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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. R2-2011-XXXX
NPDES NO. CA0037427

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

Table 1. Discharger Information

Discharger	Sanitary District No. 5 of Marin County
Name of Facility	Paradise Cove Treatment Plant and its wastewater collection system
Facility Address	3700 Paradise Drive
	Tiburon, CA 94920
	Marin County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	

Discharges by the Sanitary District No. 5 of Marin County from the discharge point identified below are subject to waste discharge requirements as set forth in this Order.

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Secondary Treated Municipal Wastewater	37º 53’ 50” N	122º 27’ 40” W	Central San Francisco Bay

Table 3. Administrative Information

This Order was adopted by the Regional Water Board on:	**<Adoption Date>**
This Order shall become effective on:	**June 1, 2011**
This Order shall expire on:	**May 31, 2016**
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	**180 days prior to the Order expiration date**

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 <**adoption date**>.

_____
Bruce H. Wolfe**,** Executive Officer

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I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	Sanitary District No. 5 of Marin County
Name of Facility	Paradise Cove Treatment Plant and its wastewater collection system
Facility Address	3700 Paradise Drive
	Tiburon, CA 94920
	Marin County
Facility Contact, Title, and Phone	Robert Lynch, District Manager, (415) 435-1501
Mailing Address	P.O. Box 227, Tiburon, CA 94920
Type of Facility	Publicly Owned Treatment Works (POTW)
Facility Design Flow	0.04 million gallons per day (MGD) average dry weather treatment capacity
Service Areas	Sanitary District No. 5 of Marin County
Service Population	260

II. FINDINGS

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

A. Background. Sanitary District No. 5 of Marin County (hereinafter Discharger) is currently discharging under Order No. R2-2006-0037 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0037427. The Discharger submitted a Report of Waste Discharge, dated November 30, 2010, and applied for an NPDES permit reissuance to discharge treated wastewater from the Paradise Cove Treatment Plant (hereinafter Facility) to the Central San Francisco Bay. The discharge is also currently regulated under Order No. 2007-0077 (NPDES Permit CA0038849), which supersedes all requirements on mercury and PCBs from wastewater discharges in the region. This Order does not affect Order No. R2-2007-0077.

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 and Discharge Description.

1. **Facility Description**. The Discharger owns and operates the Facility, which provides secondary-level treatment for domestic wastewater within the Sanitary District No. 5 of Marin County. The Facility has an average dry weather treatment capacity of 0.04 MGD.

   Previously the Discharger operated a 0.02 MGD treatment facility. The Discharger determined a treatment plant upgrade was necessary due in part to anticipated conveyance of wastewater from Seafirth Estates Wastewater Treatment Plant (average dry weather design flow of 0.0075 MGD). Seafirth was abandoned due to high cost and the difficulty in maintaining and operating the plant. Its flows are now directed to the Paradise Cove Facility through a new pump station.

In late 2008 the Discharger began construction on an upgrade to the treatment plant to increase capacity to 0.04 MGD. The upgraded facility became active in January 2009.

The current wastewater treatment process utilizes two identical treatment trains consisting of grinding, flow equalization (primary settling), extended aeration, secondary clarification, chlorination (sodium hypochlorite) and dechlorination (sodium bisulfite). Treated, disinfected, and dechlorinated secondary effluent from the Facility is discharged (Discharge Point No. 001) through an outfall pipe to the Central San Francisco Bay. Only one of the two treatment trains is currently in use. The Facility does not process any biosolids. Waste activated sludge is stored in a holding tank (aerobic digestion) and is hauled to a nearby wastewater treatment plant in Tiburon, CA, where solids are processed prior to disposal.

The Facility currently provides wastewater treatment and disposal service to 130 homes within the sanitary district. In addition to the increased flow from the Seafirth plant, the Discharger has anticipated increased flow from 48 homeowners that wish to abandon their individual septic systems in favor of connecting to the Facility. It is also anticipated that 32 additional homes may be built within the Discharger's service area and that the Romberg Tiburon Center may also connect to the Facility.

2. **Discharge Description**. Treated secondary effluent from the Facility is discharged to the Central San Francisco Bay as shown in Attachment B. The discharge occurs though a submerged outfall located approximately 100 feet offshore and at a depth of 20 feet below the surface. The outfall is constructed of 6-in HDPE pipe and utilizes a rubber duckbill diffuser. Compliance monitoring is conducted at Monitoring Locations EFF-001 and EFF-001D as described in Attachment E, Monitoring and Reporting Program (MRP).

3. **Biosolids Management.** The Facility does not have any equipment for handling and removal of solids from the wastewater treatment process. Biosolids are stored onsite prior to transport to disposal at the Tiburon Wastewater Treatment Facility.

4. **Storm Water Discharge.** The Discharger is not required to be covered under the General Permit (NPDES General Permit CAS000001 – the General Permit) because all storm water flows to the Facility, and is treated along with the wastewater discharged to the Facility.

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

C. Legal Authorities. This Order is issued pursuant to Clean Water Act (CWA) section 402 and implements regulations adopted by the United States Environmental Protection Agency (USEPA) and Chapters 5.5, Division 7 of the California Water Code (CWC) (commencing with section 13370). It shall serve 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 Article 4, Chapter 4, Division 7 of the CWC (commencing with section 13260).

D. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet

(Attachment F) contains background information and rationale for this Order's requirements, and is hereby incorporated into this Order and constitutes part of the findings for this Order. Attachments A through 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 the provisions of CEQA.

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

G. Water Quality-Based Effluent Limitations. CWA section 301(b) and NPDES regulations at 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. 40 CFR 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant that has no numeric objective, water quality-based effluent limitations (WQBELs) must be established using (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

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

Table 5, below, lists beneficial uses of the Central San Francisco Bay specifically identified in the Basin Plan.

Table 5. Basin Plan Beneficial Uses of the Central San Francisco Bay

Discharge Point	Receiving Water Name	Beneficial Uses
001	Central San Francisco Bay	Industrial Service Supply (IND) Industrial Process Supply (PROC) Ocean, Commercial and Sport Fishing (COMM) Shellfish Harvesting (SHELL) Estuarine Habitat (EST) Fish Migration (MIGR) Preservation of Rare and Endangered Species (RARE) Fish Spawning (SPWN) Wildlife Habitat (WILD) Water Contact Recreation (REC1) Non-Contact Water Recreation (REC2) Navigation (NAV)

The State Water Board's *Water Quality Control Plan for Enclosed Bays and Estuaries—Part 1, Sediment Quality* became effective on August 25, 2009. This plan supersedes other narrative sediment quality objectives, and establishes new sediment quality objectives and related implementation provisions for specifically defined sediments in most bays and estuaries.

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 contained toxics criteria for California and 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 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* (hereinafter State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria USEPA promulgated for California through the NTR and the priority pollutant objectives the Regional Water Board 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. Compliance Schedules and Interim Requirements. The State Water Board adopted Resolution No. 2008-0025 on April 15, 2008, titled "Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits." Under limited circumstances, this policy allows the Regional Water Board to grant a compliance schedule based on a discharger's request and demonstration that it is infeasible to comply immediately with certain effluent limitations. This policy became effective on August 27, 2008, superseding the Basin Plan's compliance schedule policy. This Order does not contain a compliance schedule or an interim effluent limitation for any constituent.

L. 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.

M. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on biochemical oxygen demand (BOD) and total suspended solids (TSS). Derivation of these technology-based limitations is discussed in the Fact Sheet (Attachment F). This Order's technology-based pollutant restrictions implement the minimum applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum federal technology-based requirements as necessary to meet water quality standards.

WQBELs have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The procedures for calculating the individual WQBELs for priority pollutants are based on the SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under State law and submitted to USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for the purposes of the CWA" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

N. Antidegradation Policy. NPDES regulations at 40 CFR 131.12 require that the State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy through State Water Board Resolution No. 68-16, which incorporates the federal antidegradation policy where the federal policy applies under federal law and requires that existing water quality be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. As discussed in the Fact Sheet, the permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

O. Anti-Backsliding Requirements. CWA Sections 402(o)(2) and 303(d)(4) and NPDES regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as those in the previous permit (Order No. R2-2006-0037). As discussed in the Fact Sheet, the permitted discharge is consistent with the anti-backsliding requirements of the CWA and federal regulations.

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

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

R. 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 in Attachment G. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. The Fact Sheet provides the rationale for this Order's special provisions.

S. Provisions and Requirements Implementing State Law. No provisions or requirements in this Order are included to implement State law only. All provisions and requirements are required or authorized under the federal CWA; consequently, violations of these provisions and requirements are subject to the enforcement remedies available for NPDES violations.

T. Notification of Interested Parties. The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided an opportunity to submit written comments and recommendations. The Fact Sheet provides details regarding the notification.

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

IT IS HEREBY ORDERED, that this Order supersedes Order No. R2-2006-0037, except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (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. Discharge of treated wastewater at any point where it does not receive an initial dilution of at least 44:1 is prohibited.

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

D. The average dry weather flow as measured at Discharge Point No. 001, station EFF-001, described in the attached monitoring and reporting program (MRP – Attachment E), shall not exceed 0.04 MGD. The average dry weather flow shall be determined over three consecutive dry weather months each year.

E. 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

A. Effluent Limitations – Discharge Point No. 001

1. Effluent Limitations for Conventional and Non-conventional Pollutants

a. The Discharger shall maintain compliance with the following effluent limitations for Discharge Point No. 001, with compliance measured at Monitoring Location EFF-001D for total coliform and at EFF-001 for BOD, TSS, pH, oil and grease and total chlorine residual, as described in the attached MRP (Attachment E).

Table 6. Effluent Limitations for Conventional and Non-Conventional Pollutants – Discharge Point No. 001

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand (BOD)	mg/L	30	45	---	---	---
Total Suspended Solids (TSS)	mg/L	30	45	---	---	---
Oil and Grease	mg/L	10	---	20	---	---
pH [1]	s.u.	---	---	---	6.0	9.0
Chlorine, Total Residual	mg/L	---	---	---	---	0.0 [2]

Footnotes to Table 6:

[1] 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.

[2] This requirement is defined as below the limit of detection in standard test methods as defined in the latest edition of *Standard Methods for the Examination of Water and Wastewater*. The Discharger may elect to use a continuous on-line monitoring system for measuring flows, sodium hypochlorite, and sodium bisulfite dosage (including a safety factor) and concentration to prove that chlorine residual exceedances are false positives. If convincing evidence is provided, the Executive Officer will conclude that these chlorine residual exceedances are false positives and are not violations of the Order's Total Residual Chlorine limit.

b. **BOD and TSS - 85 Percent Removal:** The concentration-based average monthly percent removal of BOD and TSS shall not be less than 85 percent.

c. **Total Coliform Bacteria:** Treated wastewater shall meet the following limitations of bacteriological quality:

(1) The five-sample moving median value for the most probable number (MPN) of total coliform bacteria shall not exceed 240 MPN/100 mL; and

(2) No single sample shall exceed 10,000 MPN/100 mL.

2. Effluent Limitations for Toxic Pollutants

a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 001, with compliance measured for at Monitoring Location EFF-001, as described in the attached MRP (Attachment E).

Table 7. Effluent Limitations for Toxic Pollutants – Discharge Point No. 001

Parameter	Units	Final Effluent Limitations	
		Average Monthly Effluent Limit (AMEL)	Maximum Daily Effluent Limit (MDEL)
Copper	µg/L	42	76
Cyanide	µg/L	18	42
Total Ammonia	mg/L as Nitrogen	56	150

3. Whole Effluent Acute Toxicity

a. Representative samples of the effluent at Discharge Point No. 001, with compliance measured at Monitoring Location EFF-001, as described in the attached MRP, shall meet the following limitations for acute toxicity. Bioassays shall be conducted in compliance with MRP section V (Attachment E).

The survival of organisms in undiluted combined effluent shall be:

- A three-sample median value of not less than 90 percent survival, and
- Any single sample of not less than 70 percent survival.

b. Three-sample median is further defined as follows:

A bioassay test showing survival of less than 90 percent represents a violation of this effluent limitation if one or more of the past two or less bioassay tests show less than 90 percent survival.

c. 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.

d. If the Discharger can demonstrate to the satisfaction of the Executive Officer that toxicity exceeding the levels cited above is caused by ammonia and that the ammonia in the discharge complies with total ammonia effluent limitations in this Order, then such toxicity shall not constitute a violation of this effluent limitation.

B. Reclamation Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. The discharges shall not cause the following in Central San Francisco Bay:

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

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

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

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

5. 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.

B. The discharge of waste shall not cause the following limits to be exceeded in waters of the State within one foot of the water surface:

1. Dissolved Oxygen	5.0 mg/L, minimum 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.
2. Dissolved Sulfide	Natural Background Levels
3. pH	The discharge shall not cause changes greater than 0.5 pH units in normal ambient pH levels.
4. 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.

C. The discharge shall not cause a violation of any particular water quality standard for receiving waters adopted by the Regional or State Water Boards as required by the CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or

approved pursuant to Section 303 of the CWA, or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such 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.

B. Monitoring and Reporting Program Requirements

The Discharger shall comply with the MRP (Attachment E) and future revisions thereto, including applicable sampling and reporting requirements in the two 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 will have, or will cease to have, a reasonable potential to cause or contribute to adverse impacts on water quality or beneficial uses of the receiving waters.

b. If new or revised 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 may 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, TMDLs, or as otherwise permitted under Federal regulations governing NPDES permit modifications.

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

d. If an administrative or judicial decision on a separate NPDES permit or WDR addresses requirements similar to those applicable to this discharge.

e. Or as otherwise authorized by law.

The Discharger may request a permit modification based on the above. The Discharger shall include in any such request an antidegradation and antibacksliding analysis.

2. Effluent Data Evaluation

The Discharger shall continue to monitor and evaluate the discharge from Discharge Point No. 001 for the constituents listed in the Regional Standard Provisions (Attachment G), according to the sampling frequency specified in the MRP (Attachment E). Compliance with this requirement shall be achieved in accordance with the specifications stated in the Regional Standard Provisions.

