and 2.2 TUc) for *C. dubia* exceeded the chronic toxicity screening trigger of 1 TUc.

c. Permit Requirements. The Order therefore establishes a narrative effluent limitation for chronic toxicity based on the narrative Basin Plan objective. The Order establishes requirements to implement the chronic toxicity narrative objective, including numeric triggers for accelerated monitoring. These triggers are based on Basin Plan Table 4-5.

d. Screening Phase Study. The Discharger is required to conduct a chronic toxicity screening phase study, as described in MRP Appendix E-1 (Attachment E) prior to the next permit issuance.

7. Anti-backsliding and Antidegradation

Effluent limitations in this Order that are less stringent than those in the previous permit or are not retained from the previous permit comply with anti-backsliding and antidegradation requirements for the reasons explained below:

- The previous permit contained effluent limitations for mercury; however, the RPA shows that the discharge no longer demonstrates reasonable potential for this pollutant to cause or contribute to exceedances of its WQO. This Order, therefore, does not retain these effluent limitations. Elimination of these limitations is consistent with State Water Board Order No. WQ 2001-16. Receiving water quality will not be degraded because the Discharger will maintain its current level of treatment.

- The previous permit included two sets of effluent limits for ammonia, one for the wet season (October - May) and one for the dry season (June – September) . These have been replaced by one set of performance based limits that were calculated using statistical procedures from ammonia concentrations in effluent samples when the plant was operating normally as discussed above. These new performance based limits are more stringent than the previous October-May WQBELs and are slightly less stringent than the June-September WQBELs. Overall, the new performance based limits are more stringent than the previous two sets of WQBELs so compliance with anti-backsliding and antidegradation is maintained. Moreover, State Water Board Order WQ 2001-06 provides that it is not anti-backsliding if the new limits are not comparable to previous limits. The performance based limits in this Order are not comparable to the previous limits, because one set is based on proper operated normal performance, and the other is based on water quality objectives.

- The previous permit contained effluent limitations for bis(2-ethylhexyl)phthalate; however, the RPA shows that the discharge no longer demonstrates reasonable potential for this pollutant to cause or contribute to exceedances of its WQO. This Order, therefore, does not retain these effluent limitations. Elimination of these limitations is consistent with State Water Board Order No. WQ 2001-16. Receiving water quality will not be degraded because the Discharger will maintain its current level of treatment.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Receiving water limitations V.A.1 and V.A.2 are based on the narrative and numeric objectives contained in Basin Plan Chapter 3. The new Dissolved Oxygen limit (5.0 mg/L) is less stringent than the limit in the previous permit (7.0 mg/L). The limit in the previous permit was a technical error. That limit applied to cold water habitats whereas the receiving water, Calera Creek, is actually a warm water habitat that has the lower limit.

Receiving water limitation V.A.3 is retained from the previous permit and requires compliance with federal and State water quality standards.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

The principal purposes of a monitoring program are to:

- Document compliance with waste discharge requirements and prohibitions established by the Regional Water Board,

- Facilitate self-policing by the Discharger in the prevention and abatement of pollution arising from waste discharge,

- Develop or assist in the development of limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards, and

- Prepare water and wastewater quality inventories.

The MRP is a standard requirement in almost all NPDES permits issued by the Regional Water Board, including this Order. It contains definitions of terms and sets out requirements for reporting of routine monitoring data in accordance with NPDES regulations, the CWC, and State and Regional Water Board policies. The MRP also defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents, for which no effluent limitations are established, is also required to provide data for future completion of RPAs.

The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

A. Influent Monitoring

Influent monitoring requirements at INF-001 for BOD_5 and TSS are unchanged from the previous permit to allow determination of compliance with this Order's 85% removal requirement. Flow monitoring is also retained. The MRP does not retain influent monitoring for oil and grease because there is not a removal requirement for oil and grease.

B. Effluent Monitoring

The MRP retains most effluent monitoring requirements from the previous permit. Changes in effluent monitoring are summarized as follows.

