Appendix A
Revised Tentative Order

Linda S. Adams
Secretary for
Environmental Protection

California Regional Water Quality Control Board

San Francisco Bay Region

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Arnold Schwarzenegger
Governor

REVISED TENTATIVE ORDER NO. R2-2010-XXXX
NPDES NO. CA0037770

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

Table 1. Discharger Information

Discharger	Mt. View Sanitary District
Name of Facility	Mt. View Sanitary District Wastewater Treatment Plant and its Collection System
Facility Address	3800 Arthur Road
	Martinez, CA 94553
	Contra Costa County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

Discharges by the Mt. View Sanitary District 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	Advanced Secondary Treated Municipal Wastewater	38º 01' 16" N	122º 06' 13" W	Peyton Slough, a tributary to Carquinez Strait

Table 3. Administrative Information

This Order was adopted by the Regional Water Board on:	
This Order shall become effective on:	**January 1, 2011**
This Order shall expire on:	**December 31, 2015**
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 _____.

_____
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	Mt. View Sanitary District
Name of Facility	Mt. View Sanitary District Wastewater Treatment Plant (Plant) and its Collection System
Facility Address	3800 Arthur Road
	Martinez, CA 94553
	Contra Costa County
Facility Contact, Title, and Phone	Michael D. Roe, District Manager, (925) 228-5635 Ext. 32
Mailing Address	P.O. Box 2757, Martinez, CA 94553
Type of Facility	Publicly Owned Treatment Works (POTW)
Facility Design Flow	3.2 million gallons per day (MGD) (average dry weather design capacity) 10.94 MGD (peak wet weather design capacity)
Service Areas	City of Martinez
Service Population	23,000

II. FINDINGS

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

A. Background. The Mt. View Sanitary District (hereinafter "Discharger") is currently discharging under Order No. R2-2006-0063 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0037770. The Discharger submitted a Report of Waste Discharge, dated November 18, 2009, and applied for NPDES permit renewal to discharge treated wastewater from its wastewater treatment plant (Plant). The discharge is also currently regulated under Regional Water Board Order No. R2-2007-0077 (NPDES Permit CA0038849), which supersedes all requirements on mercury from wastewater discharges in the Region. This Order does not affect the mercury permit. The Discharger is also covered under Regional Water Board Order No. R2-2010-0056, which amended the Discharger's permit to implement cyanide site specific objectives. This order supersedes Order No. R2-2010-0056. For purposes of this Order, references to the "discharger" or "permittee" in applicable federal and State laws, regulations, plans, or policies 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 Plant that provides advanced secondary treatment for domestic, commercial, and some industrial wastewater from unincorporated areas of Martinez and portions of the City of Martinez. The Discharger has a current average dry weather design treatment capacity of 3.2 million gallons per day (MGD), and can treat peak wet weather flows up to 10.94 MGD. The effluent from Discharge Point 001, measured at Monitoring Location E-001, from September 2008 to August 2009 averaged 1.7 MGD with a maximum daily effluent flow rate of 6.4 MGD. The Plant serves an estimated

population of 23,000 with approximately 270 businesses over a 4,100 acre service area. Attachment B provides a Plant map.

2. **Treatment Process Description**. The treatment system consists of screening, primary clarification, trickling filtration, biotower nitrification, secondary sedimentation, advanced secondary sand filtration and UV disinfection. During periods of elevated wet weather influent flows, flows that exceed the biotower capacity are routed around the biotower nitrification treatment step. The Discharger's wastewater collection system includes 110 miles of sewer collection lines and four pump stations. Attachment C provides a Plant flow schematic.

3. **Discharge Description**. Secondary-treated, filtered, and disinfected effluent is discharged from the Plant through Discharge Point 001 to Moorhen Marsh, a constructed wetland that is the final treatment process component. Moorhen Marsh flows to Peyton Slough, where it combines with surface runoff to supply the downstream 137 acre McNabney Marsh. Flows from McNabney Marsh re-enter Peyton Slough, which is tributary to Carquinez Strait.

4. **Biosolids Management.** Sludge is anaerobically digested and then dewatered by centrifuge. In dry weather months, the sludge volume is further reduced in drying beds, and the runoff from these beds is collected in a sump and pumped back to the Plant headworks. Biosolids are presently used as alternative daily cover at the B&J Landfill in Dixon.

5. **Storm Water Discharge.** Because all storm water is routed through the Plant headworks, it is exempt from coverage under the State Water Board's statewide storm water NPDES general permit (*WDRs for Discharges of Storm Water Associated with Industrial Activities, Excluding Construction Activities*, NPDES General Permit No. CAS000001).

C. Legal Authorities. This Order is issued pursuant to Clean Water Act (CWA) Section 402 and implements regulations adopted by the U.S. Environmental Protection Agency (USEPA) and California Water Code (CWC) Chapter 5.5, Division 7 (commencing with Section 13370). It shall serve as an NPDES permit for point source discharges from the Plant to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to CWC Article 4, Chapter 4, Division 7 (commencing with Section 13260).

D. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information submitted as part of the NPDES renewal 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 this Order's Findings. Attachments A through E and G are also incorporated into this Order.

E. California Environmental Quality Act (CEQA). Under CWC Section 13389, this action to adopt an NPDES permit is exempt from 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 that meet technology-based requirements at minimum, and any more stringent effluent limitations necessary to meet 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. The Fact Sheet (Attachment F) discusses technology-based effluent limitations development.

G. Water Quality-Based Effluent Limitations. CWA Section 301(b) and 40 CFR 122.44(d) require that permits include limitations more stringent than 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 (Reasonable Potential). 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 waters and groundwater. It also includes implementation program 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), the Office of Administrative Law (OAL) and USEPA. Requirements of this Order implement the Basin Plan.

The Basin Plan does not specifically identify beneficial uses for Peyton Slough, but does identify beneficial uses for Carquinez Strait, to which Peyton Slough is tributary. Table 5 lists these beneficial uses. State Water Board Resolution No. 88-63 establishes State policy that all waters, with certain exceptions, are to be considered suitable or potentially suitable for municipal or domestic supply (MUN). Because of the marine influence on the receiving waters of Carquinez Strait, total dissolved solids levels commonly exceed 3,000 milligrams per liter (mg/L); therefore, the receiving waters qualify for an exception to State Water Board Resolution No. 88-63, and the MUN designation does not apply to Carquinez Strait.

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.

Table 5. Basin Plan Beneficial Uses of Carquinez Strait

Discharge Point	Receiving Water Name	Beneficial Uses
001	Peyton Slough, a tributary to Carquinez Strait	Industrial Service Supply (IND) Ocean, Commercial, and Sport Fishing (COMM) Fish Spawning (SPWN) Estuarine Habitat (EST) Wildlife Habitat (WILD) Water Contact Recreation (REC1) Non-Contact Water Recreation (REC2) Navigation (NAV) Fish Migration (MIGR) Preservation of Rare and Endangered Species (RARE)

I. 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 apply in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that apply 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. SIP Section 2.1 provides that, based on an existing discharger's request and demonstration that it is infeasible to achieve immediate compliance with an effluent limitation derived from a CTR criterion, a compliance schedule may be allowed in an NPDES permit. 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 limits. 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 any interim effluent limit 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 USEPA approves them.

M. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based limits consist of restrictions on biochemical oxygen demand (BOD), total suspended solids (TSS), oil and grease, and pH. The Fact Sheet (Attachment F) discusses the technology-based limitation derivations. 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.

In this Order, WQBELs 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 are 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. 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 CWA requirements.

N. Antidegradation Policy. 40 CFR 131.12 requires that State water quality standards include an antidegradation policy consistent with 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 it 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 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 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 Order and are therefore consistent with anti-backsliding requirements.

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

Q. Standard and Special Provisions. Attachment D contains standard provisions that apply to all NPDES permits in accordance with 40 CFR 122.41 and additional conditions that apply to specified categories of permits in accordance with 40 CFR 122.42. The Discharger must comply with all standard provisions and with those additional conditions that apply under 40 CFR 122.42. The Regional Water Board has also included in this Order special provisions that apply to the Discharger. The Fact Sheet (Attachment F) provides rationale for the special provisions contained in this Order.