The Discharger shall evaluate on an annual basis if concentrations of any significant constituent increase over past performance. The Discharger shall investigate the cause of the increase. The investigation may include, but need not be limited to, an increase in the effluent monitoring frequency, monitoring of internal process streams, and monitoring of influent sources. This may be satisfied through identification of these constituents as "Pollutants of Concern" in the Discharger's Pollutant Minimization Program described in Provision VI.C.4 below. The Discharger shall provide a summary of the annual evaluation of data and source investigation activities in the annual self-monitoring report.

The Discharger shall submit a final report that presents 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 Receiving Water Study

The Discharger shall collect or participate in collecting background ambient receiving water monitoring data for priority pollutants that is required to perform 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. This provision may be met through monitoring through the collaborative BACWA study, or a similar ambient monitoring program for San Francisco Bay. This permit may be reopened as appropriate, to incorporate effluent limits or other requirements based on Regional Water Board review of these data.

The Discharger shall submit a final report that presents all the data to the Regional Water Board 180 days prior to Order expiration. This final report shall be submitted with the application for permit reissuance.

4. Best Management Practices and Pollutant Minimization Program

a. The Discharger shall continue to conduct, in a manner acceptable to the Executive Officer, its existing Pollutant Minimization Program to promote minimization of pollutant loadings 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 February 28 of each calendar year. Each annual report shall include at least the following information:

i. *A brief description of the treatment plant, treatment plant processes and service area.*

ii. *A 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 for the 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 the sources of the pollutants of concern.* This discussion shall identify and prioritize tasks to address the Discharger's pollutants of concern. The Discharger may implement tasks by themselves or participate in group, regional, or national tasks that will address its pollutants of concern. The Discharger is strongly encouraged to participate in group, regional, or national tasks 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 of concern 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 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, and web site. Information shall be specific to the 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 shall also include a discussion of the specific criteria used to measure the effectiveness of each of the tasks in sections VI.C.4.b.iii, iv, v, and vi.

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

ix. *Evaluation of Pollutant Minimization Program and task effectiveness.* This Discharger shall use the criteria established in section VI.C.4.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 in order 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 detected but not quantified (DNQ) when the effluent limitation is less than the method detection limit (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 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. An 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 an 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 the effluent limitation;

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

v. The annual report required by section VI.C.4.b above, shall specifically address the following items:

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

2. A list of potential sources of the reportable priority pollutants;

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

4. A description of actions to be taken in the following year.

5. 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 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 by February 19 of each year, for the period covering 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, Federal 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 Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (State Water Board Order No. 2006-0003 DWQ) 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 Waste Discharge Requirements for Sanitary Sewer Systems (Sanitary Sewer System WDRs) and this Order, the Sanitary Sewer System WDRs more clearly and specifically stipulate 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 sewage spills from the collection system upstream of the Facility boundaries. Attachments D and G of this Order specify reporting requirements for unauthorized discharges from anywhere within the Facility downstream of the Facility boundaries.

6. Copper Action Plan

The Discharger shall continue to implement a Copper Action Plan in accordance with the following tasks and time schedule.

Task	Deadline
1. Report on Status of Copper Control Program The Discharger shall submit a report to the Regional Water Board documenting implementation of the copper control program. Additionally, the Discharger shall report the findings and results of the studies completed, planned, or in progress under Task 3. On Task 3 studies, the Discharger may collaborate and provide this information in a single report to satisfy this requirement for the entire group.	With the annual pollution prevention report due each year on February 28
2. Implement Additional Measures If the three-year rolling mean dissolved copper concentration of the receiving water exceeds 2.2 µg/L, evaluate the effluent copper concentration trend, and if it is increasing, develop and implement additional measures to control copper discharges.	Within 90 days of an exceedance submit a technical report that describes effluent copper concentration trends and, if increasing, identifies additional measures that the Discharger will take to control copper along with an implementation schedule.
3. Studies to Reduce Copper Pollutant Impact Uncertainties The Discharger shall conduct or cause to be conducted technical studies to investigate possible copper sediment toxicity and technical studies to investigate sublethal effects on salmonids. Specifically, the Discharger shall include the manner in which the above will be accomplished and describe the studies to be performed with an implementation schedule. To satisfy this requirement, the Discharger may collaborate and conduct these studies as a group.	Submit a study plan and schedule with annual pollution prevention report due on February 28, 2011.

7. Cyanide Action Plan

The Discharger does not have any potential contributors of cyanide to its treatment plant. If the Discharger receives a request to discharge detectable levels of cyanide to its treatment plant, it shall notify the Executive Officer, and complete the following tasks.

Task	Deadline
1. Implement Cyanide Control Program The Discharger shall submit a plan for and begin implementation of a program to minimize cyanide discharges to its treatment plant consisting, at a minimum, of the following elements: a. Inspect each potential contributor to assess the need to include that contributing source in the control program. b. Inspect contributing sources included in the control program annually. Inspection elements may be based on USEPA guidance, such as Industrial User Inspection and Sampling Manual for POTWs (EPA 831-B-94-01). c. Develop and distribute educational materials to contributing sources regarding the need to prevent cyanide discharges. d. Prepare an emergency monitoring and response plan to be implemented if a significant cyanide discharge occurs. e. If ambient monitoring shows cyanide concentrations of 1.0 µg/L or higher in the main body of the Bay, undertake actions to identify and abate cyanide sources responsible for the elevated ambient conditions.	With the annual pollution prevention report due each year on February 28.
2. Report on Status of Cyanide Control Program Submit a report to the Regional Water Board documenting implementation of the cyanide control program.	With annual pollution prevention report due each year on February 28.

8. Compliance Schedules – Not Applicable

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

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

Coefficient of Variation (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) are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

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) 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 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 is the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

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

Minimum Level (ML) 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 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) are those sample results less than the laboratory's MDL.

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

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

Pollutant Minimization Program (PMP) means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a 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 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) 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 is 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 is any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

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

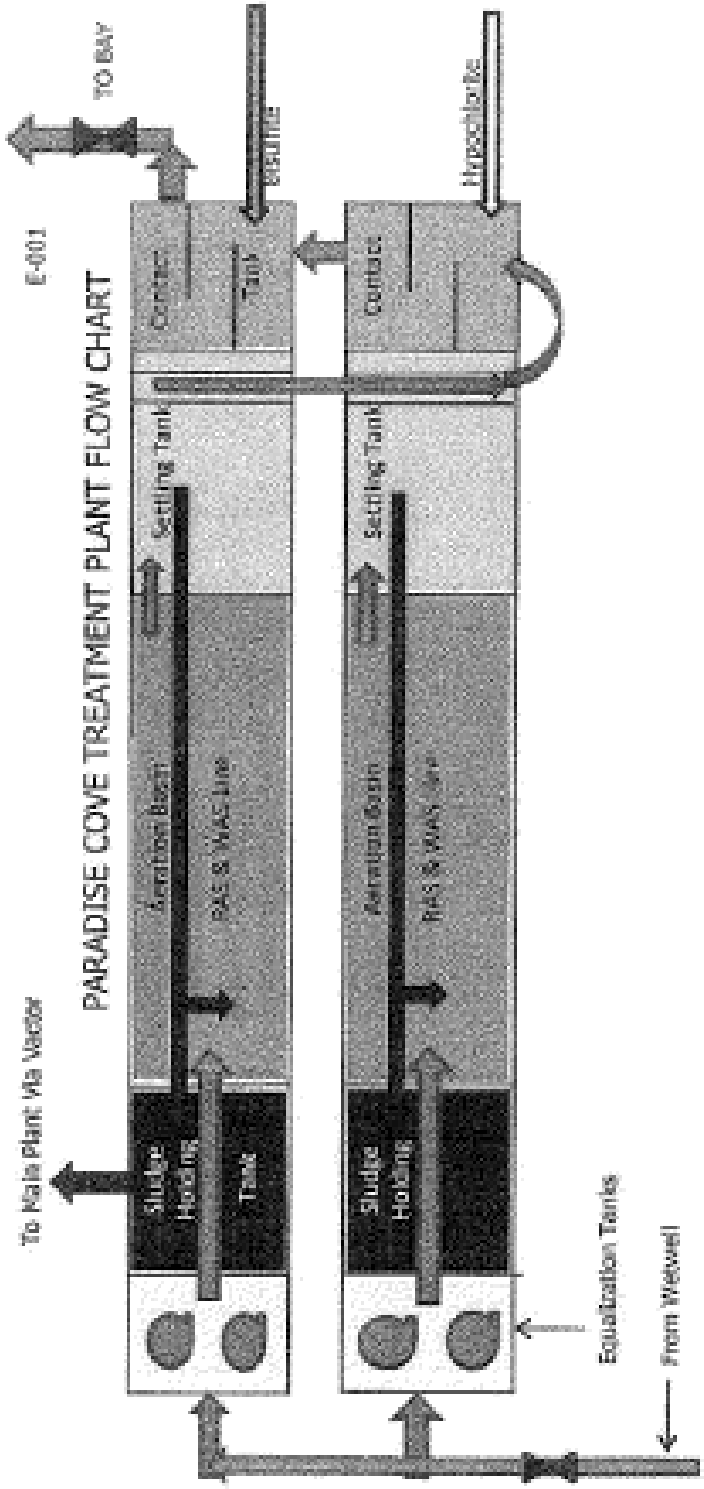
$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

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) 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

ATTACHMENT C – PROCESS FLOW DIAGRAM



Sanitary District No. 5 of Marin County
Paradise Cove Treatment Plant
Schematic

ATTACHMENT D –STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

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

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

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

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

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

F. Inspection and Entry

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

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

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

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

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

G. Bypass

1. Definitions

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

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

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

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

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

a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and

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

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

5. Notice

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

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

H. Upset

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

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

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

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

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

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

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

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of 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 C.F.R. § 122.41(l)(3); § 122.61.)

III. STANDARD PROVISIONS – MONITORING

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

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

IV. STANDARD PROVISIONS – RECORDS

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

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));

3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));

5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and

6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

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

1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and

2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

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

B. Signatory and Certification Requirements

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

2. All permit applications shall be signed by 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 C.F.R. § 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 C.F.R. § 122.22(b)(1));

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

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

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

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 C.F.R. § 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 C.F.R. § 122.22(d).)

C. Monitoring Reports

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

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

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

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

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

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

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

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

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

F. Planned Changes

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

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

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii).)

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

G. Anticipated Noncompliance

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

H. Other Noncompliance

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

I. Other Information

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

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.42(b)(3).)

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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 (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 the Regional Standard Provisions, the 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, must be specified in the permit, and must be approved for use by the Executive Officer, following consultation with the State Water Quality Control Board (State Water Board) Quality Assurance Program.

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
Influent	INF-001	At any point in the treatment facility headworks at which all waste tributary to the system is present and preceding any phase of treatment, and exclusive of any return flows or process side-streams, formerly A-001.
Effluent	EFF-001	At a point in the outfall from the treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present, formerly E-001. This location may be the same as E-001D.
Effluent	EFF-001D	At any point in the disinfection facilities at which adequate contact with the disinfectant is assured.

III. INFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor influent to the facility at Monitoring Location INF-001 as follows. Influent sampling is required year-round.

Table E-2. Influent Monitoring – Monitoring Location INF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow Rate [1]	gpd	Cont	1/Day
Biochemical Oxygen Demand (BOD_5)	mg/L	C-24	4/Year
	kg/day	Calculate	4/Year

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total Suspended Solids (TSS)	mg/L	C-24	1/Week
	kg/day	Calculate	1/Week
Cyanide	µg/L	Grab	4/Year

Legend for Table E-2:

Units:

gpd = gallons per day
mg/L = milligrams per liter
kg/d = kilograms per day

Sample Type:

C-24 = 24-hour Composite
Cont = Continuous

Frequency:

1/Day = once per day
4/Year = once per quarter

Footnotes to Table E-2:

[1] For influent flows, the following information shall also be reported monthly:
Daily: Total daily flow volume (gallons)
Monthly: Monthly average flow rate (gpd)
Monthly: Maximum average daily flow rate (gpd)
Monthly: Minimum average daily flow rate (gpd)
Monthly: Total flow volume (gallons)

IV. EFFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor treated effluent from the facility at Monitoring Location EFF-001D or EFF-001, when discharging to the Central San Francisco Bay, as follows.

Table E-3. Effluent Monitoring – Monitoring Location EFF-001 or EFF-001D

Parameter	Units	Sample Type[1],[2]	Minimum Sampling Frequency	Sampling Station
Flow Rate [3]	gpd	Cont.	1/Day	EFF-001
pH	s.u.	Grab	5/Week	EFF-001
BOD_5	mg/L	C-24	4/Year	EFF-001
	kg/day	Calculate	4/Year	EFF-001
TSS	mg/L	C-24	1/Week	EFF-001
	kg/day	Calculate	1/Week	EFF-001
BOD_5 percent removal[4]	%	Calculate	4/Year	EFF-001
TSS percent removal [4]	%	Calculate	1/Month	EFF-001
Total Chlorine Residual[5]	mg/L	Grab	5/Week	EFF-001
	kg/day	Calculate	5/Week	EFF-001
Oil and Grease[6]	mg/L	Grab	1/Year	EFF-001
	kg/day	Calculate	1/Year	EFF-001
Total Coliform Bacteria	MPN/100mL	Grab	4/Year	EFF-001D
Acute Toxicity [7]	% survival	C-24	1/Year	EFF-001
Dissolved Oxygen (DO)	mg/L	Grab	1/Month	EFF-001

Parameter	Units	Sample Type[1],[2]	Minimum Sampling Frequency	Sampling Station
Copper	µg/L	C-24	4/Year	EFF-001
	kg/month	Calculate	4/Year	EFF-001
Cyanide	µg/L	Grab	4/Year	EFF-001
Ammonia	mg/L as N	Grab	4/Year	EFF-001
2,3,7,8 TCDD & Congeners	pg/L	Grab	1/5 Years	EFF-001
Remaining Priority Pollutants[8]	Misc.	Misc.	1/5 years	EFF-001

Legends for Table E-3:

Units:

gpd = gallons per day
s.u. = standard units
^{o}C = degrees Celsius
mg/L = milligrams per liter
kg/d = kilograms per day
kg/month = kilograms per month
µg/L = micrograms per liter
pg/L = picograms per liter
MPN/100 mL = most probable number per 100 milliliters

Sample Type:

C-24 = 24-hour Composite
Cont = Continuous

Sampling Frequency:

1/Day = once per day
1/Week = once per week
5/Week = five times per week
1/Month = once per month
1/Year = once per year
4/Year = four times per year
1/5 Years = once every five years

Footnotes to Table E-3:

[1] 24-hour composites may be made up of discrete grab samples collected over the course of a day and volumetrically or mathematically flow-weighted. Samples for inorganic pollutants may be combined prior to analysis. Samples for organic pollutants should be analyzed separately. If only one grab sample will be collected, it should be collected during periods of maximum peak flows. Samples shall be taken on random days.