- The MRP retains routine monitoring for the toxic pollutants with effluent limitations (copper, lead, and cyanide). Monitoring for priority toxic pollutants must be conducted in accordance with the Regional Standard Provisions (Attachment G).

- Routine effluent monitoring for salinity is established for future calculation of the un-ionized fraction of ammonia in the effluent.

- To reduce the cost and effort associated with effluent monitoring requirements, effluent monitoring for total organic nitrogen, nitrate nitrogen, and total phosphorus were not retained.

C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity.** Monthly 96-hour bioassay testing is required to demonstrate compliance with the effluent limitation for acute toxicity. The MRP requires the use of rainbow trout as the bioassay test species.

2. **Chronic Toxicity.** This Order establishes the requirement for the Discharger to conduct chronic toxicity testing once per year. The Discharger conducted an effluent toxicity screening study during the previous permit term, which determined the most sensitive species to be *C. dubia.* The permit therefore requires the use of *C. dubia* as the testing species. The Discharger shall re-screen in accordance with MRP Appendix E-1 (Attachment E) after any significant change in the nature of the effluent or prior to 180 days prior to the expiration of this Order.

D. Receiving Water Monitoring

Most receiving water monitoring requirements are retained from the previous permit. Changes in receiving water monitoring are summarized as follows.

- To reduce the burden of monitoring requirements, receiving water monitoring for total organic nitrogen, nitrate nitrogen, and total phosphorus were not retained.
- Monitoring for hardness is established in the receiving water because some water quality criteria depend on hardness. Hardness data will be used in future RPA.
- Monitoring for salinity in the receiving water is established for determination of the un-ionized fraction of ammonia in the receiving water.

E. Biosolids Monitoring

This Order requires adherence to the applicable sludge monitoring requirements of 40 CFR 503 (for land application) or 40 CFR 258 (for landfill disposal.)

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions (Provision VI.A)

Standard Provisions, which in accordance with 40 CFR 122.41and 122.42 apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachments D of this Order. NPDES regulations at 40 CFR 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. NPDES regulations at 40 CFR 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. The Regional Standard Provisions (Attachment G) supplement the Federal Standard Provisions. In accordance with 40 CFR 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 122.41(j)(5) and (k)(2) because the CWC enforcement authority is more stringent. In lieu of these conditions, this Order incorporates by reference CWC section 13387(e).

B. MRP Requirements (Provision VI.B)

The Discharger is required to monitor the permitted discharge in order to evaluate compliance with permit conditions. Monitoring requirements are contained in the MRP (Attachment E), Federal Standard Provisions (Attachment D), and Regional Standard Provisions (Attachment G). This provision requires compliance with these documents and is authorized by 40 CFR 122.41(h) and (j), and CWC sections 13267 and 13383.

C. Special Provisions (Provision VI.C)

1. Reopener Provisions

These provisions are based on 40 CFR 122.63 and allow modification of this Order and its effluent limitations as necessary in response to updated WQOs, regulations, or other new relevant information that may be established in the future and other circumstances allowed by law.

2. Effluent Characterization Study and Report

This Order does not include effluent limitations for priority pollutants that do not demonstrate reasonable potential. It is reasonable to require the Discharger to continue monitoring for these pollutants.

3 Ambient Background Study and Report

This provision is to generate data to calculate effluent limitation in compliance with the SIP.

4. Best Management Practices and Pollution Minimization Program

This provision for a Pollutant Minimization Program is based on Basin Plan Chapter 4 (section 4.13.2) and SIP Chapter 2 (section 2.4.5).

5. Reliability Assurance Plan and Status Report.

This provision is required to support the Discharger's request for an exception to Basin Plan Discharge Prohibition 1.