R. Provisions and Requirements Implementing State Law. Section IV.E in this Order contains provisions that are included to implement State law only. Such provisions or requirements are not required or authorized under the federal CWA, and consequently, violations of such provisions or requirements are not subject to the enforcement remedies that are available for NPDES violations.

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

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

IT IS HEREBY ORDERED that this Order supersedes Order Nos. R2-2006-0063 and R2-2010-0056, except for enforcement purposes, and, in order to meet the provisions contained in CWC Division 7 (commencing with Section 13000) and regulations adopted thereunder, and the federal CWA provisions and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

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

B. The bypass of untreated or partially treated wastewater to waters of the United States is prohibited, except as provided for in the conditions stated in Attachment D, Sections I.G.2 and I.G.4, of this Order. For the rare and occasional bypass of the bio-filter or bio-tower for major maintenance, the Regional Water Board approves the bypass provided the Discharger demonstrates to the complete satisfaction of the Executive Officer that the bypass met the requirements set forth in the Federal Standard Provisions (Attachment D, Section I.G.3), and the bypass caused no lasting harm to beneficial uses as demonstrated through this Order's receiving water monitoring, specifically as required in Attachment E, Section VII.C.

C. The average dry weather flow, measured at Monitoring Location E-001, as described in the attached Monitoring and Reporting Plan (MRP) (Attachment E), shall not exceed 3.2 MGD. Average dry weather flow shall be determined over three consecutive dry weather months each year.

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

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations for Conventional and Non-Conventional Pollutants

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

Table 6. Effluent Limitations for Conventional and Non-Conventional Pollutants

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.	---	---	---	6.5	8.5

Footnote 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. **BOD_5 and TSS 85 Percent Removal:** The concentration-based average monthly percent removal of BOD_5 and TSS shall not be less than 85 percent, evaluated at Discharge Point 001, with compliance measured at Monitoring Location E-001, as described in the attached MRP (Attachment E).

3. **Enterococcus Bacteria:** Treated wastewater shall not exceed 35 most probable number (MPN) per 100 mL as a geometric mean of a minimum of 5 effluent samples collected over a calendar month. The Discharger shall comply with this limitation for Discharge Point 001, with compliance measured at Monitoring Location E-001, as described in the attached MRP (Attachment E).

B. Effluent Limitations for Toxic Pollutants

The Discharger shall comply with the following effluent limitations for Discharge Point 001, with compliance measured at Monitoring Location E-001, as described in the attached MRP (Attachment E).

Table 7. Effluent Limitations for Toxic Pollutants

Parameter	Units	Final Effluent Limitations (1)	
		AMEL	MDEL
Copper	µg/L	8.3	11.4
Dioxin-TEQ	µg/L	1.4×10^{-8}	2.8×10^{-8}
Benzo(a)Anthracene	µg/L	0.049	0.098
Total Ammonia	mg/L	1.6	4.7

Footnotes to Table 7:

(1) a. Limitations for toxic pollutants apply to the average concentration of all samples collected during the averaging period (daily = 24-hour period; monthly = calendar month).
b. All metals limitations are expressed as total recoverable metal.

C. Whole Effluent Acute Toxicity:

1. Representative effluent samples at Discharge Point 001, with compliance measured at Monitoring Location E-001, as described in the attached MRP, shall meet the following limits

for acute toxicity. Bioassays shall be conducted in compliance with MRP Section V.A. (Attachment E).

The survival of organisms in undiluted combined effluent shall be:

(1) An eleven (11)-sample median value of not less than 90 percent survival, and
(2) An eleven (11)-sample 90^{th} percentile value of not less than 70 percent survival.

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

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

   90th percentile: A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit if one or more of the past ten or less bioassay tests show less than 70 percent survival.

3. Bioassays shall be performed using the most up-to-date USEPA protocol and the requirements described in the Monitoring and Reporting Program (MRP), Section V.A. (Attachment E). 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).

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

D. Whole Effluent Chronic Toxicity:

1. There shall be no chronic toxicity in the discharge. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, or any other relevant measure of the health of an organism population or community.

   Compliance with this limit shall be determined by analyses of indicator organisms and toxicity tests. Compliance shall be measured at E-001, as described in the MRP (Attachment E).

2. The effluent chronic toxicity shall be expressed and reported in toxic units (TUc), where

   $$TU_c = 100/NOEC$$

   The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test.

3. The Discharger shall comply with the following tiered requirements based on results from representative samples of the effluent at Discharge Point 001, with compliance measured at E-001 as described in the MRP (Attachment E), meeting test acceptability criteria and MRP Section V.B. (Attachment E):

a. Conduct routine monitoring.

b. Accelerate monitoring after exceeding a single-sample maximum of 1 TUc.

c. Return to routine monitoring if accelerated monitoring does not exceed the "trigger" in (2), above.

d. If accelerated monitoring confirms consistent toxicity above the "trigger" in (2), above, initiate toxicity identification evaluation/toxicity reduction evaluation (TIE/TRE) in accordance with a workplan submitted in accordance with MRP Section V.B.3. (Attachment E) that addresses any and all comments from the Executive Officer.

e. Return to routine monitoring after appropriate elements of the TRE workplan are implemented and either the toxicity drops below "trigger" levels in (2), above, or, based on the TRE results, the Executive Officer authorizes a return to routine monitoring.

4. The Discharger shall comply with MRP Section V.B.3., which requires a "Chronic Toxicity Identification and Toxicity Reduction Study" in accordance with the schedule set forth therein.

5. The Discharger shall conduct routine monitoring with the test species and protocols specified in MRP Section V.B. (Attachment E). The Discharger shall also perform Chronic Toxicity Screening Phase monitoring as described in MRP Appendix E-1 (Attachment E). Chronic Toxicity Monitoring Screening Phase Requirements, Critical Life Stage Toxicity Tests and definitions of terms used in the chronic toxicity monitoring are identified in MRP Appendices E-1 and E-2 (Attachment E).

E. Reclamation Specifications – Marsh and Wetland Specification

1. Marsh Operation. The Discharger shall operate and maintain the marsh without chemical treatment (i.e., herbicides and algaecides) and implement all feasible measures prior to any chemical treatment. If chemical treatment is proposed, then such treatment shall be in accordance with the provisions of State General Permit Nos. CAG990004 (Discharge of Aquatic Pesticides to Surface Water for Vector Control) and CAG990005 (Discharge of Aquatic Pesticides for Weed Control to Waters of the United States), and the Basin Plan.

2. Marsh Management Plan. By November 1, 2011, the Discharger shall review and update its Marsh Management Plan, as appropriate, to ensure compliance with Receiving Water Limitations contained in this Order, Section V. At a minimum, this review shall include a proposal for monitoring the marsh for salinity, dissolved oxygen, temperature, and pH to take into account seasonal fluctuations and tidal gate operations. The Discharger shall also (1) include a map identifying the monitoring locations, (2) propose the frequency of monitoring at each location, and (3) develop an implementation schedule, as appropriate.

The Discharger shall describe in a separate section of its Annual Report, as required by the Monitoring and Reporting Program, Section IX.B (Attachment E), the results of its annual review of marsh management processes, and include an estimated time schedule to update its Marsh Management Plan to document any revisions in marsh management implemented in the previous year.

3. **Marsh Contingency Plan.** The Discharger shall continue to implement the following approved programs and plans: (a) a Marsh Contingency Plan for the protection of the marsh and Suisun Bay during contingency operations, (b) a program to minimize public contact with the treated wastewater, and (c) a special receiving water monitoring plan and program to assess impacts on nearshore biota.

   Annually, the Discharger shall review and update as necessary the Marsh Contingency Plan. The discharge of pollutants in violation of this Order where the Discharger has failed to develop and adequately implement a contingency plan will be the basis for considering such discharge a willful and negligent violation of this Order pursuant to CWC Section 13387. Plan revisions, or a letter stating that no changes are needed, shall be included in a separate section of the Discharger's Annual Report, as required by the Monitoring and Reporting Program, Section IX.B (Attachment E).