[2] Grab samples shall be collected coincident with composite samples collected for the analysis of regulated parameters.

[3] Flow Monitoring:

For effluent flows, the following information shall be reported monthly:
Daily: Total daily flow volume (gal)
Monthly: Average daily flow rate (gpd) during the entire month
Monthly: Maximum daily flow rate (gpd)
Monthly: Minimum daily flow rate (gpd)
Monthly: Total flow volume (gal)

[4] The percent removal for BOD_5 and TSS shall be reported in accordance with Effluent Limitations IV.A.1.b. Samples for BOD_5 and TSS shall be collected simultaneously with influent samples.

[5] The dechlorinated effluent shall be monitored continuously or, at a minimum, once every day. The Discharger shall report, on a daily basis, both maximum and minimum concentrations for samples taken both prior to and following dechlorination. If a violation is detected, the maximum and average concentrations and the duration of each non-zero

residual event shall be reported, along with the cause and corrective actions taken. Total chlorine dosage (gpd or kg/d) shall be recorded on a daily basis.

[6] Each oil and grease sample event shall consist of a composite sample comprised of three grab samples taken at equal intervals during the sampling date, with each grab sample being collected in a glass container. The grab samples shall be mixed in proportion to the instantaneous flow rates occurring at the time of each grab sample, within the accuracy of plus or minus 5%. Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent rinsings as soon as possible after use, and the solvent rinsings shall be added to the composite sample for extraction or analysis.

[7] Acute bioassay tests shall be performed in accordance with Section V of this MRP.

[8] Sampling for all Priority Pollutants is described in Attachment G.

V. WHOLE EFFLUENT ACUTE TOXICITY TESTING REQUIREMENTS

The Discharger shall monitor acute toxicity at the compliance location and frequency specified in Table E-3, as follows.

1. Compliance with the acute toxicity effluent limitations of this Order shall be evaluated by measuring survival of test organisms exposed to 96-hour static renewal bioassays.

2. Test organism shall be rainbow trout.

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.(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.

4. 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).

VI. RECLAMATION MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECEIVING WATER MONITORING REQUIREMENTS

The Discharger shall continue to participate in the Regional Monitoring Program (RMP), which involves collection of data on pollutants and toxicity in water, sediment and biota of the Estuary. The Discharger's participation and support of the RMP is used in consideration of the level of receiving water monitoring required by this Order.

VIII. OTHER MONITORING REQUIREMENTS – NOT APPLICABLE

IX. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this Order, the State or Regional Water Board may notify the Discharger to 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). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall submit quarterly and annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order for each calendar month. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR. Quarterly SMRs shall be due on the 30th day following the end of each calendar quarter. Annual Reports shall be due on February 1 following each calendar year.

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

Table E-4. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period
1/Day	Day after permit effective date	Midnight through 11:59 PM or any 24-hour period that reasonably represents a calendar day for purposes of sampling.
5/Week	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday
1/Month	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month
1/Quarter or 4/Year	Closest of March 1, June 1, September 1, December 1 following (or on) permit effective date	December 1 through February 28 or 29 March 1 through May 31 June 1 through August 31 September 1 through November 30
1/Year	January 1 following (or on) permit effective date	January 1 through December 31, preferably during the discharge season
1/5 Years	Day after permit effective date	All

4. The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current 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 the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy ($\pm$ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

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

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

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

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

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

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

      Executive Officer
      California Regional Water Quality Control Board

San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612
ATTN: NPDES Wastewater Division

C. Discharge Monitoring Reports

1. As described in section IX.B.1 above, at any time during the term of this Order, the State or Regional Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the Discharger is not required to 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.

D. Other Reports

The Discharger shall report the results of any special studies, monitoring, and reporting required by section VI of the Order with the first quarterly SMR following the respective due date.

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ATTACHMENT F – FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Sanitary District No. 5 of Marin County Wastewater Treatment and Reclamation Facility (Facility).

Table F-1. Facility Information

WDID	2 215021002
CIWQS Place ID	239498
Discharger	Sanitary District No. 5 of Marin County
Name of Facility	Paradise Cove Treatment Plant and its wastewater collection system
Facility Address	3700 Paradise Drive
	Tiburon, CA 94920
	Marin County
Facility Contact, Title, Phone	Robert L. Lynch, District Manager, (415) 435-1501
Authorized Person to Sign and Submit Reports	Same
Mailing Address	P.O. Box 227, Tiburon, CA 94920
Billing Address	Same
Type of Facility	Publicly Owned Treatment Works (POTW)
Major or Minor Facility	Minor
Threat to Water Quality	--
Complexity	--
Pretreatment Program	No
Reclamation Requirements	No
Facility Permitted Flow	0.04 million gallons per day (MGD)
Facility Design Flow	0.04 MGD
Watershed	San Francisco Bay
Receiving Water	Central San Francisco Bay
Receiving Water Type	Marine
Service Areas	Sanitary District No. 5 of Marin County
Service Area Population	260

A. The Sanitary District No. 5 of Marin County (hereinafter the Discharger) owns and operates the Facility, a publicly owned treatment works, and its associated wastewater collection system (collectively the Facility). The Facility provides secondary treatment of wastewater collected from

its service areas (Paradise Cove and Seafirth in Tiburon) and discharges to the Central San Francisco Bay.

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

B. The discharge of treated wastewater from the Facility to the Central San Francisco Bay, a water of the United States, is currently regulated by Order No. R2-2006-0037 (National Pollutant Discharge Elimination System [NPDES] Permit No. CA0037427), which was adopted on June 14, 2006, and expires on June 30, 2011.

C. The Discharger filed a Report of Waste Discharge and submitted an application for reissuance of its waste discharge requirements (WDRs) and NPDES permit dated November 30, 2010.

II. FACILITY DESCRIPTION

A. Description of Wastewater Treatment

1. **Facility Description**. The Discharger owns and operates the Facility, which provides secondary treatment for domestic wastewater to approximately 260 people (130 service connections) within the Sanitary District No. 5 of Marin County. The Discharger has a current average dry weather design treatment capacity of 0.04 MGD.

2. **Treatment Process Description**. Wastewater from approximately 260 people located on the Tiburon Peninsula is conveyed via gravity sewer to an influent wet well. The wastewater treatment process utilizes two identical treatment trains consisting of: grinding, flow equalization (primary settling), extended aeration, secondary clarification, chlorination (sodium hypochlorite) and dechlorination (sodium bisulfite). Treated, disinfected and dechlorinated secondary effluent from the Facility is discharged (Discharge Point No. 001) through an outfall pipe to the Central San Francisco Bay through a diffuser located 400 feet offshore. Currently, the Discharger only uses one of the two treatment trains.

   The old treatment plant consisted of a single treatment train with a design capacity of 0.020 MGD. Construction on the upgraded treatment plant began in late 2008 and became operational in January 2009. The second train has been installed in order to meet future demand projected on the basis of growth within the service area. The treatment plant upgrade was necessary due in part to the anticipated conveyance of wastewater from the Seafirth Estates Wastewater Treatment Facility (average dry weather design flow of 0.0075 MGD). Seafirth was abandoned due to high cost and the difficulty in maintaining and operating the plant. Its flows are now directed to the Paradise Cove Facility through a new pump station. In addition to the increased flow from the Seafirth plant, the District reports in their report of waste discharge that they anticipate increased flows from 48 homeowners that wish to abandon their individual septic systems in favor of connecting to the Discharger's sewer system. It is also anticipated that 32 additional homes may be built within the service area and that the Romberg Tiburon Center may also connect to the District's sewer system.

3. **Discharge Description.** Treated secondary effluent, at a maximum permitted flow of 0.04 MGD, from the Facility is discharged to the Central San Francisco Bay as shown in

Attachment B. The discharge occurs through a submerged outfall located approximately 400 feet offshore and at a depth of 20 feet below the surface. The outfall is constructed of 6-inch diameter HDPE pipe and utilizes a rubber duckbill diffuser. The Regional Water Board has determined that the outfall meets the requirements to be considered a deep water discharge, as defined in the Basin Plan.

Compliance monitoring for the outfall is conducted at Monitoring Locations EFF-001 as described in Attachment E, Monitoring and Reporting Program (MRP).

4. **Biosolids Management.** The Facility does not have any equipment for handling and removal of solids from the wastewater treatment process. Biosolids are stored onsite prior to transport to disposal at the Tiburon Wastewater Treatment Facility.

5. **Storm Water Discharge.** The Discharger is not required to be covered under the General Permit (NPDES General Permit CAS000001 – the General Permit) because all storm water runoff at the Facility is treated along with the wastewater discharged to the Facility.

B. Discharge Points and Receiving Waters

Table F-2 below identifies the locations of the discharge point and receiving water. The Central San Francisco Bay is located in the Central Bay Basin watershed management area, between the Richmond-San Rafael Bridge and the San Francisco-Oakland Bay Bridge.

Table F-2. Outfall Locations

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Secondary Treated Municipal Wastewater	37º 53’ 50” N	122º 27’ 40” W	Central San Francisco Bay

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

Effluent limitations contained in Order No. R2-2006-0037, and representative monitoring data from the term of the previous order, collected during the period July 2006 to June 2010 are summarized in Table F-3 and Table F-4 below.

Table F-3. Effluent Limitations (Previous Permit) and Monitoring Data for Conventional and Non-Conventional Pollutants

Parameter	(units)	Effluent Limitations			Monitoring Data (From July 2006-June 2010))		
		Monthly Average	Weekly Average	Daily Maximum	Highest Monthly Average	Highest Weekly Average	Highest Daily Discharge
Biochemical Oxygen Demand (5-day @ 20°C) (BOD_5)	mg/L	30	45	---	18	18	--
Total Suspended Solids (TSS)	mg/L	30	45	---	26	26	--
Oil and Grease	mg/L	10	---	20	--	--	5.0
pH	s.u.	Within 6.0 – 9.0			6.2 – 7.1		

Parameter	(units)	Effluent Limitations			Monitoring Data (From July 2006-June 2010))		
		Monthly Average	Weekly Average	Daily Maximum	Highest Monthly Average	Highest Weekly Average	Highest Daily Discharge
Chlorine, Total Residual	mg/L	---	---	0.0[1]	--	--	0.0[1]
Acute Toxicity	% Survival	[2]			95[4]		
Total Coliform Bacteria	MPN/100 mL	[3]			80[5]		

Footnotes to Table F-3:

mg/L = milligrams per liter

MPN/100 mL = Most Probable Number per 100 milliliters

% survival = percent survival

[1] Effluent limitation and monitoring results reported as an instantaneous maximum effluent limitation.

[2] A three sample median value of not less than 90 percent survival; and a single sample value of not less than 70 percent survival.

[3] The 5-day moving median value for the MPN value of total coliform bacteria is not to exceed 240 MPN/100mL, and no single sample is to exceed 10,000 MPN/100 mL.

[4] Instantaneous minimum.

[5] Single sample maximum.

Table F-4. Effluent Limitations (Previous Permit) and Monitoring Data for Toxic Pollutants

Parameter	Units	Final Limitations		Interim Limitations		Monitoring Data (From January 2009 – September 2010)
		Daily Maximum	Monthly Average	Daily Maximum	Monthly Average	Highest Daily Concentration
Copper[1]	µg/L	84	42	--	--	8.2
Cyanide	µg/L	42	21	10	--	12

Footnotes to Table F-4:

µg/L = micrograms per liter

[1] Order No. R2-2006-0037 established conditional effluent limitations for copper if a site-specific water quality objective (SSO) for copper for all segments of the San Francisco Bay north of the Dumbarton Bridge became legally effective. On February 23, 2009, the Regional Water Board sent a letter to the Discharger informing the Discharger that on January 6, 2009, the USEPA approved the copper SSO, and the conditional effluent limitations (referred to as "Alternate Effluent Limitations") were effective. The Alternate Effluent Limitations contained within Order No. R2-2006-0037 consists of an AMEL of 42 µg/L and a MDEL of 84 µg/L.

[2] Order No. R2-2006-0037 established conditional effluent limitations for cyanide if a SSO for cyanide for all segments of the San Francisco Bay became legally effective. On August 8, 2008, the Regional Water Board sent a letter to the Discharger informing the Discharger that on July 22, 2008, the USEPA approved the cyanide SSO, and the conditional effluent limitations (referred to as "Alternate Effluent Limitations") were effective. The Alternate Effluent Limitations contained within Order No. R2-2006-0037 consists of an AMEL of 21 µg/L and a MDEL of 42 µg/L.

D. Compliance Summary

1. **Compliance with Numeric Effluent Limitations.** The Discharger conducted acute toxicity tests during May 2007, February 2009, and July 2009 discharge events. The minimum survival rate of 95% occurred during February 2009 event.

2. **Compliance with Previous Permit Provisions.** A list of special activities required by the previous permit (Order No. R2-2006-0037) and the status of those requirements are shown in Table F-5, below.

Table F-5. Compliance with Previous Permit Provisions

Provision Number	Requirement	Status of Completion
C.3	Effluent Characterization for Selected Constituents	Final Report was submitted on November 30, 2010
C.4	Ambient Background Receiving Water Study	Final Report was submitted on November 30, 2010
C.5	Pollutant Minimization Program	Annual report was submitted on February 28, 2010
C.8	Compliance Schedule Pollutants Progress Update	Annual report submitted on January 28, 2010
C.10	Biosolids Management Practices: Land Application, Surface Disposal, and Incineration Report	Annual report submitted on January 28, 2010
C.11.a	Wastewater Facilities and Operations Status Report and Annual Report	Annual report was submitted on January 28, 2010
C.11.b	O&M Manual Status Report	Annual Report was submitted on January 28, 2010
C.11.c	Contingency Plan, Review, and Status Reports	Annual Report was submitted on January 28, 2010

E. Planned Changes – Not Applicable

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Order is issued pursuant to CWA section 402 and implementing regulations adopted by the USEPA and Chapter 5.5, Division 7 of the CWC (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from the Facility to surface waters. This Order also serves as 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 adopt an NPDES permit is exempt from the provisions of CEQA.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans**. The *Water Quality Control Plan for the San Francisco Bay Basin* (hereinafter Basin Plan) is the Regional Water Board's master water quality control

planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was adopted by the Regional Water Board and approved by the State Water Resources Control Board, USEPA, and the Office of Administrative Law, as required. Requirements of this Order implement the Basin Plan.