6. Special Provisions for Municipal Facilities (POTWs Only)

a. Biosolids Management Practices Requirements. This provision is based on Basin Plan Chapter 4, section 4.17, and 40 CFR Parts 257 and 503, and is retained from the previous permit.

b. Sanitary Sewer and Sewer System Management Plan. This provision is to explain the Order's requirements as they relate to the Discharger's collection system, and to promote consistency with the State Water Board-adopted General Collection System WDRs (General Order, Order No. 2006-0003-DWQ).

The General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans and report all sanitary sewer overflows, among other requirements and prohibitions. Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. Inasmuch that the Discharger's collection system is part of the system that is subject to this Order, certain standard provisions are applicable as specified in Provisions, section VI.C.5. For instance, the 24-hour reporting requirements in this Order are not included in the General Order. The Discharger must comply with both the General Order and this Order. The Discharger and public agencies that are discharging wastewater into the facility were required to obtain enrollment for regulation under the General Order by December 1, 2006.

The State Water Board amended the General Order on February 20, 2008 in Order No. WQ 2008-0002-EXEC, to strengthen the notification and reporting requirements for sanitary sewer overflows. The Regional Water Board issued a 13267 letter on May 1, 2008, requiring dischargers to comply with the new notification requirements for sanitary

sewer overflows, and to comply with similar notification and reporting requirements for spills from wastewater treatment facilities.

VIII. PUBLIC PARTICIPATION

The Regional Water Board is considering the issuance of WDRs that will serve as an NPDES permit for the Facility. As a step in the WDRs 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 them with an opportunity to submit written comments and recommendations. Notification was provided through publication in The Pacifica Times on November 2, 2011.

B. Written Comments

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

To receive full consideration and a written response, written comments must be received at the Regional Water Board offices by 5:00 p.m. on December 2, 2011.

C. Public Hearing

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

Date: January 18, 2012
Time: 9:00 am
Location: Elihu Harris State Office Building
1515 Clay Street, 1st Floor Auditorium
Oakland, CA 94612

Contact: Derek Whitworth, (510) 622-2349, email DWhitworth@waterboards.ca.gov

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

Dates and venues may change. The Regional Water Board web address is http://www.waterboards.ca.gov/sanfranciscobay where one can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

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

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

E. Information and Copying

The Report of Waste Discharge, 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 8:00 a.m. and 5:00 p.m., Monday through Friday Copying of documents may be arranged by calling 510-622-2300.

F. Register of Interested Persons

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

G. Additional Information

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

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

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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, record keeping, 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 sewage 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 effects. 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. **Operations 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 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, 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 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.

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.

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.

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.

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 indicated in Table C, and its associated analytical method for inclusion in the MRP. For effluent monitoring, this alternative 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.

iii. The Discharger shall collect grab samples of effluent during periods of 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 permit 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 all affected discharge points that have effluent limits for the duration of the bypass, unless otherwise stipulated by the MRP.

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.

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.

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.

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;

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);

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.

   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 Pollution 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

Congener	TEF
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.

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. 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.).

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] in accordance with applicable reporting quantities for hazardous materials.

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) 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; and

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] 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.

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 water (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.

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

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

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:

   Geometric Mean = $Anti\log\left(\frac{1}{N}\sum_{i=1}^{N} Log(C_i)\right)$

   or

[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.

Geometric Mean = (C1*C2*…*CN)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 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.

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 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 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.

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
	Chromium (total)[3]	SM 3500					50	2	10	0.5	1			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)[4]								0.5			0.2	
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)[5]	0100.2 (note)[6]												
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										

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 Analysis for total chromium may be substituted for analysis of chromium (III) and chromium (VI) if the concentration measured is below the lowest hexavalent chromium criterion (11 µg/L).

4 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).

5 MUN = Municipal and Domestic Supply. This designation, if applicable, is in the Findings of the permit.

6 Determination of Asbestos Structures over 10 [micrometers] in Length in Drinking Water Using MCE Filters, U.S. EPA 600/R-94-134, June 1994.

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
33.	Ethylbenzene	602	0.5	2										
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									

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
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									
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)[7]	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									

[7] 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.

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
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											
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											