V. RECEIVING WATER LIMITATIONS

A. The discharges shall not cause the following in Peyton Slough:

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 will cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or that 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 — 7.0 mg/L, minimum (when tide gates are open)

   5.0 mg/L, minimum (when tide gates are closed)

   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 those specified above, the discharge shall not cause further reduction in ambient dissolved oxygen concentrations.

2. Dissolved Sulfide — Natural background levels

3. pH — Controllable water quality factors shall not cause changes greater than 0.5 units in normal ambient pH levels (ambient

	pH levels are 6.0 to 9.0 as shown in *Review of Receiving Water Limitation for pH* by Nute Engineering, October 2009)
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 CWA Section 303, or amendments thereto, the Regional Water Board may revise or modify this Order in accordance with such more stringent standards.

VI. PROVISIONS

A. Standard Provisions

1. Federal Standard Provisions. The Discharger shall comply with the Federal Standard Provisions included in this Order (Attachment D).

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 (MRP)

The Discharger shall comply with the MRP (Attachment E) and future revisions thereto, including applicable sampling and reporting requirements in the standard provisions listed in Section 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 will be modified as necessary to reflect updated WQOs and wasteload 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 condition should be modified.

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

e. Or as otherwise authorized by law.

The Discharger may request permit modification based on the above. The Discharger shall include with any such request appropriate antidegradation and anti-backsliding analyses.

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

a. Effluent Characterization for Selected Constituents

The Discharger shall continue to monitor and evaluate the discharge from Discharge Point 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 constituent increase over past performance. The Discharger shall investigate the cause of any such 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.3. 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 all the data no later than 180 days prior to the Order expiration date. The final report shall be submitted with the application for permit reissuance.

b. Ambient Background Receiving Water Study

The Discharger shall collect or participate in collecting background ambient receiving water monitoring data for priority pollutants for which the Regional Water Board is required to perform Reasonable Potential analyses and calculate effluent limitations. The data for the conventional water quality parameters (pH, salinity, and hardness) shall be sufficient to characterize these parameters in the receiving water at a point after the discharge has mixed with the receiving waters. This provision may be met, in part, through a collaborative study or a similar ambient monitoring program for San Francisco Bay. This Order may be reopened, as appropriate, to incorporate effluent limits or other requirements based on review of these data.

The Discharger shall submit, or cause to have submitted on its behalf, a final report that presents all these data 180 days prior to Order expiration. This final report shall be submitted prior to or with the application for permit reissuance.

c. Copper Translator Study

The Discharger submitted a copper translator study plan in April 2010 outlining the data collection necessary to establish dissolved-to-total metal translators in accordance with USEPA guidelines. The Discharger shall collect data for development of dissolved-to-total site-specific translators for copper in accordance with the following tasks and schedule:

Table 8. Site-Specific Copper Translator Study

Tasks	Compliance Date
1. Commence Implementation of Site-Specific Translator Study Plan The Discharger shall implement the site-specific translator study plan. The study will use field sampling data close to the discharge point and in the vicinity of the discharge point, or as otherwise provided for in the study plan.	January 1, 2011
2. Submit Site-Specific Translator Report The report shall document the results of the site-specific translator study and propose site-specific copper translators.	January 31, 2013

3. Best Management Practices and Pollution Minimization Program

a. Pollution Minimization Program

The Discharger shall continue to improve, in a manner acceptable to the Executive Officer, its existing Pollutant Minimization Program to minimize pollutant loadings to the Plant and therefore to the receiving waters.

b. Annual Pollution Prevention Report

The Discharger shall submit an annual pollution prevention report, acceptable to the Executive Officer, no later than August 31 of each calendar year. The annual report shall cover the preceding year (July 1 through June 30). Each annual report shall include at least the following information:

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

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

(3) *Identification of sources for the pollutants of concern*. This discussion shall address how the Discharger intends to estimate and identify pollutants sources. The

Discharger shall also identify sources or potential sources not directly within the Discharger's ability or authority to control, such as pollutants in the potable water supply and air deposition.

(4) *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 the tasks themselves or participate in a regional, State, or national group to 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.

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

(6) *Continuation of Public Outreach Program*. The Discharger shall prepare a public outreach program to communicate pollution 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 on the web. Information shall be specific to target audiences. The Discharger shall coordinate with other agencies as appropriate.

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

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

(9) *Evaluation of Pollutant Minimization Program and task effectiveness*. This Discharger shall use the criteria established in Provision VI.C.3.b.(7), above, to evaluate the Program's and tasks' effectiveness.

(10) *Identification of specific tasks and time schedules for future efforts*. Based on the evaluation, 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 (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:

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

(2) 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 Provision VI.C.3.c. above, the Discharger's Pollutant Minimization Program shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

(1) 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;

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

(3) 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;

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

(5) The annual P2 report required by Provision VI.C.3.b. shall specifically address the following items:

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

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

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

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

4. Reliability Status Report

a. The Discharger shall develop and maintain a Reliability Status Report for the Plant, which will allow the Regional Water Board to evaluate the reliability of the Discharger's system in preventing inadequately treated wastewater from being discharged into the receiving waters. The Reliability Status Report shall be maintained in usable condition and be available for reference and use.

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

c. The Discharger shall provide the Executive Officer, upon request, a summary describing the current status of its Reliability Status Report, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall also submit, by February 1 each year, a description or summary of its review and evaluation procedures and applicable changes to its Reliability Status Report.

5. Special Provisions for POTWs

a. Biosolids Management Practices Requirements

(1) The Discharger must dispose of all generated biosolids in a municipal solid waste landfill, use them as part of a waste-to-energy facility, reuse them by land application, or dispose of them in a sludge-only landfill in accordance with 40 CFR 503. If the Discharger desires to dispose of biosolids by a different method, it must request a permit modification to USEPA 180 days before start-up of the alternative disposal practice. All the requirements in 40 CFR 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) The Discharger shall not create a nuisance due to its biosolids treatment, storage and disposal or reuse, such that it results in objectionable odors, flies, or groundwater contamination.

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

(4) The Discharger shall not cause biosolid waste material to be in a position where it is or can be carried from the biosolids treatment and storage site and deposited in waters of the State.

(5) The Discharger shall have biosolids treatment and storage site facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in

the temporary storage site. Adequate protection is defined as protection from at least a 100-year storm and protection from the highest possible tidal stage that may occur.

(6) The Discharger shall submit an annual report to USEPA and the Regional Water Board containing monitoring results and pathogen and vector attraction reduction requirements as specified by 40 CFR 503 for biosolids that are applied to land, placed on a surface disposal site, or fired in a biosolids incinerator as defined in 40 CFR 503, and postmarked February 28 of each year for the period covering the previous calendar year.

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

(8) This Order does not authorize permanent on-site biosolids storage or disposal activities. 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 Regional 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 sludge regulations.

b. Sanitary Sewer Overflows and Sewer System Management Plan

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

The General Waste Discharge Requirements for Collection System Agencies (General Collection System WDRs), 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 Collection System WDRs and this Order, the General Collection 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, 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

Plant boundaries. Attachments D and G of this Order specify reporting requirements for unauthorized discharges from anywhere within the Plant downstream of the Plant boundaries.

6. Copper Action Plan

The Discharger shall implement monitoring and surveillance, pretreatment, source control and pollution prevention for copper in accordance with the following tasks and time schedule.