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and amended it on May 4, 1995, and November 9, 1999. About 40 criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR contained toxics criteria for California and 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 for priority toxic pollutants that apply to the receiving waters for this Discharger.

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* (hereinafter State Implementation Policy or SIP*).* The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria USEPA promulgated for California through the NTR and the priority pollutant objectives the Regional Water Board 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.

4. **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 [40 CFR 131.21, 65 Fed. Reg. 24641 (April 27, 2000)]. Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

5. **Antidegradation Policy.** 40 CFR 131.12 requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16, which incorporates the federal antidegradation policy where the federal policy applies under federal law and requires that existing water quality be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provisions of 40 CFR 131.12 and Resolution No. 68-16.

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 where limitations may be relaxed.

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

On June 28, 2007, the USEPA approved a revised list of impaired water bodies prepared by the State [hereinafter referred to as the 303(d) list], pursuant to provisions of CWA section 303(d) requiring 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. Central San Francisco Bay is listed as an impaired water body. The pollutants impairing Central San Francisco Bay include chlordane, DDT, dieldrin, dioxin compounds, exotic species, furan compounds, mercury, PCBs, dioxin-like PCBs, and selenium. The SIP requires final effluent limitations for all 303(d)-listed pollutants to be based on total maximum daily loads (TMDLs) and associated waste load allocations (WLAs).

On February 12, 2008 the USEPA approved a TMDL for mercury in the San Francisco Bay. On March 29, 2010, the USEPA approved a TMDL for PCBs in San Francisco Bay. The TMDLs for mercury and PCBs are incorporated into the Basin Plan and are applicable to this discharge. TMDLs establish WLAs for point sources and load allocations (LAs) for non-point sources and are intended to achieve the water quality standards for the impaired waterbodies. Mercury and PCBs discharges from the Facility are regulated by Regional Water Board Order No. R2-2007-0077.

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 to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where reasonable potential has been established for a pollutant, but there is no numeric objective for the pollutant, water quality-based effluent limitations may be established: (1) using USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) on an indicator parameter for the pollutant of concern; or (3) using a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

A. Discharge Prohibitions

1. **Discharge Prohibition III.A** (Discharge of treated wastewater at a location or in a manner different from that described in this Order is prohibited): 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** (No discharge receiving less than 44:1 dilution): This prohibition is similar to the previous permit. Because ammonia limits are based on an initial dilution of 44:1, it is necessary to require that the Discharger achieve this dilution. Further,

Table 4-1 of the Basin Plan prohibits the discharge of any wastewater that does not receive a minimum initial dilution of at least 10:1.

3. **Discharge Prohibition III.C** (No bypass or overflow of untreated or partially treated wastewaters): This prohibition is based on 40 CFR 122.41(m). See federal Standard Provisions, Attachment D, section G.

4. **Discharge Prohibition III.D** (Average dry weather flow not to exceed dry weather design capacity): This prohibition is based on the design treatment capacity of the Plant. Exceedance of the Plant's average dry weather flow design capacity of 0.04 MGD may result in reduced treatment quality.

5. **Discharge Prohibition III. E** (No sanitary sewer overflows to waters of the United States): Discharge Prohibition No. 15 from Basin Plan Table 4-1 and the CWA prohibit the discharge of wastewater to surface waters except as authorized under an NPDES permit. POTWs must achieve secondary treatment, at a minimum, and any more stringent limitations that are necessary to achieve water quality standards [33 U.S.C. § 1311 (b)(1)(B and C)]. Therefore, a sanitary sewer overflow that results in the discharge of raw sewage, or sewage not meeting secondary treatment requirements, to surface waters is prohibited under the CWA and the Basin Plan.

B. Technology-Based Effluent Limitations

1. Scope and Authority

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 discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR 133. These Secondary Treatment Regulations include the following minimum requirements. The 30-day average percent removal for BOD_5 and TSS, by concentration, is not to be less than 85 percent.

Table F-6. Secondary Treatment Effluent Limitations

Parameter	Units	30-Day Average	7-Day Average
BOD_5	mg/L	30	45
TSS	mg/L	30	45
BOD and TSS	% Removal	85	--
pH	Standard Units	6.0 - 9.0	

2. Applicable Effluent Limitations

Table F-7 summarizes technology-based effluent limitations for conventional and non-conventional pollutants.

Table F-7. Summary of Conventional and Non-Conventional Pollutants for Discharge Point No. 001

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
BOD_5	mg/L	30[1]	45	--	--	--
TSS	mg/L	30[1]	45	--	--	--
pH	Standard units	--	--	--	6.0	9.0
Oil and Grease	mg/L	10	--	20	--	--
Chlorine Residual	mg/L	--	--	--	--	0.0[2]
Total Coliform Bacteria	MPN/100mL	[3]				

[1] The average monthly percent removal of BOD_5 and TSS shall not be less than 85 percent.
[2] Requirement defined as below the limit of detection in standard test methods defined in the latest USEPA approved edition of *Standard Methods for the Examination of Water and Wastewater*. The Discharger may elect to use a continuous on-line monitoring system for measuring flow, chlorine and sodium bisulfite dosage (including a safety factor) and concentration to prove that chlorine residual exceedances are false positives. Convincing evidence must be provided to the Regional Water Board to conclude these false positives are not violations of this permit.
[3] The moving median value of most probably number (MPN) of total coliform bacteria in any five (5) consecutive samples shall not exceed 240 MPN/100 mL; and, any single sample shall not exceed 10,000 MPN/100 mL.

a. **BOD_5 and TSS.** Secondary treatment standards of 40 CFR Part 133 for BOD_5 and TSS are retained from the previous permit. 40 CFR 122.45(d) specifies that discharge limitations shall be stated as average weekly limitations and average monthly limitations, unless impracticable.

b. **pH.** The pH limitation is retained from Order No. R2-2006-0037 and is required by Basin Plan Table 4-2 for deep water discharges. This effluent limitation is consistent with the limitation included in the previous Order.

c. **Oil and Grease.** The effluent limitations established for oil and grease are unchanged from the previous permit and are required by Basin Plan Table 4-2 for all discharges to inland surface waters and enclosed bays and estuaries of the San Francisco Bay Region. These effluent limitations are consistent with the limitations included in the previous Order.

d. **Chlorine Residual.** Section 4.5.5.1 and Table 4-2 of the Basin Plan specify effluent limitations for conventional pollutants, including chlorine residual. Because the Discharger chlorinates prior to discharge through Discharge Point No. 001, an effluent limitation (0.0 mg/L as an instantaneous maximum) will be applied. This effluent limitation is consistent with the limitation included in the previous Order.

e. **Total coliform bacteria.** The effluent limitations for total coliform bacteria are based on Table 4-2 of the Basin Plan. These limitations require that treated wastewater must meet the following: The moving median value of most probably number (MPN) of total coliform bacteria in any five (5) consecutive samples shall not exceed 240 MPN/100 mL; and, any single sample shall not exceed 10,000 MPN/100 mL. These effluent limitations are consistent with the limitations included in the previous Order.

C. Water Quality-Based Effluent Limitations (WQBELs)

WQBELs have been derived to implement water quality objectives (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 beneficial uses and WQOs contained in the Basin Plan 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 the applicable CWA water quality standards.

1. Scope and Authority

a. As specified at 40 CFR 122.44(d)(1)(i), permits are required to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard (Reasonable Potential or RP). WQBELs in this Order are revised and updated from the limitations in the previous permit, and their presence in this Order is based on an evaluation of the Discharger's data as described below under the Reasonable Potential Analysis (RPA).

b. Maximum Daily Effluent Limitations (MDELs) are used in this Order to protect against acute water quality effects. It is impracticable to use weekly average limitations to guard against acute effects. Although weekly averages are effective for monitoring the performance of biological wastewater treatment plants, the MDELs are necessary for preventing fish kills or mortality to aquatic organisms, as further explained in SubSections c through e, below.

c. NPDES regulations, the SIP and USEPA's Technical Support Document (TSD) provide the basis to establish MDELs and AMELs. 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:

(1) Maximum daily and average monthly discharge limitations for all discharges other than publicly owned treatment works; and

(2) Average weekly and average monthly discharge limitations for POTWs"

d. The amended SIP (p. 8, Section 1.4) requires that WQBELs be expressed as MDELs and average monthly effluent limitations (AMELs). For aquatic life-based calculations, the amended SIP indicates MDELs are to be used in place of average weekly limitations for POTWs."

e. The TSD (p. 96) states that a maximum daily limitation is appropriate for two reasons: (1) The basis for the 7-day average for POTWs is derived from secondary

treatment requirements. This basis is not related to the need for assuring achievement of water quality standards. (2) The 7-day average, which could be comprised of up to seven or more daily samples, could average out peak concentrations, and therefore the Discharger's potential for causing acute toxic effects would be missed. A maximum daily limitation would be toxicologically protective of acute toxicity impact.

2. Applicable Beneficial Uses and Water Quality Objectives

a. The Basin Plan implements State Water Board Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply (MUN). Because of the marine influence on receiving waters of San Francisco Bay, total dissolved solids levels in San Francisco Bay commonly (and often significantly) exceed 3,000 mg/L and thereby meet an exception to State Water Board Resolution No. 88-63. The designation MUN does not apply to the Central San Francisco Bay. Beneficial uses applicable to the Central San Francisco Bay are as follows:

Table F-8. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Central San Francisco Bay	Industrial Service Supply (IND) Industrial Process Supply (PROC) Ocean, Commercial and Sport Fishing (COMM) Shellfish Harvesting (SHELL) Estuarine Habitat (EST) Fish Migration (MIGR) Preservation of Rare and Endangered Species (RARE) Fish Spawning (SPWN) Wildlife Habitat (WILD) Water Contact Recreation (REC1) Non-Contact Water Recreation (REC2) Navigation (NAV)

b. The WQOs applicable to the receiving waters 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.

i. Basin Plan. The Basin Plan specifies numeric WQOs for 10 priority toxic pollutants, as well as narrative WQOs for toxicity and bioaccumulation in order to protect beneficial uses. The pollutants for which the Basin Plan specifies numeric objectives are arsenic, cadmium, hexavalent chromium, copper in freshwater, lead, mercury, nickel, silver, zinc, and cyanide. The Basin Plan's narrative toxicity objective (section 3.3.18) states in part, "[a]ll waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms." The bioaccumulation objective states in part, "[c]ontrollable water quality factors shall not cause a detrimental increase in concentrations of toxic

substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered."

Effluent limitations and provisions contained in this Order are based on available information to implement these objectives.

ii. 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 the San Francisco Bay Region, although Basin Plan Tables 3-3, 3-3A, 3-3B, 3-3C, and 3-4 include numeric objectives for certain priority toxic pollutants that supersede CTR criteria north of the Dumbarton Bridge.

iii. NTR. The NTR establishes numeric aquatic life criteria for selenium, numeric aquatic life and human health criteria for 33 other toxic organic pollutants for waters of San Francisco Bay. These NTR criteria apply to Central San Francisco Bay, the receiving water for Discharge Point No. 001 for this Discharger.

iv. Technical Support Document for Water Quality-Based Toxics Controls. Where numeric objectives have not been established or updated in the Basin Plan, 40 CFR 122.44(d) requires that WQBELs be established based on USEPA criteria, supplemented where necessary by other relevant information, to attain and maintain narrative WQOs to fully protect designated beneficial uses. To determine the need for WQBELs and establish them when necessary, the Regional Water Board has followed the requirements of applicable NPDES regulations, including 40 CFR 122 and 131, as well as guidance and requirements established by the Basin Plan; USEPA's *Technical Support Document for Water Quality-Based Toxics Control* (the TSD, EPA/505/2-90-001, 1991); and the State Water Board's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, 2005* (SIP).

v. Sediment Quality Objectives. The Water Quality Control Plan for Enclosed Bays and Estuaries—Part 1, Sediment Quality contains a narrative WQO, "Pollutants in sediments shall not be present in quantities that, alone or in combination, are toxic to benthic communities in bays and estuaries of California." This WQO is to be implemented by integrating three lines of evidence: sediment toxicity, benthic community condition, and sediment chemistry. The Policy requires that if the Regional Water Board determines that a discharge has reasonable potential to cause or contribute to an exceedance of this WQO, it is to impose the WQO as a receiving water limit.

vi. Basin Plan Receiving Water Salinity Policy and Hardness. The Basin Plan (like the CTR and the NTR) states that the salinity characteristics (i.e., freshwater vs. saltwater) of the receiving water shall be considered in determining the applicable WQO. Freshwater objectives shall 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 objectives shall 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 in between these two categories, or tidally influenced freshwaters that

support estuarine beneficial uses, the objectives shall be the lower of the salt or freshwater objectives (the latter calculated based on ambient hardness) for each substance.

The receiving water for Discharge Point No. 001 for this Discharger, Central San Francisco Bay, is an estuarine environment based on salinity data generated through the Regional Monitoring Program (RMP) at the Yerba Buena Island (BC10) sampling station between 1993 and 2008. In that period, the receiving water's minimum salinity was 11.8 ppt, its maximum salinity was 32.17 ppt, and its average salinity was 25.7 ppt. Because the salinity was greater than 10 ppt in 100 percent of receiving water samples, the saltwater objectives from the Basin Plan, NTR, and CTR apply to this discharge and were used for the reasonable potential analysis.

vii. Site-Specific Metal Translators. 40 CFR 122.45(c) requires effluent limitations for metals to be expressed as total recoverable metal. Because applicable water quality criteria for the metals are typically expressed in the dissolved form, factors or translators must be used to convert metals concentrations from dissolved to total recoverable and vice versa. In the CTR, USEPA establishes default translators that are used in NPDES permitting activities; however, site-specific conditions, such as water temperature, pH, suspended solids, and organic carbon, greatly impact the form of metal (dissolved, filterable, or otherwise) present and therefore available in the water to cause toxicity. In general, the dissolved form is more available and more toxic to aquatic life than filterable forms. Site-specific translators can be developed to account for site-specific conditions, thereby preventing exceedingly stringent or under protective water quality objectives.