Table 9. Copper Action Plan

Task	Compliance Date
1. Review Potential Copper Sources The Discharger shall submit an inventory of potential copper sources to the discharge.	March 1, 2011
2. Implement Copper Control Program The Discharger shall submit a plan for and begin implementation of a program to reduce copper discharges identified in Task 1. For publicly owned treatment works, the plan shall consist, at a minimum, of the following elements: a. Provide education and outreach to the public (e.g., focus on proper pool and spa maintenance and plumbers' roles in reducing corrosion). b. If corrosion is determined to be a significant copper source, work cooperatively with local water purveyors to reduce and control water corrosivity, as appropriate, and ensure that local plumbing contractors implement best management practices to reduce corrosion in pipes. c. Educate plumbers, designers, and maintenance contractors for pools and spas to encourage best management practices that minimize copper discharges.	With annual pollution prevention report due August 31, 2011
3. Implement Additional Measures If the Regional Water Board notifies the Discharger that the three-year rolling mean copper concentration of the receiving water exceeds 2.8 µg/L, the Discharger shall evaluate the effluent copper concentration trend. If the trend is increasing, develop and begin implementing additional measures to control copper discharges.	Begin implementation of additional measures within 90 days of notification
4. Studies to Reduce Copper Pollutant Impact Uncertainties The Discharger shall conduct or cause to be conducted technical studies that investigate possible copper sediment toxicity and 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, dischargers may collaborate and conduct these studies as a group.	With annual pollution prevention report due August 31, 2011
5. Report Status of Copper Control Program The Discharger shall submit a report documenting copper control program implementation and addressing the effectiveness of the actions taken, including any additional copper controls required by Task 3, above, together with a schedule for actions to be taken in the next 12 months. Additionally, the Discharger shall report the findings and results of the studies completed, planned, or in progress under Task 4. Regarding the Task 4 studies, dischargers may collaborate and provide this information in a single report to satisfy this requirement for an entire group.	With annual pollution prevention report each year starting with August 31, 2011 report

7. Cyanide Action Plan

The Discharger shall implement monitoring and surveillance, pretreatment, source control and pollution prevention for cyanide in accordance with the following tasks and time schedule.

Table 10. Cyanide Action Plan

Task		Compliance Date
1.	**Review Potential Cyanide Contributors** The Discharger has submitted an inventory of potential sources of cyanide to the treatment plant (e.g., metal plating operations, hazardous waste recycling, etc.). Since no sources of cyanide were identified, Tasks 2 and 3 are not required, unless the Discharger receives a request to discharge detectable levels of cyanide to its treatment plant. If so, the Discharger shall notify the Executive Officer and implement Tasks 2 and 3.	Complete
2.	**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. Monitor each potential source identified 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 and potential 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.	With annual pollution prevention report due August 31, 2011
3.	**Implement Additional Measures** If the Regional Water Board notifies the Discharger that ambient monitoring shows cyanide concentrations of 1.0 µg/L or higher in the main body of San Francisco Bay, the Discharger shall commence actions to identify and abate cyanide sources responsible for the elevated ambient concentrations.	Begin implementation of additional measures within 90 days of notification
4.	**Report Status of Cyanide Control Program** The Discharger shall submit an annual report documenting implementation of the cyanide control program and addressing the effectiveness of actions taken, including any additional cyanide controls required by Task 3, above, together with a schedule for actions to be taken in the next 12 months.	With annual pollution prevention report each year starting with August 31, 2011 report

VII. COMPLIANCE DETERMINATION

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP Attachment A - Definitions (Attachment E), Fact Sheet

Section VI, and the Regional Standard Provisions (Attachment G). For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the priority pollutant concentration 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:

$$\textbf{Arithmetic mean} = \mu = \Sigma x / n$$

where:

Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL) is 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) is 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 organism's body.

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 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 are 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 are 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 is 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 is 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) is 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 pollutant total mass 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 the Code of Federal Regulations, Title 40, 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) are 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 PMP's goal 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 is 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 SIP Appendix 4 in accordance with SIP Section 2.4.2 or established in accordance with SIP Section 2.4.3. 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:

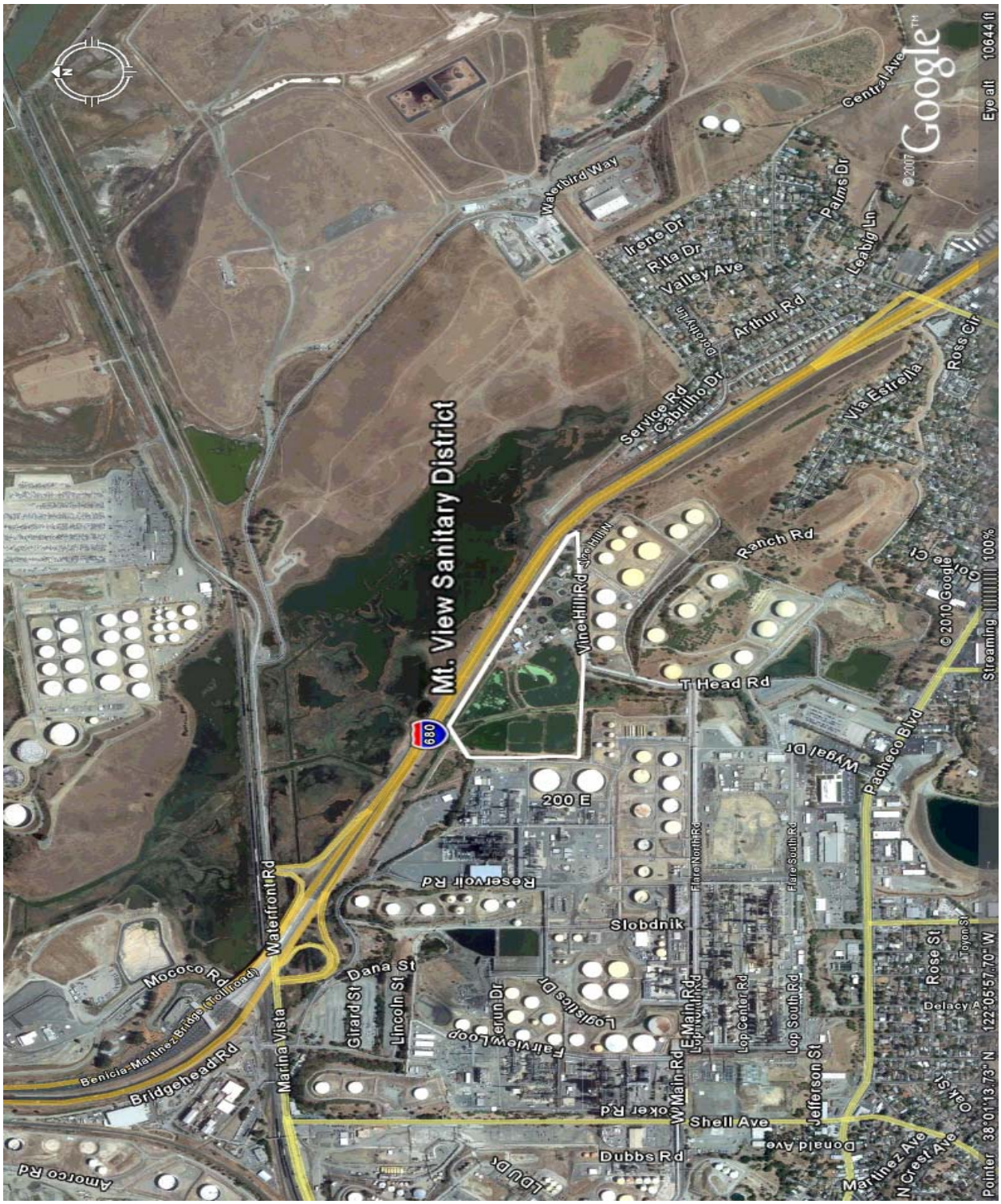
$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:

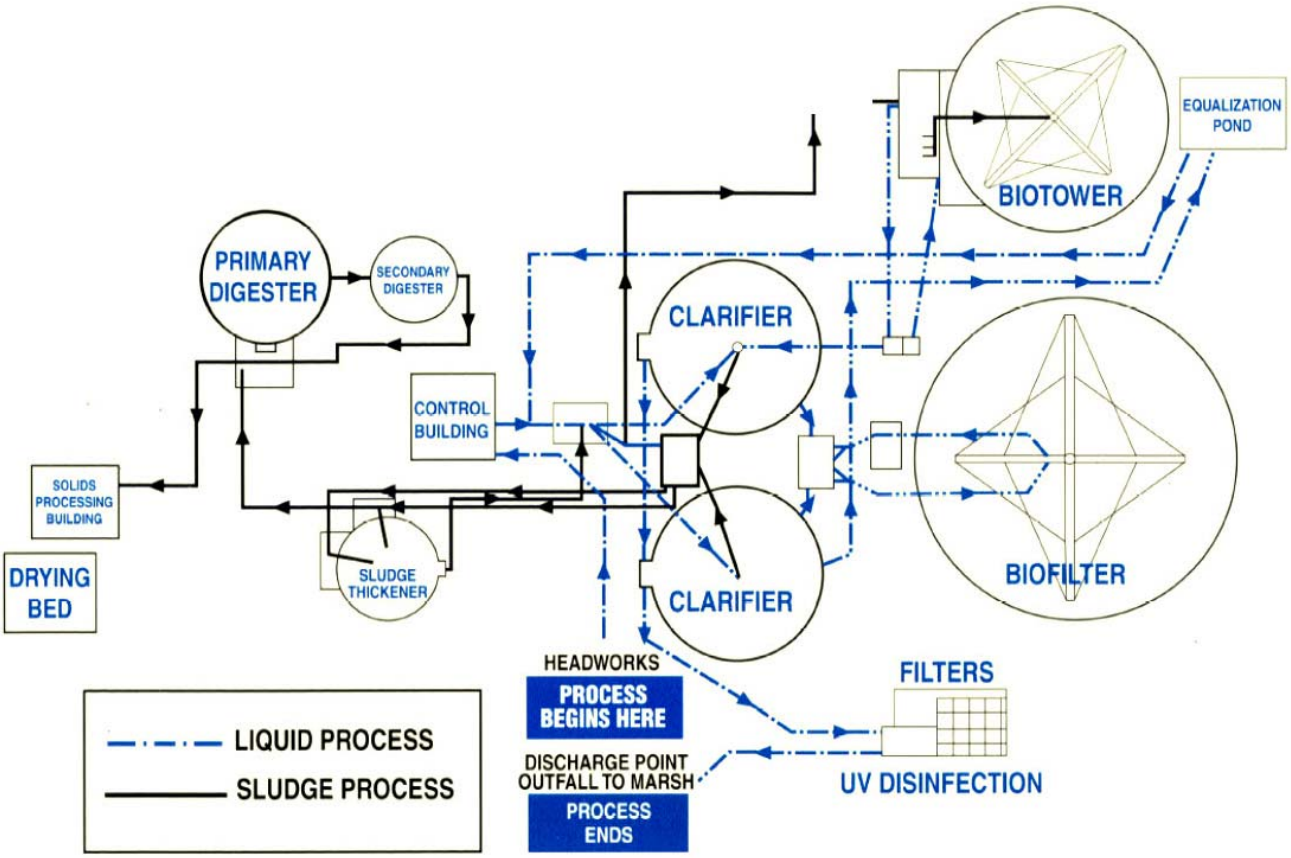
x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

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 Plant 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



ATTACHMENT D –STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of this Order's conditions. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or 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 CWA Section 307(a) for toxic pollutants and with standards for sewage sludge use or disposal established under CWA Section 405(d) 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 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); CWC, § 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 CWC, 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 bypass date. (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 CWC. (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 sample date, 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); CWC § 13267.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and 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 section, 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 Plant operation , a new authorization satisfying the requirements of Regional 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 data calculation and reporting 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 CWC provisions, 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 CWA Sections 301 or 306 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).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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Tables

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

National Pollutant Discharge Elimination System (NPDES) regulations at 40 CFR 122.48 require that all NPDES permits specify monitoring and reporting requirements. California Water Code (CWC) Sections 13267 and 13383 also authorize the Regional Water Quality Control Board (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 and with all Regional Standard Provisions (Attachment G). The Executive Officer may amend the MRP pursuant to U.S. Environmental Protection Agency (USEPA) regulations at 40 CFR Parts 122.62, 122.63, and 124.5.

B. The Discharger shall conduct all analyses using current USEPA methods that have been approved by the USEPA Regional Administrator pursuant to 40 CFR 136.4 and 40 CFR 136.5, or equivalent methods that are commercially and reasonably available and that provide quantification of sampling parameters and constituents sufficient to evaluate compliance with applicable effluent limits and to perform reasonable potential analysis. Equivalent 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	I-001	At a point in the Plant headworks at which all waste tributary to the treatment process system is present and preceding any phase of treatment, formerly A-1.
Effluent	E-001	At a point in the treatment facilities prior to the point of discharge to Moorhen Marsh, and at which point treatment of the wastewater is complete, and all waste tributary to this point is present.
Effluent	B-Weir	At the point where treated water is discharged from Moorhen Marsh to Peyton Slough.
Reclamation	McN-A	At a point on the northwestern part of McNabney Marsh.
Reclamation	McN-B	At a point in McNabney Marsh, south of the corner of Waterbird Way and Waterfront Road.
Reclamation	McN-C	At a point in the southeastern part of McNabney Marsh.
Receiving Water	C-R	At a point in Upper Peyton Slough, located upstream of the Pond A discharge weir.

Type of Sampling Location	Monitoring Location Name	Monitoring Location Description
Receiving Water	C-1	At a point in Upper Peyton Slough, located within 50 feet downstream of the Pond B discharge weir.
Receiving Water	C-2	At a point in Upper Peyton Slough, located at the downstream headwall of the culvert under Interstate 680.
Receiving Water	C-3	At a point in Upper Peyton Slough, located 30 feet upstream of the culvert under Waterfront Road.

III. INFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor Plant influent at I-001 as follows.

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

Parameter	Units	Sample Type	Minimum Sampling Frequency
Biochemical Oxygen Demand (BOD)	mg/L	C-24	1/Week
Total Suspended Solids (TSS)	mg/L	C-24	1/Week
Cyanide	mg/L	G	1/Quarter

Footnotes to Table E-2:
Units:
mg/L = milligrams per liter
G = Grab

IV. EFFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor treated Plant effluent at E-001, as follows.

Table E-3. Effluent Monitoring – Monitoring Location E-001

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow Rate [1]	MGD	Cont	Cont
pH [2]	s.u.	G	1/Day
BOD_5	mg/L	C-24	1/Week
	kg/day	C-24	1/Week
TSS	mg/L	C-24	1/Week
	kg/day	C-24	1/Week
BOD_5 and TSS percent removal [3]	%	Calculate	1/Month
Oil and Grease [4]	mg/L	C-24	1/Quarter
Enterococcus Bacteria	MPN/100mL	G	3/Week
Temperature	°C	G	1/Day
Hardness	mg/L as $CaCO_3$	C-24	1/Month
Acute Toxicity [5]	% survival	C-24	1/Month
Chronic Toxicity [6]	TUc	C-24	1/Year
Dissolved Oxygen (DO) [7]	mg/L	G	1/Week

Parameter	Units	Sample Type	Minimum Sampling Frequency
	% Saturation	G	1/Week
Dissolved Sulfides (7)	mg/L	G	1/Week
Copper	µg/L	(9)	1/Month
Benzo(a)Anthracene	µg/L	(9)	2/Year
Dioxin-TEQ	µg/L	(9)	1/Year
Total Ammonia (8)	mg/L as N	G	1/Month
Unionized Ammonia (8)	mg/L as N	Calculate	1/Month
Cyanide	mg/L	G	1/Quarter
Standard Observations	--	--	1/Month
Remaining Priority Pollutants	µg/L	(9)	1/Year

Footnotes to Table E-3:

Units:

MG = million gallons
MGD = million gallons per day
s.u. = standard units
°C = degrees Celsius
mg/L = milligrams per liter
kg/d = kilograms per day
µg/L = micrograms per liter
MPN/100 mL = most probable number per 100 milliliters
G = Grab
C-24 = 24-hour Composite
Cont = Continuous

(1) Flow shall be monitored continuously, and the following shall be reported in Self Monitoring Reports:
a. Daily average flow rate (MGD)
b. Daily total flow volume (MG)
c. Monthly average flow rate (MGD)
d. Monthly total flow volume (MG), and
e. Average daily maximum and average daily minimum flow rates (MGD) for each month.

(2) If pH is monitored continuously; the minimum and maximum pH values for each day shall be reported in SMRs.