The CTR at 40 CFR 131.38(b)(2), Table 2, includes default translators that are used in NPDES permitting. These default translators were used to determine the need for and calculate metals WQBELs for this Order, with the exception of translators for copper and nickel.

Consistent with Table 7.2.1-2 of the Basin Plan, site specific translators for copper were used to determine applicable water quality objectives for copper. Consistent with recommendations of the Clean Estuary Partnership's *North of Dumbarton Bridge Copper and Nickel Development and Selection of Final Translators* (2005), site specific translators for nickel were used to determine applicable water quality objectives for nickel. These translators are summarized in the table below:

Table F-9. Translators for Copper and Nickel for Deepwater Discharges to Central San Francisco Bay

	Copper	Nickel
AMEL Translator	0.73	0.65
MDEL Translator	0..87	0.85

3. Determining the Need for WQBELs

40 CFR 122.44(d)(1)(i) requires permits to include WQBELs for all pollutants (non-priority or priority) "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 narrative or numeric criteria within a State water quality standard" (i.e., which have "Reasonable Potential").

a. Reasonable Potential Analysis

Regional Water Board staff used the methods and procedures prescribed in SIP section 1.3 to analyze the effluent and background data and the nature of facility operations to determine if the discharge has Reasonable Potential. The Reasonable Potential Analysis (RPA) compares the effluent data with numeric and narrative WQOs in the Basin Plan, NTR, and CTR.

b. Reasonable Potential Methodology

The RPA projects a maximum effluent concentration (MEC) for each pollutant based on existing data, while accounting for a limited data set and effluent variability. There are three triggers in determining Reasonable Potential.

i. The first trigger is activated if the MEC is greater than the lowest applicable WQO (MEC $\geq$ WQO), which has been adjusted, if appropriate, for pH, hardness, and translator data. If the MEC is greater than the adjusted WQO, then that pollutant has Reasonable Potential, and a WQBEL is required.

ii. The second trigger 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.

iii. The third trigger 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. A limitation may be required under certain circumstances to protect beneficial uses.

c. Effluent Data.

As discussed in section II of this Fact Sheet, the Discharger recently replaced the 40-year old treatment plant with a new treatment plant. Effluent data used in the RPA has been limited to data collected since the new treatment plant has been operational to ensure the RPA is representative of the current treatment system capabilities. The RPA was based on the effluent monitoring data collected by the Discharger from January 2009 through September 2010. Regional Water Board staff analyzed these data and the nature of the discharge to determine if the discharge has Reasonable Potential.

d. Ambient Background Data

Ambient background values are used in the RPA and in the calculation of effluent limitations. For the RPA, ambient background concentrations are the observed maximum detected water column concentrations. 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. The RMP station at Yerba Buena Island, located in the Central Bay, has been monitored for most of the inorganic (CTR constituent numbers 1–15) and some of the organic (CTR constituent numbers 16–126) toxic pollutants, and these data were used as background data in performing this RPA.

The RMP has not analyzed all the constituents listed in the CTR. On May 15, 2003, a group of several San Francisco Bay Region dischargers (known as the Bay Area Clean Water Agencies, or BACWA) submitted a collaborative receiving water study, entitled the *San Francisco Bay Ambient Water Monitoring Interim Report*. This study includes monitoring results from sampling events in 2002 and 2003 for the remaining priority pollutants not monitored by the RMP. The RPA was conducted and the WQBELs were calculated using RMP data from 1993 through 2008 for inorganics and organics at the Yerba Buena Island RMP station, and additional data from the BACWA *Ambient Water Monitoring: Final CTR Sampling Update Report* for the Yerba Buena Island RMP station.

e. Reasonable Potential Determination.

The maximum effluent concentrations (MECs), most stringent applicable WQOs, and background concentrations used in the RPA are presented in Table F-10, along with the RPA results (yes or no) for each pollutant analyzed. Reasonable Potential was not determined for all pollutants because applicable water quality objectives have not been established for all pollutants, and monitoring data were not available for others. The pollutants that exhibit Reasonable Potential for Discharge Point No. 001 are copper, cyanide and ammonia.

Table F-10. Summary of RPA Results – Discharge Point No. 001

CTR #	Priority Pollutants	MEC or Minimum DL [1],[2] (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL [1],[2] (µg/L)	RPA Results [3]
1	Antimony	0.19	4,300	1.8	No
2	Arsenic	0.6	36	2.46	No
3	Beryllium	<0.041	No Criteria	0.215	Ud
4	Cadmium	0.02	9.36	0.13	No
5a	Chromium (III)	Not Available	No Criteria	4.4	Ud
5b	Hexavalent Chromium	0.51	50	4.4	No
6	Copper	8.2	8.2	2.549	Yes[4]
7	Lead	0.09	8.5	0.804	No
8	Mercury (303d listed)	0.0017	0.025	0.0086	[5]
9	Nickel	3.2	13	3.73	No
10	Selenium (303d listed)	0.22	5.0	0.39	No
11	Silver	<0.063	2.2	0.052	No
12	Thallium	<0.07	6.3	0.21	No
13	Zinc	34	86	5.092	No

CTR #	Priority Pollutants	MEC or Minimum DL [1],[2] (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL [1],[2] (µg/L)	RPA Results [3]
14	Cyanide	12	2.9	<0.4	Yes
15	Asbestos	Not Available	No Criteria	Not Available	Ud
16	2,3,7,8-TCDD (303d listed)	$<1.14x10^{-6}$	$1.4x10^{-8}$	8.2E-09	No
	Dioxin TEQ (303d listed)	$1.2x10^{-9}$	$1.4x10^{-8}$	5.32E-08	No
17	Acrolein	<1.7	780	<0.5	No
18	Acrylonitrile	<0.69	0.66	0.03	No
19	Benzene	<0.18	71	<0.05	No
20	Bromoform	24	360	<0.5	No
21	Carbon Tetrachloride	<0.16	4.4	0.06	No
22	Chlorobenzene	<0.18	21,000	<0.5	No
23	Chlorodibromomethane	10	34	<0.05	No
24	Chloroethane	<0.38	No Criteria	<0.5	Ud
25	2-Chloroethylvinyl ether	<0.28	No Criteria	<0.5	Ud
26	Chloroform	2.3	No Criteria	<0.5	Ud
27	Dichlorobromomethane	4.4	46	<0.05	No
28	1,1-Dichloroethane	<0.19	No Criteria	<0.05	Ud
29	1,2-Dichloroethane	<0.18	99	0.04	No
30	1,1-Dichloroethylene	<0.21	3.2	<0.5	No
31	1,2-Dichloropropane	<0.18	39	<0.05	No
32	1,3-Dichloropropylene	<0.16	1,700	<0.5	No
33	Ethylbenzene	<0.26	29,000	<0.5	No
34	Methyl Bromide	<0.17	4,000	<0.5	No
35	Methyl Chloride	<0.23	No Criteria	<0.5	Ud
36	Methylene Chloride	0.2	1,600	22	No
37	1,1,2,2-Tetrachloroethane	<0.1	11	<0.05	No
38	Tetrachloroethylene	<0.19	8.85	<0.05	No
39	Toluene	0.7	200,000	<0.3	No
40	1,2-Trans-Dichloroethylene	<0.22	140,000	<0.5	No
41	1,1,1-Trichloroethane	<0.19	No Criteria	<0.5	Ud
42	1,1,2-Trichloroethane	<0.16	42	<0.05	No
43	Trichloroethylene	<0.2	81	<0.5	No
44	Vinyl Chloride	<0.25	525	<0.5	No
45	2-Chlorophenol	<0.98	400	<1.2	No
46	2,4-Dichlorophenol	<0.99	790	<1.3	No
47	2,4-Dimethylphenol	<0.87	2,300	<1.3	No
48	2-Methyl- 4,6-Dinitrophenol	<0.91	765	<1.2	No
49	2,4-Dinitrophenol	<0.83	14,000	<0.7	No
50	2-Nitrophenol	<0.89	No Criteria	<1.3	Ud
51	4-Nitrophenol	<0.83	No Criteria	<1.6	Ud
52	3-Methyl 4-Chlorophenol	<0.91	No Criteria	<1.1	Ud
53	Pentachlorophenol	<0.81	7.9	<1	No
54	Phenol	<0.69	4,600,000	<1.3	No
55	2,4,6-Trichlorophenol	<0.97	6.5	<1.3	No
56	Acenaphthene	<0.03	2,700	0.00193	No
57	Acenaphthylene	<0.03	No Criteria	0.001285	Ud
58	Anthracene	<0.03	110,000	0.000592	No
59	Benzidine	<5	0.00054	<0.0015	No
60	Benzo(a)Anthracene	<0.03	0.049	0.005315	No
61	Benzo(a)Pyrene	<0.03	0.049	0.00333	No
62	Benzo(b)Fluoranthene	<0.03	0.049	0.00459	No

CTR #	Priority Pollutants	MEC or Minimum DL [1],[2] (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL [1],[2] (µg/L)	RPA Results [3]
63	Benzo(ghi)Perylene	<0.03	No Criteria	0.004544	Ud
64	Benzo(k)Fluoranthene	<0.03	0.049	0.00177	No
65	Bis(2-Chloroethoxy)Methane	<0.93	No Criteria	<0.3	Ud
66	Bis(2-Chloroethyl)Ether	<0.95	1.4	<0.0002	No
67	Bis(2-Chloroisopropyl)Ether	<0.81	170,000	Not Available	No
68	Bis(2-Ethylhexyl)Phthalate	2.1	5.9	<0.7	No
69	4-Bromophenyl Phenyl Ether	<0.97	No Criteria	<0.23	Ud
70	Butylbenzyl Phthalate	<0.98	5,200	0.0056	No
71	2-Chloronaphthalene	<0.98	4,300	<0.3	No
72	4-Chlorophenyl Phenyl Ether	<0.99	No Criteria	<0.3	Ud
73	Chrysene	<0.03	0.049	0.002781	No
74	Dibenzo(a,h)Anthracene	<0.03	0.049	0.00064	No
75	1,2-Dichlorobenzene	<0.27	17,000	<0.3	No
76	1,3-Dichlorobenzene	<0.18	2,600	<0.3	No
77	1,4-Dichlorobenzene	<0.18	2,600	<0.3	No
78	3,3 Dichlorobenzidine	<5	0.077	<0.001	No
79	Diethyl Phthalate	<0.86	120,000	<0.21	No
80	Dimethyl Phthalate	<0.97	2,900,000	<0.21	No
81	Di-n-Butyl Phthalate	<0.91	12,000	0.016	No
82	2,4-Dinitrotoluene	<0.96	9.1	<0.27	No
83	2,6-Dinitrotoluene	<0.98	No Criteria	<0.29	Ud
84	Di-n-Octyl Phthalate	<0.92	No Criteria	<0.38	Ud
85	1,2-Diphenylhydrazine	<0.9	0.54	0.0037	No
86	Fluoranthene	<0.03	370	0.0109	No
87	Fluorene	<0.03	14,000	0.00208	No
88	Hexachlorobenzene	<0.91	0.00077	0.0000221	No
89	Hexachlorobutadiene	<0.92	50	<0.3	No
90	Hexachlorocyclopentadiene	<0.9	17,000	<0.3	No
91	Hexachloroethane	<0.94	8.9	<0.2	No
92	Indeno(1,2,3-cd)Pyrene	<0.03	0.049	0.00398	No
93	Isophorone	<0.93	600	<0.3	No
94	Naphthalene	<0.03	No Criteria	0.01262	Ud
95	Nitrobenzene	<0.95	1,900	<0.25	No
96	N-Nitrosodimethylamine	<0.88	8.1	<0.3	No
97	N-Nitrosodi-n-Propylamine	<0.97	1.4	<0.001	No
98	N-Nitrosodiphenylamine	<0.83	16	<0.001	No
99	Phenanthrene	<0.03	No Criteria	0.00951	Ud
100	Pyrene	<0.03	11,000	0.0194	No
101	1,2,4-Trichlorobenzene	<0.98	No Criteria	<0.3	Ud
102	Aldrin	<0.02	0.00014	0.00000285	No
103	Alpha-BHC	<0.025	0.013	0.000496	No
104	beta-BHC	<0.02	0.046	0.000413	No
105	gamma-BHC	<0.02	0.063	0.000703	No
106	delta-BHC	<0.02	No Criteria	0.000053	Ud
107	Chlordane (303d listed)	<0.025	0.00059	0.000178	No
108	4,4'-DDT (303d listed)	<0.02	0.00059	0.000167	No
109	4,4'-DDE (linked to DDT)	<0.015	0.00059	0.000693	No

CTR #	Priority Pollutants	MEC or Minimum DL [1],[2] (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL [1],[2] (µg/L)	RPA Results [3]
110	4,4'-DDD	<0.02	0.00084	0.000313	No
111	Dieldrin (303d listed)	<0.02	0.00014	0.000264	No
112	Alpha-Endosulfan	<0.02	0.0087	0.000031	No
113	beta-Endolsulfan	<0.025	0.0087	0.000069	No
114	Endosulfan Sulfate	<0.025	240	0.0000819	No
115	Endrin	<0.025	0.0023	0.00004	No
116	Endrin Aldehyde	<0.025	0.81	Not Available	No
117	Heptachlor	<0.025	0.00021	0.000019	No
118	Heptachlor Epoxide	<0.02	0.00011	0.000094	No
119-125	PCBs sum (303d listed)	<0.2	0.00017	0.00146	[5]
126	Toxaphene	<1	0.0002	Not Available	Cannot Determine
	Tributyltin	Not Available	0.0074	0.00222	Cannot Determine
	Total PAHs	Not Available	15	0.0841	Cannot Determine
	Total Ammonia (mg/L)	8.0	1.27	0.43	Yes

[1] The MEC or maximum background concentration is the actual detected concentration unless there is a "<" sign before it, in which case the value shown is the minimum detection level.

[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 => WQO/WQC, or B > WQO/WQC and MEC is detected;

= No, if MEC and B are < WQO/WQC or all effluent data are undetected;

= Undetermined (Ud), if no criteria have been promulgated;

= Cannot Determine, if there are insufficient data.

[4] Section 7.2.2.2 of the Basin Plan requires that individual NPDES permits for municipal and industrial wastewater treatment facilities include WQBELs for copper.

[5] SIP section 1.3 excludes from its RPA procedure priority pollutants for which a TMDL has been developed. TMDLs have been developed for mercury and PCBs in San Francisco Bay. Mercury and PCBs from wastewater discharges are regulated by NPDES Permit No. CA0038849 (currently Regional Water Board Order No. R2-2007-0077), which implements the San Francisco Bay Mercury and PCB TMDLs.

i. **Constituents with limited data.** The Discharger has performed sampling and analysis for the constituents listed in the CTR. This data set was used to perform the RPA. In some cases, Reasonable Potential cannot be determined because effluent data are limited or ambient background concentrations are not available. 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 to add numeric effluent limitations to this Order or to continue monitoring.

ii. **Pollutants with no Reasonable Potential.** WQBELs are not included in this Order for constituents that do not demonstrate Reasonable Potential; however, monitoring for such pollutants is still required. If concentrations of these constituents are found to have increased significantly, section VI.C.2 of this Order requires the Discharger to investigate the source of the increase. Remedial measures are required if the increase poses a threat to water quality.

f. RPA Determination for Sediment Quality Objectives

Pollutants in some receiving water sediments may be present in quantities that, alone or in combination, are toxic to benthic communities. Efforts are underway to identify stressors causing such conditions. However, to date there is no evidence directly linking compromised sediment conditions to the discharges subject to this Order; therefore, the Regional Water Board cannot draw a conclusion about reasonable potential for the discharges to cause or contribute to exceedances of the sediment quality objectives. Nevertheless, the Discharger continues to participate in the RMP, which monitors San Francisco Bay sediment and seeks to identify stressors responsible for degraded sediment quality. Thus far, the monitoring has provided only limited information about potential stressors and sediment transport. The Regional Water Board is exploring appropriate requirements to impose on the Discharger, along with other dischargers in the region, to obtain additional information that may inform future RPAs.

4. WQBEL Calculations

a. Pollutants with Reasonable Potential. WQBELs were developed for the toxic and priority pollutants that were determined to have Reasonable Potential. The WQBELs were calculated based on appropriate WQOs and the appropriate procedures specified in SIP section 1.4. The WQOs used for each pollutant with Reasonable Potential are discussed below.

b. Dilution Study.

The SIP provides the basis for any dilution credit. The Discharger submitted a Mixing Zone Study Report for Sanitary District No. 5 of Marin County, dated January 28, 2011, prepared by LimnoTech for RMC Water and Environment. The report presents findings of a mixing zone study for the Discharger's outfall and establishes the amount of minimum dilution that's available for Discharger's effluent in the immediate receiving water surrounding the outfall.

The mixing zone study report indicates the Discharger used the 2003 USEPA Visual Plumes modeling package to calculate initial dilution. Model inputs for effluent and ambient environment were selected by the Discharger to represent critical conditions where dilution would be low. The effluent flow used for these simulations represented maximum design flow and environmental conditions were selected to represent slack tide and maximum density stratification. This is expected to be a reasonable worst-case scenario for this discharge.

Modeling results presented by the Discharger indicate that the minimum initial dilution is 44:1. These modeling results support granting dilution to the Discharger.

c. Dilution Credit

In response to State Water Board Order WQ 2001-06, the Regional Water Board has evaluated the assimilative capacity of the receiving water for 303(d)-listed pollutants for which the Discharger has Reasonable Potential to cause or contribute to an excursion above any State water quality standard in its discharge. The evaluation included a review of RMP data (local and Central Bay stations), effluent data, and WQOs/WQC. From this evaluation, it is determined that the assimilative capacity is highly variable because of the complex hydrology of the receiving water. Therefore, there is uncertainty associated with the representative nature of the appropriate ambient background data to conclusively quantify the assimilative capacity of the receiving water. Pursuant to Section 1.4.2.1 of the SIP, "dilution credit may be limited or denied on a pollutant-by-pollutant basis…."

i. Bioaccumulative Pollutants: No bioaccumulative pollutants displayed reasonable potential. Consequently, Regional Board staff did not evaluate dilution credit limitations for bioaccumulative pollutants.

ii. In calculating WQBELs for total ammonia (a non-bioaccumulative and non-persistent pollutant), the estimated minimum initial dilution of 44:1 was used (based on the Mixing Zone Study described above). Actual initial dilution is used because ammonia is not a persistent pollutant and the Basin Plan states, "In most instances, ammonia will be diluted or degraded to a nontoxic state fairly rapidly." As such, there is unlikely to be cumulative toxicity effects associated with discharges containing elevated concentrations of ammonia. Therefore, granting dilution credits based on actual initial dilution is protective of water quality.

iii. For cyanide, a non-persistent pollutant that quickly disperses and degrades like ammonia, a more conservative dilution rate of 10:1 was used to calculate the water quality based effluent limits. Whereas the action initial dilution of 44:1 was granted for ammonia, less dilution is granted for cyanide because SIP Section 1.4.2.2 dictates that mixing zones be a small as practicable. Limiting dilution is equivalent to decreasing the size of the allowed mixing zone. The different approach for cyanide (versus ammonia) reflects the fact that cyanide has been regulated in permits for decades in this region. As a result of past conservative policies and changes in policies and standards, the process for deriving effluent limits for cyanide are more stringent than those for ammonia to comply with antidegradation. In other words, because past policies have resulted in very stringent limitations, to backslide from these limits, CWA 303(d)(4) provides that there must be compliance with antidegradation policies. The background documentation for the proposed cyanide site-specific objectives included an antidegradation analysis, which concluded that certain effluent limitations resulting from implementation of the site-specific objectives (assuming 10:1 dilution) would not degrade water quality. Therefore, the dilution credit used here is the dilution credit that results in effluent limits no greater than those identified in the site-specific objectives documents for this Discharger. This resultant dilution credit for cyanide is also in compliance with the SIP, which requires the mixing zone be as small as practicable. Additionally, consistent with the site-specific objective conclusion on antidegradation, to further ensure that water

quality is not degraded, this Order requires a cyanide action plan if the Discharger identifies new cyanide sources.

iv. For persistent non-bioaccumulative constituents, a conservative allowance of 10:1 dilution for discharges to the Bay has been assigned for protection of beneficial uses. Though this is less than the actual dilution achieved, limiting dilution credit for persistent non-bioaccumulative pollutants is based on SIP provisions, Section 1.4.2, that consider the following:

(a) The SIP allows background to be determined on a discharge-by-discharge or water body-by-water body basis (SIP 1.4.3). Consistent with the SIP, the Regional Water Board is using a water body-by-water body basis because of the uncertainties inherent in accurately characterizing ambient background in a complex estuarine system on a discharge-by-discharge basis.

The Yerba Buena Island Station fits the guidance for ambient background in the SIP compared to other stations in the RMP. The SIP states that background data are applicable if they are "representative of the ambient receiving water column that will mix with the discharge." Water from this station is representative of water that will mix with the discharge from this Discharger.

(b) Because of the complex hydrology of the San Francisco Bay, a mixing zone has not been established. There are uncertainties in accurately determining the mixing zones for each discharge. The models that have been used to predict dilution have not considered the three-dimensional nature of the currents in the estuary resulting from the interaction of tidal flushes and seasonal fresh water outflows. Salt water is heavier than fresh water, colder saltwater from the ocean flushes in twice a day generally under the warmer fresh river waters that flow out annually. When these waters mix and interact, complex circulation patterns occur due to the different densities of these waters. These complex patterns occur throughout the estuary but are most prevalent in the San Pablo, Carquinez Strait, and Suisun Bay areas. The locations change depending on the strength of each tide and the variable rate of delta outflow. Additionally, sediment loads to the San Francisco Bay from the Central Valley also change on a longer-term basis. These changes can result in changes to the depths of different parts of the Bay making some areas more shallow and/or other areas more deep. These changes affect flow patterns that in turn can affect the initial dilution achieved by a diffuser.

(c) The SIP allows a limited mixing zone and dilution credit for persistent pollutants. Discharges to the Bay are defined in the SIP as incompletely mixed discharges. Thus, dilution credit should be determined using site-specific information. Section 1.4.2.2 of the SIP specifies that the Regional Water Board "significantly limit a mixing zone and dilution credit as necessary… For example, in determining the extent of a mixing zone or dilution credit, the RWQCB shall consider the presence of pollutants in the discharge that are …persistent." The SIP defines persistent pollutants to be "substances for which degradation or decomposition in the environment is nonexistent or very slow." The pollutants at issue here are persistent pollutants (e.g., copper). The dilution studies that

estimate actual dilution do not address the effects of these persistent pollutants in the Bay environment, such as their long-term effects on sediment concentrations. Though this concern would not apply to non-persistent pollutants like cyanide and some organic compounds, a conservative dilution credit is still appropriate because of the lack of near-field receiving water data for these pollutants.

The main justification for using a 10:1 dilution credit is the uncertainty in accurately determining both ambient background and the mixing zone in a complex estuarine system with multiple wastewater discharges.

d. Calculation of Pollutant-Specific WQBELs

i. Copper

(a) *Copper WQOs*. The most stringent applicable WQOs for copper are the Basin Plan's site-specific chronic and acute marine WQOs, 6.0 and 9.4 micrograms per liter (µg/L), respectively, expressed as dissolved metal. Regional Water Board staff converted these WQOs to total recoverable metal using site-specific translators of 0.73 (chronic) and 0.87 (acute). This results in a chronic water quality criterion of 8.2 µg/L and an acute water quality criterion of 10.8 µg/L.

(b) *RPA Results*. This Order establishes effluent limitations for copper because the MEC of 8.2 µg/L is equal to the most stringent applicable WQO for this pollutant, demonstrating Reasonable Potential by Trigger 1. In addition, Basin Plan section 7.2.1.2 requires that individual NPDES permits for municipal and industrial wastewater treatment facilities include WQBELs for copper.

(c) C*opper WQBELs*. Order No. R2-2006-0037 established conditional effluent limitations for copper if a site-specific water quality objective (SSO) for copper for all segments of the San Francisco Bay north of the Dumbarton Bridge became legally effective. On February 23, 2009, the Regional Water Board sent a letter to the Discharger informing the Discharger that on January 6, 2009 the USEPA approved the copper SSO, and the conditional effluent limitations (referred to as "Alternate Effluent Limitations") were effective. The Alternate Effluent Limitations contained within Order No. R2-2006-0037 consists of an AMEL of 42 µg/L and a MDEL of 84 µg/L.

For this permit reissuance, the WQBELs for copper were recalculated according to SIP procedures using available data. A coefficient of variation (CV) of 0.2 and a dilution credit of D = 9 were used to calculate the WQBELs. The resulting WQBELs consisted of an AMEL of 55 µg/L and an MDEL of 76µg/L. The AMEL contained in Order No. R2-2006-0037 (42 µg/L) is more stringent than the newly calculated effluent limitation of 55 µg/L, thus consistent with federal and State anti-backsliding regulations, the AMEL of 42 µg/L has been carried over to this Order. The newly calculated MDEL is more stringent than the MDEL contained within Order No. R2-2006-0037. This Order establishes the more stringent newly calculated MDEL of 76 µg/L.

(d) *Anti-backsliding*. Anti-backsliding requirements are satisfied because the effluent limitations in this Order are not less stringent than those in the previous Order.

ii. Cyanide

(a) *Cyanide WQO.* The most stringent applicable WQOs for cyanide are the Basin Plan's site-specific chronic and acute marine WQOs, 2.9 and 9.4 micrograms per liter (µg/L), respectively.

(b) *RPA Results.* This Order establishes effluent limitations for cyanide because the MEC of 12 µg/L exceeds the most stringent applicable WQO for this pollutant, demonstrating Reasonable Potential by Trigger 1.

(c) *Cyanide WQBELs.* Order No. R2-2006-0037 established conditional effluent limitations for cyanide if a SSO for cyanide for all segments of the San Francisco Bay became legally effective. On August 8, 2008, the Regional Water Board sent a letter to the Discharger informing the Discharger that on July 22, 2008, the USEPA approved the cyanide SSO, and the conditional effluent limitations (referred to as "Alternate Effluent Limitations") were effective. The Alternate Effluent Limitations contained within Order No. R2-2006-0037 consists of an AMEL of 21 µg/L and a MDEL of 42 µg/L.

For this permit reissuance, WQBELs for cyanide were recalculated according to SIP procedure using a CV of 1.09 and a dilution credit of D = 9. The resulting WQBELs were an AMEL of 18 µg/L and an MDEL of 47 µg/L. The MDEL contained in Order No. R2-2006-0037 (42 µg/L) is more stringent than the newly calculated MDEL of 47 µg/L, thus consistent with federal and State anti-backsliding regulations, the MDEL of 42 µg/L has been carried over to this Order. The newly calculated AMEL is more stringent than the AMEL contained within Order No. R2-2006-0037. This Order establishes the more stringent newly calculated AMEL of 18 µg/L.

(d) *Anti-backsliding.* Anti-backsliding requirements are satisfied because the effluent limitations in this Order are not less stringent than those in the previous Order.

iii. Ammonia

(a) *Ammonia WQO*. The Basin Plan contains WQOs for un-ionized ammonia of 0.025 mg/L as an annual median and 0.16 mg/L as a maximum upstream of the San Francisco Bay Bridge. Regional Water Board staff translated these WQOs from un-ionized ammonia concentrations to equivalent total ammonia concentrations (as nitrogen) since (1) sampling and laboratory methods are not available to analyze for un-ionized ammonia; and (2) the fraction of total ammonia that exists in the toxic un-ionized form depends on the pH, salinity, and temperature of the receiving water.

To translate the Basin Plan un-ionized ammonia objective, Regional Water Board staff used pH, salinity, and temperature data from 1993 through 2001 from the nearest RMP station to the outfall, the Yerba Buena Island RMP Station (BC10).