(3) BOD_5 and TSS percent removal shall be reported for each calendar month in accordance with Effluent Limitations IV.A.2. BOD and TSS effluent samples shall be collected simultaneously with influent samples.

(4) Each oil and grease sample 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.

(5) Acute bioassay tests shall be performed in accordance with MRP Section V.A.

(6) Critical life stage toxicity tests shall be performed and reported in accordance with the Chronic Toxicity Requirements specified in MRP Section V.B. Accelerated monitoring frequency is specified in MRP Provision V.B.1.e., except during the period when the Discharger is conducting the "Chronic Toxicity Identification and Toxicity Reduction Study" as required by MRP Provision V.B.3, when the sampling frequency is to be as specified for the study.

(7) Sulfide samples shall be run when dissolved oxygen is less than 2.0 mg/L.

(8) The Discharger shall calculate the un-ionized ammonia fraction using the effluent water pH and temperature at the time of sampling. See Fact Sheet, Section IV.D.4.c.(5) for the un-ionized ammonia calculation.

(9) Sampling for priority pollutants is described in Attachment G.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

The Discharger shall monitor acute toxicity at the compliance location E-001 and at the frequencies specified in Table E-3 as follows.

A. Whole Effluent Acute Toxicity

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

2. Test organisms shall be fathead minnow unless the Executive Officer specifies in writing otherwise.

3. All bioassays shall be performed using the most sensitive species based on the most recent screening test results and in accordance with the most up-to-date protocols in 40 CFR 136, currently in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms,* 5th Edition.

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

5. The sample shall be taken from secondary treated effluent after disinfection. Monitoring of the bioassay water shall include, on a daily basis, the following parameters: pH, dissolved oxygen, ammonia (if toxicity is observed), temperature, hardness, and alkalinity. These results shall be reported in the monthly Self-Monitoring Reports or as specified by the Regional Water Board.

   If a violation of acute toxicity requirements occurs, the bioassay test shall be repeated with new fish as soon as practical and shall be repeated until a test fish survival rate of 90 percent or greater is observed. If the control fish survival rate is less than 90 percent, the bioassay test shall be restarted with new fish and shall continue as soon as practical until an acceptable test is completed (i.e., control fish survival rate is 90 percent or greater).

B. Whole Effluent Chronic Toxicity

1. Chronic Toxicity Monitoring Requirements

   a. *Sampling*. The Discharger shall collect 24-hour composite effluent samples at E-001, as specified in Table E-3 above, for critical life stage toxicity testing as indicated below. For toxicity tests requiring renewals, 24-hour composite samples collected on consecutive days are required.

   b. *Test Species*. The test species shall be *Americamysis bahia*. The Executive Officer may change the test species if data suggest that another test species is more sensitive to the discharge.

   c. *Methodology.* Sample collection, handling, and preservation shall be in accordance with USEPA protocols. In addition, bioassays shall be conducted in compliance with the most recently promulgated test methods, as shown in Appendix E-1 and "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," currently fourth Edition (EPA-821-R-02-013), with exceptions granted the

Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).

d. Dilution Series. The Discharger shall conduct tests at 5%, 10%, 25%, 50%, and 100%. The "%" represents percent effluent as discharged. The Discharger may use a buffer only after obtaining written approval from the Executive Officer.

e. *Conditions for Accelerated Monitoring.* The Discharger shall accelerate monitoring to monthly when the following condition is exceeded:

Single sample maximum value of 1 TUc.

2. Chronic Toxicity Reporting Requirements

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

i. Sample dates

ii. Test initiation date

iii. Test species

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

v. NOEC values in percent effluent

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

vii. TUc values (100/NOEC, $100/IC_{25}$, or $100/EC_{25}$)

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

ix. NOEC and LOEC values for reference toxicant tests

x. IC_{50} or EC_{50} values for reference toxicant tests

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

b. *Compliance Summary.* The results of the chronic toxicity testing shall be provided in the most recent Self-Monitoring Report and shall include a summary table of chronic toxicity data from at least eleven of the most recent samples. The information in the table shall include the items listed above under 2.a., item numbers i, iii, v, vi (IC_{25} or EC_{25}), vii, and viii.

3. Chronic Toxicity Reduction Evaluation (TRE)

   a. To be ready to respond to toxicity events, the Discharger shall prepare a generic TRE work plan within 90 days of the effective date of this Order. The Discharger shall review and update the work plan as necessary to remain current and applicable to the discharge and discharge facilities.

   b. Within 30 days of exceeding a trigger for accelerated monitoring, the Discharger shall submit a specific TRE work plan, which shall be the generic work plan revised as appropriate for the toxicity event after consideration of available discharge data.

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

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

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

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

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

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

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

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

   e. The TRE may be ended at any stage if monitoring finds there is no longer consistent toxicity (complying with Effluent Limitations Section IV.D. of this Order).

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

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

   h. Many recommended TRE elements parallel required or recommended efforts of source control, pollution prevention, and storm water control programs. TRE efforts shall be coordinated with such efforts. To prevent duplication of efforts, evidence of complying

with requirements or recommended efforts of such programs may be acceptable to comply with TRE requirements.

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

VI. RECLAMATION MONITORING REQUIREMENTS

The Discharger shall monitor the marsh reclamation area according to Table E-4, below.

Table E-4. Monitoring Locations B-Weir, McN-A, McN-B, and McN-C

Parameter	Units	Sample Type	Minimum Sampling Frequency
Turbidity	NTU	Grab	Monthly
pH (1)	standard unit	Grab	Monthly
Temperature (1)	ºC	Grab	Monthly
Dissolved Oxygen (2)	mg/L	Grab	Monthly
	percent saturation	Grab	Monthly
Dissolved Sulfides (2)	mg/L	Grab	Monthly
Total Ammonia (1)	mg/L as N	Grab	Quarterly
Unionized Ammonia (3)	mg/L as N	Calculate	Quarterly
Salinity	ppt	Grab	Monthly
Hardness (as $CaCO_3$)	mg/L	Grab	Monthly
Standard Observations (4)	--	--	Monthly

Footnotes to Table E-4:

Units:
NTU = nephelometric turbidity units
ºC = degree Celsius
mg/L = milligrams per liter
ppt = parts per thousand

(1) Samples for pH and temperature shall be taken concurrently with total ammonia samples.
(2) Sulfide samples shall be run when dissolved oxygen is less than 2.0 mg/L.
(3) The unionized fraction shall be calculated based on the total ammonia, pH, total dissolved solids or salinity, and temperature.
(4) Standard Observations are described in Attachment G.

VII. RECEIVING WATER MONITORING REQUIREMENTS

A. 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 San Francisco Bay. The Discharger's participation and support of the RMP is used in consideration of the level of receiving water monitoring required by this Order.

B. The Discharger shall monitor receiving water at Monitoring Locations C-R and C-1 to C-3, according to Table E-5 below.

Table E-5. Receiving Water Monitoring – Monitoring Locations C-R, C-1 to C-3

Parameter	Units	Sample Type	Minimum Sampling Frequency
pH [1]	s.u.	G	1/Month
Temperature [1]	°C	G	1/Month
Turbidity	NTU	G	2/Year
Dissolved Oxygen [2]	mg/L	G	1/Month
	% saturation	G	1/Month
Hardness	mg/L as $CaCO_3$	G	1/Month
Total Ammonia [1]	mg/L as N	G	1/Month
Dissolved Sulfides [2]	mg/L	G	1/Month
Standard Observations [3]	---	Observation	1/Month

Footnotes to Table E-5:

Units:

s.u. = standard units
°C = degrees Celsius
mg/L = milligrams per liter

(1) Samples for pH and temperature shall be taken concurrently with ammonia samples.
(2) Sulfide samples shall be run when dissolved oxygen is less than 2.0 mg/L.
(3) Standard observations are described in Attachment G.