Regional Water Board staff used the following equations to determine the fraction of total ammonia that would exist in the toxic un-ionized form in the estuarine receiving water where the various measurements were taken from 1993-2001 (USEPA, 1989, Ambient Water Quality Criteria for Ammonia (Saltwater)–1989, EPA Publication 440/5-88-004):

For salinity > 10 ppt: fraction of NH_3 = $\frac{1}{1+10^{(pK-pH)}}$

Where:

$$pK = 9.245 + 0.116(I) + 0.0324(298 - T) + \frac{0.0415(P)}{(T)}$$

I = Molal ionic strength of saltwater = $\frac{19.9273(S)}{(1{,}000 - 1.005109[S])}$

S = Salinity (parts per thousand)

T = Temperature in degrees Kelvin

P = Pressure (one atmosphere)

Regional Water Board staff then used the 90th percentile and median un-ionized ammonia fractions from 1993 to 2001 to express the acute and chronic un-ionized ammonia WQOs as total ammonia concentrations. This approach is consistent with USEPA guidance on translating dissolved metal WQOs to total recoverable metal WQOs (USEPA, 1996, *The Metals Translator: Guidance for Calculating a Total Recoverable Limit from a Dissolved Criterion,* EPA Publication 823-B-96-007).

The equivalent total ammonia acute and chronic WQOs are 4.93 mg/L and 1.27 mg/L, respectively.

(b) *RPA Results.* Basin Plan section 4.5.5.2 indicates that WQBELs shall be calculated according to the SIP. Basin Plan section 3.3.20 refers to ammonia as a toxic pollutant. Therefore, The SIP methodology was used to perform the RPA and to calculate effluent limitations for ammonia. This Order establishes effluent limitations for total ammonia because the MEC of 8 mg/L as nitrogen exceeds the most stringent applicable translated WQO for this pollutant, demonstrating Reasonable Potential by Trigger 1.

(c) *WQBELs.* The most stringent total ammonia WQBELs calculated according to SIP procedures using a CV of 0.6 and a dilution of D = 43 are an MDEL of 150 mg/L and an AMEL of 56 mg/L. Regional Water Board staff made statistical adjustments to the WQBEL calculations because:

- the Basin Plan's chronic WQO for un-ionized ammonia is based on an annual median instead of the typical 4-day average;

- the SIP assumes a 4-day average concentration and monthly sampling frequency of 4 days per month to calculate effluent limitations based on chronic criteria, whereas a 365-day average and a monitoring frequency of 30 days per month (the maximum daily sampling frequency in a month since the averaging period for the chronic criteria is longer than 30 days) were used.

These statistical adjustments are supported by USEPA's *Water Quality Criteria; Notice of Availability; 1999 Update of Ambient Water Quality Criteria for Ammonia,* published on December 22, 1999, in the Federal Register.

Following SIP methodology, Regional Water Board staff used the maximum ambient background total ammonia concentration to calculate effluent limitations based on the acute criterion; and the median background total ammonia concentration to calculate effluent limitations based on the chronic criterion. Because the Basin Plan's chronic un-ionized ammonia objective is an annual median, the median background concentration is more representative of ambient conditions than a daily maximum.

Effluent Limitations for Total Ammonia (as N)		
	AMEL	**MDEL**
Based on Basin Plan	56 mg/L	150 mg/L

(d) *Anti-backsliding.* Anti-backsliding requirements are satisfied because the previous permit did not include total ammonia WQBELs.

e. Effluent Limitation Calculations – Discharge Point No. 001

Table F-11 below summarizes the effluent limit calculations for Discharge Point No. 001.

Table F-11. Effluent Limitation Calculations for Discharge Point No. 001

PRIORITY POLLUTANTS	Copper	Cyanide	Total Ammonia (Acute)	Total Ammonia (Chronic)
Units	**ug/L**	**ug/L**	**mg/L as N**	**mg/L as N**
Basis and Criteria type	Basin Plan SSO	Basin Plan SSO	Basin Plan Aquatic Life	Basin Plan Aquatic Life
Criteria -Acute	-----	-----	4.93	-----
Criteria -Chronic	-----	-----	-----	1.27
SSO Criteria -Acute	9.4	9.4	-----	-----
SSO Criteria -Chronic	6.0	2.9	-----	-----
Water Effects ratio (WER)	1	1	1	1
Lowest WQO	6.0	2.9	4.93	1.27
Site Specific Translator - MDEL	0.87	-----	-----	-----
Site Specific Translator - AMEL	0.73	-----	-----	-----
Dilution Factor (D) (if applicable)	9	9	43	43
No. of samples per month	4	4	4	30

PRIORITY POLLUTANTS	Copper	Cyanide	Total Ammonia (Acute)	Total Ammonia (Chronic)
Units	**ug/L**	**ug/L**	**mg/L as N**	**mg/L as N**
Aquatic life criteria analysis required? (Y/N)	Y	Y	Y	Y
HH criteria analysis required? (Y/N)	N	Y	N	N
Applicable Acute WQO	11	9.4	4.93	--
Applicable Chronic WQO	8	2.9	--	1.27
HH criteria	--	220,000	--	--
Background (Maximum Conc for Aquatic Life calc)	2.55	0.4	0.43	0.13
Background (Average Conc for Human Health calc)	--	--	--	--
Is the pollutant on the 303d list and/or bioaccumulative (Y/N)?	N	N	N	N
ECA acute	85	94.0	198	--
ECA chronic	59	29.0	--	50.3
ECA HH	--	2,200,000	--	--
No. of data points <10 or at least 80 percent of data reported non detect? (Y/N)	N	N	Y	Y
Avg of effluent data points	5.6	2.39	1.73	1.73
Std Dev of effluent data points	1.3	2.6	2.81	2.81
CV calculated	0.2	1.09	N/A	N/A
CV (Selected) - Final	0.2	1.09	0.6	0.6
ECA acute mult99	0.60	0.19	0.32	--
ECA chronic mult99	0.77	0.35	--	0.93
LTA acute	51	17	63.71	--
LTA chronic	45	9	--	46.8
minimum of LTAs	45	9	63.71	46.8
AMEL mult95	1.2	2.0	1.55	1.19
MDEL mult99	1.7	5.3	3.11	3.11
AMEL (aq life)	55	18	98.91	55.64
MDEL(aq life)	76	47	198.43	145.67
MDEL/AMEL Multiplier	1.4	2.6	2.01	2.62
AMEL (human hlth)	--	2,200,000	--	--
MDEL (human hlth)	--	--	--	--
minimum of AMEL for Aq. life vs HH	55	18	99	56
minimum of MDEL for Aq. Life vs HH	76	47	200	150
Current limit in permit (30-day average)	42	21	--	--

PRIORITY POLLUTANTS	Copper	Cyanide	Total Ammonia (Acute)	Total Ammonia (Chronic)
Units	**ug/L**	**ug/L**	**mg/L as N**	**mg/L as N**
Current limit in permit (daily)	84	42	--	--
Final limit - AMEL	42	18	99	56
Final limit - MDEL	76	42	200	150
Max Effl Conc (MEC)	8.2	12	8.0	8.0

5. Whole Effluent Acute Toxicity

a. Acute. This Order includes effluent limitations for whole-effluent acute toxicity for Discharge Point No. 001 that are unchanged from the previous permit and based on the Basin Plan. All bioassays are to 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.

Acute toxicity monitoring data were collected from July 2006 to June 2010. From these data, the minimum percent survival of any single bioassay was 95% and the three-sample median was 100%.

b. Chronic. In Order No. R2-2006-0037 the Regional Water Board determined there is not reasonable potential for the discharge to contribute to an exceedance of water quality objectives for chronic toxicity due to the minor discharge volume and domestic wastewater makeup (no industrial type discharges). Evidence to indicate reasonable potential exists for chronic toxicity has not been identified by the Regional Water Board and the influent make up has not significantly changed, thus a chronic toxicity effluent limitation has not been established in this Order.

6. Anti-backsliding and Antidegradation

a. Anti-backsliding

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 be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. WQBEL calculations and compliance with anti-backsliding requirements are discussed for each pollutant with a WQBEL in Fact Sheet section IV.C.4.c.

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

b. Antidegradation

As discussed within section II.A.2 of this Fact Sheet, the Discharger has increased the design capacity of the treatment system from 0.02 MGD to 0.04 MGD to accept additional flow that was previously treated by the abandoned Seafirth Estates Wastewater Treatment Facility, and additional flows from new home construction and individual homeowners that are currently connected to septic systems. The Discharger has been operating at the flow limitation established in Order No. R2-2006-0037 of 0.02 MGD, however the Discharger has requested an increase in permitted flow to the new design capacity of 0.04 MGD to address potential future increases in flow. This increase in effluent flow from 0.02 MGD to 0.04 MGD is applicable to State and federal antidegradation regulations.

40 CFR 131.12 requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State antidegradation policy was adopted in 1968 as Resolution No. 68-16 by the State Water Board. The antidegradation policies require that existing water quality be maintained unless degradation is justified based on specific findings. In 1990 the State Water Board issued guidance to the regional water boards for implementing State and federal antidegradation policies. Within this guidance, the State Water Board determined that a complete antidegradation analysis will not be required and simple antidegradation analysis may be performed if specific criteria have been met, including that the proposed action will produce minor effects which will not result in a significant reduction of water quality.

The Discharger submitted an Antidegradation Analysis for Flow Increase at Paradise Cove Treatment Plant, dated December 21, 2010, prepared by RMC Water and Environment (Antidegradation Analysis). Within the Antidegradation Analysis the Discharger examines the following:

i. Existing applicable water quality standards for the receiving waters.

ii. Ambient conditions in the receiving waters in comparison to applicable water quality standards.

iii. Incremental changes in constituent loadings resulting from the proposed change in discharge.

iv. Comparison of the proposed increase in loading relative to other sources.

The Discharger focused the analysis on pollutants of concern for POTWs within the San Francisco Bay, including copper, mercury, cyanide, and ammonia. The Antidegradation Analysis concluded that the proposed flow increase will result in very small increases in mass loadings compared to total mass loadings to the San Francisco Bay and that this additional loading will produce minor effects which will not result in a significant reduction of water quality in the receiving water, and will not affect the beneficial uses of the San Francisco Bay.

Further, the Antidegradation Analysis states that the proposed flow increase will prevent two other types of discharges from occurring. Specifically, the flow increase allows the Facility to accommodate new flows from the Seafirth Estates Wastewater Treatment Facility, which no longer discharges to the receiving water. The closure of the Seafirth Facility is a benefit to water quality in San Francisco Bay that partially offsets the proposed flow increase. Additionally, the expansion will allow the Facility to accommodate anticipated flows from residents abandoning individual septic systems in favor of connecting to the Discharger's sewer system. The Antidegradation Analysis states that septic systems are problematic in the Facility's service area because of native soil conditions and steep slopes, so conversion away from septic systems also provides a water quality benefit. In other words, the increase in flow is to move residents from problematic individual septic systems to the Facility's wastewater treatment plant. As such, any small increase in bioaccumulative pollutants such as mercury and PCBs from residential flows is outweighed by the benefit of abandoning septic systems.

Based on the findings of the Discharger's Antidegradation Analysis that the proposed action will produce minor effects which will not result in a significant reduction of water quality, the Regional Water Board has determined that an allowable increase in flow from 0.020 MGD to 0.04 MGD is consistent with State and federal antidegradation policies.

V. RATIONALE FOR SURFACE RECEIVING WATER LIMITATIONS

The receiving water limitations are based on Basin Plan WQOs and are a required part of this Order. They are retained from the previous permit.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

The Discharger is required to monitor the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are contained in the MRP (Attachment E) and the Regional Standard Provisions (Attachment G). This provision requires compliance with these documents and is authorized by 40 CFR122.41 (h) and (j), CWC sections 13267 and 13383.

A. Influent Monitoring

Influent monitoring requirements for BOD_5 and TSS allows for determination of compliance with this Order's 85 percent removal requirement. Influent flow monitoring requirements are retained from the previous permit for BOD_5. For TSS, a monitoring frequency of weekly was included because TSS is an excellent overall indicator of treatment quality.

Quarterly influent monitoring for cyanide has been established based on the requirements of Basin Plan, which requires that all municipal facilities that receive an effluent limitation for cyanide implement influent monitoring. In the August 8, 2008 letter from the Regional Water Board titled, "Alternate Cyanide Effluent Limitations Effective, Requirement for Cyanide Action Plan, and Requirement for Influent Monitoring", the Regional Water Board states, *"…pursuant to section 13383 of the California Water Code, this letter, effective September 1, 2008, requires that the facilities in Attachment A [includes Discharger] implement influent monitoring for cyanide at the same frequency for which these facilities monitor effluent."*

B. Effluent Monitoring

The MRP retains most effluent monitoring requirements from the previous permit. Changes in effluent monitoring at EFF-001 are summarized as follows.

- Weekly effluent monitoring for TSS instead of quarterly has been established because TSS is an excellent overall indicator of treatment quality.

- Quarterly effluent monitoring for ammonia has been established in order to evaluate compliance with new limitations imposed in this Order.

C. Whole Effluent Toxicity Testing Requirements

This Order retains unchanged the annual acute toxicity monitoring requirements contained in the Order No. R2-2006-0037 in order to evaluate compliance with the effluent limitation for acute toxicity and Provision VI.C.8. All bioassays are to be performed using the most up-to-date USEPA protocol. 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.

D. Receiving Water Monitoring

The Discharger shall collect or participate in collecting background ambient receiving water data with other Dischargers and/or through the Regional Monitoring Program (RMP). This information is required to perform RPAs 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. This provision may be met through monitoring under the BACWA Coordinated Receiving Water Monitoring Effort, or a similar ambient monitoring program for San Francisco Bay. This Order may be reopened as appropriate, to incorporate effluent limitations or other requirements based on the Regional Water Board review of these data.

E. Other Monitoring Requirements – Not Applicable

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. 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. 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. Monitoring and Reporting Requirements (Provision VI.B)

The Discharger is required to monitor the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are contained in the MRP (Attachment E) 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 Data Evaluation

This Order does not include effluent limitations for the selected constituents addressed in the Regional Standard Provisions (Attachment G) that do not demonstrate Reasonable Potential, but this provision requires the Discharger to continue monitoring for these pollutants as described in the Regional Standard Provisions and specified in the MRP. If concentrations of these constituents increase significantly, this provision requires the Discharger to investigate the sources of the increases and establish remedial measures if the increases result in reasonable potential to cause or contribute to an excursion above water quality standards. This provision is based on the Basin Plan, the SIP, and CWC 13267.

3. Ambient Background Receiving Water Study

This provision is based on the Basin Plan, the SIP, CWC 13267, and the Regional Standard Provisions (Attachment G). As indicated in the Order, this requirement may be met by participating in a collaborative study.

4. Best Management Practices and Pollutant Minimization Program

This provision is based on Basin Plan section 4.13.2 and SIP section 2.4.5.

5. Special Provisions for Municipal Facilities (POTWs Only)

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

b. Sanitary Sewer Overflows 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 Resources Control Board's Statewide General Waste Discharge Requirements for Sanitary Sewer Overflow and related Monitoring and Reporting Program (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 apply as specified in Provisions, section VI.C.5.b. 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 enroll 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. The Regional Standard Provisions (Attachment G) contains the same notification and reporting requirements for spills from wastewater treatment facilities.

6. Copper Action Plan

These requirements are carried over from the Regional Water Board's February 23, 2009 letter titled, "Alternate Copper Effluent Limitations Effective January 6, 2009, and Reporting Requirements for Copper Action Plan for Discharges North of the Dumbarton Bridge" and implement the requirements for the Discharger to implement a Copper Action Plan consistent with the requirements of the Basin Plan.

7. Cyanide Action Plan

These requirements are carried over from the Regional Water Board's August 8, 2008 letter titled, "Alternate Cyanide Effluent Limitations Effective, Requirement for Cyanide Action Plan, and Requirement for Influent Monitoring" and implement the requirements for the

Discharger to implement a Cyanide Action Plan consistent with the requirements of the Basin Plan.

8. Compliance Schedules – Not Applicable

VIII. PUBLIC PARTICIPATION

The Regional Water Board is considering the issuance of WDRs that will serve as an NPDES permit for the Facility discharges. As a step in the WDR adoption process, the Regional Water Board 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 notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided an opportunity to submit written comments and recommendations. Notification was provided through the **Marin Independent Journal**.

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 Officer at the Regional Water Board at the address above on the cover page of this Order, Attention: Robert Schlipf.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on March 14, 2011.

C. Public Hearing

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

Date: April 13, 2011
Time: 9:00 am
Location: Elihu Harris State Office Building
1515 Clay Street, 1st Floor Auditorium
Oakland, CA 94612

Contact: Robert Schlipf, (510) 622-2478, email rschlipf@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.

Please be aware that dates and venues may change. Our 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 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 8:30 a.m. and 4:45 p.m., except from noon to 1:00 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 the Sanitary District No. 5 of Marin County Wastewater Treatment Facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this Order may be directed to Robert Schlipf at 510-622-2478 (e-mail at rschlipf@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

March 2010

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

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

FOR

NPDES WASTEWATER DISCHARGE PERMITS

APPLICABILITY

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

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

I. STANDARD PROVISIONS - PERMIT COMPLIANCE

A. Duty to Comply

Not Supplemented

B. Need to Halt or Reduce Activity Not a Defense

Not Supplemented

C. Duty to Mitigate

This supplements I.C. of Standard Provisions (Attachment D)

1. Contingency Plan

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

violation of the permit pursuant to California Water Code Section 13387. The Contingency Plan shall, at a minimum, contain the provisions of a. through g. below.

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

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

c. Provisions of emergency standby power.

d. Protection against vandalism.

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

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

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

2. Spill Prevention Plan

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

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

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

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

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

D. Proper Operation & Maintenance

This supplements I.D of Standard Provisions (Attachment D)

1. Operation and Maintenance (O&M) Manual

The Discharger shall maintain an O&M Manual to provide the plant and regulatory personnel with a source of information describing all equipment, recommended operational strategies, process control monitoring, and maintenance activities. To remain a useful and relevant document, the O&M Manual shall be kept updated to reflect significant changes in treatment facility equipment and operational practices. The O&M Manual shall be maintained in usable

condition and be available for reference and use by all relevant personnel and the Regional Water Board.

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 in cases where excluding the public is infeasible, such as private property. If public contact with wastewater could reasonably occur on public property, warning signs shall be posted.

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

J. Storm Water

This section is an addition to Standard Provisions (Attachment D)

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

1. Storm Water Pollution Prevention Plan (SWPP Plan)

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

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

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

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

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 the analytical methods cited in Table C for compliance determination, or any other method described in 40 CFR part 136 or approved by USEPA (such as the 1600 series) if authorized by the Regional Water Board. However, the ML must be below the effluent limitation and water quality objective. If no ML value is below the effluent limitation and water quality objective, then the method must achieve an ML no greater than the lowest ML value indicated 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

(1) 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.

(2) 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.

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

(4) 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 limitations.

(a) 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

(b) 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

(1) 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 show that the parameter is in compliance with the monthly average limit.

(2) 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.

(3) 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).

(4) 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.

(5) When a bypass occurs (except one subject to provision III.A.3.b.6 below), the Discharger shall monitor flows and collect samples on a daily basis for all constituents at affected discharge points that have effluent limitations for the duration of the bypass (including acute toxicity using static renewals), except chronic toxicity, unless otherwise stipulated by the MRP.

(6) Unless otherwise stipulated by the MRP, when a bypass approved pursuant to Attachment D, Standard Provisions, Sections I.G.2 or I.G.4, occurs, the Discharger shall monitor flows and, using appropriate procedures as specified in the MRP, collect and retain samples for affected discharge points on a daily basis for the duration of the bypass. The Discharger shall analyze for total suspended solids (TSS) using 24-hour composites (or more frequent increments) and for bacteria indicators with effluent limitations using grab samples. If TSS exceeds 45 mg/L in any composite sample, the Discharger shall also analyze the retained samples for that discharge for all other constituents that have effluent limitations, except oil and grease, mercury, dioxin-TEQ, and acute and chronic toxicity. Additionally, at least once each year, the Discharger shall analyze the retained samples for one approved bypass discharge event for all other constituents that have effluent limitations, except oil and grease, mercury, dioxin-TEQ, and acute and chronic toxicity. This monitoring shall be in addition to the minimum monitoring specified in 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:

(1) 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.

(2) 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.

(3) 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.

(4) 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.

(5) 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.

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

(2) 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.

(3) 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, 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 the Regional Water Board. 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.

A. 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 collection unit (e.g., grit, skimmings, undigested biosolids, or combination) 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 limitations 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 limitations, the number of samples taken during the monitoring period, and the number of samples that exceed applicable effluent limitations.

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:

(a) 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.

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

If a sample result, or the arithmetic mean or median of multiple sample results, is below the reporting limit, and there is evidence that the priority pollutant is present in the effluent above an effluent limitation and the Discharger conducts a Pollutant Minimization Program, the Discharger shall not be deemed out of compliance.

(3) Dioxin-TEQ Reporting: The Discharger shall report for each dioxin and furan congener the analytical results of effluent monitoring, including the quantifiable limit (reporting level), the method detection limit, and the measured concentration. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating dioxin-TEQ, the Discharger shall set congener concentrations below the minimum levels (ML) to zero. The Discharger shall calculate and report dioxin-TEQs using the following formula, where the MLs, toxicity equivalency factors (TEFs), and bioaccumulation equivalency factors (BEFs) are as provided in Table A:

$$\text{Dioxin-TEQ} = \Sigma\,(C_x \times TEF_x \times BEF_x)$$

where: C_x = measured or estimated concentration of congener *x*
TEF_x = toxicity equivalency factor for congener x
BEFx = bioaccumulation equivalency factor for congener *x*

Table A

Minimum Levels, Toxicity Equivalency Factors,
and Bioaccumulation Equivalency Factors

Dioxin or Furan Congener	Minimum Level	1998 Toxicity Equivalency	Bioaccumulation Equivalency

	(pg/L)	Factor (TEF)	Factor (BEF)
2,3,7,8-TCDD	10	1.0	1.0
1,2,3,7,8-PeCDD	50	1.0	0.9
1,2,3,4,7,8-HxCDD	50	0.1	0.3
1,2,3,6,7,8-HxCDD	50	0.1	0.1
1,2,3,7,8,9-HxCDD	50	0.1	0.1
1,2,3,4,6,7,8-HpCDD	50	0.01	0.05
OCDD	100	0.0001	0.01
2,3,7,8-TCDF	10	0.1	0.8
1,2,3,7,8-PeCDF	50	0.05	0.2
2,3,4,7,8-PeCDF	50	0.5	1.6
1,2,3,4,7,8-HxCDF	50	0.1	0.08
1,2,3,6,7,8-HxCDF	50	0.1	0.2
1,2,3,7,8,9-HxCDF	50	0.1	0.6
2,3,4,6,7,8-HxCDF	50	0.1	0.7
1,2,3,4,6,7,8-HpCDF	50	0.01	0.01
1,2,3,4,7,8,9-HpCDF	50	0.01	0.4
OCDF	100	0.0001	0.02

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:

(a) List of analyses for which the Discharger is certified;

(b) 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 be retained onsite); and

(c) 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] only when the spills are 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 the Regional Water Board. 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 Facilitys[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.

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 waters (e.g., fish kill, discoloration of water) and the extent of sampling if conducted;

(4) Corrective measures taken to minimize the impact of the unauthorized discharge;

(5) Measures to be taken to minimize the chances of a similar unauthorized discharge occurring in the future;

(6) Summary of Spill Prevention Plan or O&M Manual modifications to be made, if necessary, to minimize the chances of future unauthorized discharges; and

(7) Quantity and duration of the unauthorized discharge, and the amount recovered.

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.

Table B

Summary of Communication Requirements for Unauthorized Discharges[1] from Municipal Wastewater Treatment Facilitys

Discharger is required to:	Agency Receiving Information	Time frame	Method for Contact
1. Notify	California Emergency Management Agency (Cal EMA)	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 Cal EMA)
	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

F. Planned Changes

Not supplemented

G. Anticipated Noncompliance

Not supplemented

H. Other Noncompliance

[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.

Not supplemented

I. Other Information

Not supplemented

VI. STANDARD PROVISIONS – ENFORCEMENT

Not Supplemented

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

Not Supplemented

VIII. DEFINITIONS

This section is an addition to Standard Provisions (Attachment D)

More definitions can be found in Attachment A of this NPDES Permit.

1. Arithmetic Calculations

   a. Geometric mean is the antilog of the log mean or the back-transformed mean of the logarithmically transformed variables, which is equivalent to the multiplication of the antilogarithms. The geometric mean can be calculated with either of the following equations:

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

   or

   $$\text{Geometric Mean} = (C_1 * C_2 * \ldots * C_N)^{1/N}$$

   Where "N" is the number of data points for the period analyzed and "C" is the concentration for each of the "N" data points.

   b. Mass emission rate is obtained from the following calculation for any calendar day:

   $$\text{Mass emission rate (lb/day)} = \frac{8.345}{N}\sum_{i=1}^{N} Q_i C_i$$

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

   In which "N" is the number of samples analyzed in any calendar day and "Qi" and "Ci" 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, "Ci" is the concentration measured in the composite sample and "Qi" 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 = 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 treatment plant headworks or from any part of a treatment plant facility.

11. Priority pollutants are those constituents referred to in 40 CFR Part 122 as promulgated in the Federal Register, Vol. 65, No. 97, Thursday, May 18, 2000, also known as the California Toxics Rule, the presence or discharge of which could reasonably be expected to interfere with maintaining designated uses.

12. Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage. It excludes infiltration and runoff from agricultural land.

13. Toxic pollutant means any pollutant listed as toxic under federal Clean Water Act section 307(a)(1) or under 40 CFR 401.15.

14. Untreated waste is raw wastewater.

15. Waste, waste discharge, discharge of waste, and discharge are used interchangeably in the permit. The requirements of the permit apply to the entire volume of water, and the material therein, that is disposed of to surface and ground waters of the State of California.

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]												
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 [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										
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										

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
38.	Tetrachloroethylene	601	0.5	2										
40.	1,2-Trans-Dichloroethylene	601	0.5	1										
41.	1,1,1-Trichloroethane	601	0.5	2										
42.	1,1,2-Trichloroethane	601	0.5	2										
43.	Trichloroethene	601	0.5	2										
44.	Vinyl Chloride	601	0.5	2										
45.	2-Chlorophenol	604	2	5										
46.	2,4-Dichlorophenol	604	1	5										
47.	2,4-Dimethylphenol	604	1	2										
48.	2-Methyl-4,6-Dinitrophenol or Dinitro-2-methylphenol	604	10	5										
49.	2,4-Dinitrophenol	604	5	5										
50.	2-Nitrophenol	604		10										
51.	4-Nitrophenol	604	5	10										
52.	3-Methyl-4-Chlorophenol	604	5	1										
53.	Pentachlorophenol	604	1	5										
54.	Phenol	604	1	1		50								
55.	2,4,6-Trichlorophenol	604	10	10										
56.	Acenaphthene	610 HPLC	1	1	0.5									
57.	Acenaphthylene	610 HPLC		10	0.2									
58.	Anthracene	610 HPLC		10	2									
60.	Benzo(a)Anthracene or 1,2 Benzanthracene	610 HPLC	10	5										
61.	Benzo(a)Pyrene	610 HPLC		10	2									
62.	Benzo(b)Fluoranthene or 3,4 Benzofluoranthene	610 HPLC		10	10									
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										

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
91.	Hexachloroethane	625	5	1										
93.	Isophorone	625	10	1										
94.	Naphthalene	625	10	1	0.2									
95.	Nitrobenzene	625	10	1										
96.	N-Nitrosodimethylamine	625	10	5										
97.	N-Nitrosodi-n-Propylamine	625	10	5										
98.	N-Nitrosodiphenylamine	625	10	1										
99.	Phenanthrene	625		5	0.05									
101.	1,2,4-Trichlorobenzene	625	1	5										
102.	Aldrin	608	0.005											
103.	α-BHC	608	0.01											
104.	β-BHC	608	0.005											
105.	γ-BHC (Lindane)	608	0.02											
106.	δ-BHC	608	0.005											
107.	Chlordane	608	0.1											
108.	4,4'-DDT	608	0.01											
109.	4,4'-DDE	608	0.05											
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											

Footnotes to Table C:

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 ug/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.

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.