C. The Discharger shall monitor total ammonia, pH, temperature, and salinity daily during at least the first bypass during major maintenance of the bio-filter or bio-tower that occurs during the term of this Order. The Discharger shall also conduct an assessment using a qualified biologist to evaluate impacts, if any, from the bypass on receiving water beneficial uses (e.g., to biota), especially in the vicinity of the receiving water outfall before, during, and following the first anticipated bio-filter or bio-tower bypass. The purpose of the assessment before bypass is to establish a baseline for comparison. When notice of an anticipated bypass of the bio-filter or bio-tower is provided to the Executive Officer of the Regional Water Board, the Discharger shall include a proposal for how the assessment will be conducted. This assessment may be combined with data collected from previous bypasses, and if possible should be conducted during a different time of the year than previous assessments to account for seasonal variability. If the Executive Officer determines that results are inconclusive, evaluation of additional bypasses shall be required.

VIII. OTHER MONITORING REQUIREMENTS

The Discharger shall adhere to the sludge monitoring requirements of 40 CFR 258 (for landfill disposal) or 40 CFR 503 (for land application).

IX. MODIFICATIONS TO THE REGIONAL STANDARD PROVISIONS

The monitoring that the Regional Standard Provisions (Attachment G, section III.A.3.b) requires for bypasses shall not be required for bio-filter or bio-tower bypasses. Instead, effluent monitoring for total ammonia, pH, and temperature only is required for bypasses of 1 to 3 hours, and receiving water monitoring and biological assessment for bypasses lasting 1 to 3 days are required pursuant to Section VII.C. of this MRP.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

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 (www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS website will provide additional directions for SMR submittal in the event of service interruption of electronic submittal.

2. The Discharger shall submit monthly 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. Monthly SMRs shall be due on the 30th day following the end of each calendar month, covering samples collected during that calendar month. Annual Reports shall be due on February 1 following each calendar year.

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

Table E-6. Monitoring Periods and Reporting Schedule

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

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period
Per Discharge Event	Anytime during the discharge event or as soon as possible after aware of the event	At a time when sampling can characterize the discharge event

4. 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 Plant is operating in compliance with interim and final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

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

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

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

C. Discharge Monitoring Reports (DMRs)

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 notified by the State or Regional Water Board, the Discharger shall submit hard copy DMRs.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharge shall submit the original DMR and one copy of the DMR to 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.C.2 (Special Studies, Technical Reports, and Additional Monitoring Requirements) of this Order with the first monthly SMR following the respective due dates.

APPENDIX E-1

CHRONIC TOXICITY
DEFINITION OF TERMS AND SCREENING PHASE REQUIREMENTS

I. Definition of Terms

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

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

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

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

II. Chronic Toxicity Screening Phase Requirements

A. The Discharger shall perform screening phase monitoring:

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

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

B. Screening phase design shall, at a minimum, consist of the following elements:

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

2. Two stages:

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

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

3. Appropriate controls.

4. Concurrent reference toxicant tests.

5. Dilution series with a control and five effluent concentrations (including 100% effluent) and using a dilution factor ≥ 0.5.

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

APPENDIX E-2

SUMMARY OF TOXICITY TEST SPECIES REQUIREMENTS

Table AE-1. Critical Life Stage Toxicity Tests for Estuarine Waters

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

Toxicity Test References:

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

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

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

Toxicity Test Reference:

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

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

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

Footnotes to Table AE-3:

1. The freshwater species may be substituted with marine species if:
   a. The effluent salinity is above 1 part per thousand (ppt) greater than 95 percent of the time, or
   b. The effluent ionic strength (TDS or conductivity) at the test concentration used to determine compliance is documented to be toxic to the test species.
2. a. Marine/Estuarine refers to receiving water salinities greater than 1 ppt at least 95 percent of the time during a normal water year.
   b. Fresh refers to receiving water with salinities less than 1 ppt at least 95 percent of the time during a normal water year.

ATTACHMENT F - FACT SHEET

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ATTACHMENT F – FACT SHEET

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

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in California. Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined 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 Mt. View Sanitary District Wastewater Treatment Plant (Plant).

Table F-1. Facility Information

WDID	2 071029001
Discharger	Mt. View Sanitary District
Name of Facility	Mt. View Sanitary District Wastewater Treatment Plant and its Collection System
Facility Address	3800 Arthur Road
	Martinez, CA 94553
	Contra Costa County
Facility Contact, Title, Phone	Michael D. Roe, District Manager, (925) 228-5635 Ext 32
Authorized Person to Sign and Submit Reports	Michael D. Roe, District Manager, (925) 228-5635 Ext 32
Mailing Address	P.O. Box 2757, Martinez, CA 94553
Billing Address	P.O. Box 2757, Martinez, CA 94553
Type of Facility	Publicly Owned Treatment Works (POTW)
Major or Minor Facility	Major
Threat to Water Quality	2
Complexity	A
Pretreatment Program	No
Reclamation Requirements	Producer
Facility Permitted Flow	3.2 million gallons per day (MGD) average dry weather design capacity
Facility Design Flow	3.2 MGD (average dry weather design capacity) 10.94 MGD (peak wet weather design capacity)
Watershed	Suisun
Receiving Water	Peyton Slough, a tributary to Carquinez Strait
Receiving Water Type	Estuarine
Service Areas	City of Martinez
Service Area Population	23,000

A. The Mt. View Sanitary District (hereinafter "Discharger") owns and operates the Mt. View Sanitary District Wastewater Treatment Plant (Plant), a publicly-owned treatment works, and its associated collection systems. The Plant provides advanced secondary treatment of the wastewater collected from its service areas and discharges to Peyton Slough, a tributary to Carquinez Strait.

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

B. The discharge of treated wastewater from the Plant to Peyton Slough, a water of the United States, is currently regulated under NPDES Permit No. CA0037770 through Order No. R2-2006-0063 (hereinafter "previous Order"), which was adopted on September 13, 2006, and expired on May 17, 2010. The discharge is currently regulated under Regional Water Board Order No. R2-2007-0077 (NPDES Permit CA0038849), which supersedes all requirements on mercury from wastewater discharges in the Region. This Order does not affect the mercury permit. The Discharger is also covered under Regional Water Board Order No. R2-2010-0056, which amended the Discharger's permit to implement cyanide site specific objectives. This Order supersedes Order No. R2-2010-0056.

C. The Discharger filed a Report of Waste Discharge and submitted an application for renewal of its waste discharge requirements (WDRs) and NPDES permit dated November 18, 2009. The application was complete and the previous Order was administratively extended.

II. FACILITY DESCRIPTION

A. Description of Wastewater Treatment

The Discharger owns and operates the Plant that provides advanced secondary treatment for domestic, commercial, and some industrial wastewater from unincorporated areas of Martinez and portions of the City of Martinez. The Discharger has a current average dry weather design treatment capacity of 3.2 million gallons per day (MGD), and can treat peak wet weather flows up to 10.94 MGD. The discharge flow rate at Discharge Point 001 from September 2008 to August 2009 averaged 1.7 MGD with a maximum daily effluent flow rate of 6.4 MGD. The Plant serves an estimated population of 23,000 with 270 businesses over a 4,100 acre service area.

The treatment system consists of screening, primary clarification, trickling filtration, biotower, secondary sedimentation, advanced secondary sand filtration, and UV disinfection. Following disinfection, effluent is discharged to a constructed marsh (Moorhen Marsh) for additional treatment. The marsh discharges to Peyton Slough, which flows to a natural marsh (McNabney Marsh), which then drains downstream to Peyton Slough and ultimately flows to Carquinez Strait.

Sludge is thickened, anaerobically digested, and dewatered in a centrifuge, and placed as an alternative daily cover at the B&J Landfill in Dixon. Seasonally, sludge volume is further reduced in drying beds prior to placement in the landfill. Runoff from the drying beds is collected and pumped back to the headworks.

The Discharger's wastewater collection system includes 110 miles of sewer collection lines and four pump stations.

The Discharger collects and directs all Plant storm water runoff to the headworks and therefore is exempt from the requirements of the statewide storm water General Permit (*WDRs for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities*, NPDES General Permit No. CAS000001).

Attachment B provides a Plant map. Attachment C provides a Plant flow schematic.

B. Discharge Point and Receiving Waters

Table F-2 below indicates the discharge point location and receiving water. Peyton Slough is located within the Suisun Watershed and is tributary to Carquinez Strait.

Table F-2. Outfall Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Secondary Treated Municipal Wastewater	38º 01' 16" N	122º 06' 13" W	Peyton Slough

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

Effluent limitations contained in the previous Orders (Nos. R2-2006-0063 and R2-2010-0056) and the Mercury Watershed Permit (Order No. R2-2007-0077), and representative monitoring data from the term of the previous Order, collected during the discharge season, are as follows:

Table F-3. Previous Effluent Limitations and Monitoring Data for Conventional and Non-Conventional Pollutants for Discharge Point 001

Parameter	(units)	Effluent Limitations			Monitoring Data (9/06 to 11/09)		
		Monthly Average	Weekly Average	Daily Maximum	Highest Monthly Average	Highest Weekly Average	Highest Daily Discharge
BOD_5	mg/L	30	45	---	7.5	---	14
TSS	mg/L	30	45	---	15	---	36
Oil and Grease	mg/L	10	---	20	DNQ 2.9	---	DNQ 2.9
Total Ammonia	mg/L	8 (6 as annual average)	---	---	1.7 (0.33 as annual average)		
pH	s.u.	Within 6.5 – 8.5			Minimum – 6.5 Maximum – 7.9		
Total Coliform Bacteria	MPN/ 100 mL	*June 1 to October 31:* 5-day moving median of MPN values not to exceed 23 MPN/100mL, and no single sample to exceed 240 MPN/100 mL. *November 1 to May 31:* When flows exceed 1.85 MGD, 5-day moving median of MPN values not to exceed 240 MPN/100mL, and no single sample to exceed 10,000 MPN/100 mL.			Maximum 5-day median: 114 (June 1-Oct 31), 3,200 (Nov 1-May 31) Maximum Single Sample: 560 (June 1-Oct 31), 16,000 (Nov 1-May 31)		

Footnotes to Table F-3:
BOD = biological oxygen demand
TSS = total suspended solids
mg/L = milligrams per liter
s.u. = standard units

MPN/100 mL = Most Probable Number per 100 milliliters
DNQ = detected but not quantified (value is less than the reporting limit, but greater than or equal to the laboratory method detection limit).

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

Parameter	Units	Final Limits		Interim Limits		Monitoring Data (9/06 to 11/09)
		Daily Maximum	Monthly Average	Daily Maximum	Monthly Average	Highest Daily Concentration
Mercury (1)	µg/L	0.027	0.025	---	--	0.35
Copper	µg/L	8.3	11.4	---	---	8.2
Cyanide (2)	µg/L	15	6.5	5.5	---	DNQ 2.5

Footnotes to Table F-4:
µg/L = micrograms per liter
DNQ = detected but not quantified (value is less than the reporting limit, but greater than or equal to the laboratory method detection limit).
(1) The Mercury Watershed Permit, Order No. R2-2007-0077, establishes these limits. 0.027 ug/L is an average weekly effluent limit.
(2) The Copper and Cyanide Site Specific Objectives Amendment, R2-2010-0056, established these limits.

D. Compliance Summary

The Discharger violated its total coliform limits three times and its mercury limits twice during the previous Order's term. The Discharger conducted 62 acute toxicity tests during the previous Order's term. The minimum percent survival observed was 80 percent; therefore, there were no violations of the acute toxicity limitation. There were no violations of any other provisions of the previous Order.

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 USEPA, and CWC Chapter 5.5, Division 7 (commencing with Section 13370). It serves as an NPDES permit for point source discharges from the Plant to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to CWC Article 4, Chapter 4, Division 7 (commencing with Section 13260).

B. California Environmental Quality Act (CEQA)

Under CWC Section 13389, this action to 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 groundwater. It also includes implementation programs to achieve water quality objectives. The Basin Plan was adopted by the Regional

Water Board and approved by the State Water Board, the Office of Administrative Law, and USEPA. Requirements of this Order implement the Basin Plan.

The Basin Plan does not specifically identify beneficial uses for Peyton Slough, but does identify beneficial uses for Carquinez Strait, to which Peyton Slough is tributary. Table F-5 lists the beneficial uses of Carquinez Strait. State Water Board Resolution No. 88-63 establishes State policy that all waters, with certain exceptions, are to be considered suitable or potentially suitable for municipal or domestic supply (MUN). Because of the marine influence on receiving waters of the San Francisco Bay, total dissolved solids levels commonly (and often significantly) exceed 3,000 mg/L; therefore, the receiving waters qualify for an exception to State Water Board Resolution No. 88-63, and the MUN designation does not apply to Carquinez Strait.

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.

Table F-5. Basin Plan Beneficial Uses of Carquinez Strait

Discharge Point	Receiving Water Name	Beneficial Uses
001	Peyton Slough, a tributary to Carquinez Strait	Industrial Service Supply (IND) Ocean, Commercial, and Sport Fishing (COMM) Fish Spawning (SPWN) Estuarine Habitat (EST) Wildlife Habitat (WILD) Water Contact Recreation (REC1) Non-Contact Water Recreation (REC2) Navigation (NAV) Fish Migration (MIGR) Preservation of Rare and Endangered Species (RARE)

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 appliy in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that apply in the State. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority toxic pollutants.

3. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (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 that 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 (WQS) 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 through State Water Board Resolution 68-16, which incorporates the federal antidegradation policy where it 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 is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16. This Order continues the status quo with respect to the level of discharge authorized in the previous permit and thus there will be no change in water quality beyond the level that was authorized in the last permit. The limitations in this Order comply with antidegradation requirements and meet the requirements of the SIP because they hold the Discharger to performance levels that will neither cause nor contribute to water quality impairment, nor further water quality degradation. This is because this Order does not provide for an increase in the permitted design flow, allow for a reduced level of treatment, or increase effluent limitations.

   Because antidegradation requirements are met, there will be no lowering of water quality beyond the current level authorized in the previous permit, which is the baseline by which to measure whether degradation will occur. Therefore, further analysis in this permit is unnecessary, and findings authorizing degradation are thus unnecessary.

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 effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

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

In November 2006, USEPA approved a revised list of impaired water bodies prepared by the State [the 303(d) list] pursuant to CWA Section 303(d), which requires identification of water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. Carquinez Strait appears on the 303(d) list due to chlordane, DDT, dieldrin, dioxins and furans, mercury, PCBs, selenium, and exotic species. The SIP requires final effluent limitations for all 303(d)-listed pollutants to be consistent with total maximum daily loads and associated wasteload allocations. The discharge of mercury from the

Plant is regulated by Regional Water Board Order No. R2-2007-0077, which implements a mercury TMDL.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into 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 technology-based limitations and standards; and 40 CFR 122.44(d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain numeric and narrative water quality objectives (WQOs) to protect receiving water beneficial uses.

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

A. Discharge Prohibitions

1. **Discharge Prohibition III.A** (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 CWC Section 13260, which requires filing a Report of Waste Discharge before discharges can occur. Discharges not described in the Report of Waste Discharge, and subsequently in this Order, are prohibited.

2. **Discharge Prohibition III.B** (No bypass or overflow of untreated or partially treated wastewaters): This prohibition is based on 40 CFR 122.41(m). The conditional approval for bio-filter and bio-tower bypass is based on 40CFR 122.41(m)(4)(ii). Though already a part of the exceptions in the discharge prohibition itself, the conditional approval is included for clarity because the Discharger has raised this issue during permit reissuance. The Discharger verbally reported that it must bypass the bio-filter or bio-tower for major maintenance roughly every one to two years for a few days at a time. Also, there is no feasible means to provide redundancy for the bio-filter or bio-tower treatment nor is there large enough storage to avoid this bypass. 40CFR 122.41(m)(4)(ii) allows for anticipated bypasses only when they meet three conditions: (1) they are unavoidable to prevent loss of life, personal injury, or severe property damage; (2) there are no feasible alternatives; and (3) the Discharger submits required notices. Under these conditions, anticipated bypasses may or may not be approved after considering their adverse effects. Because the possible adverse effects of such a bypass are unknown at this time, the Regional Water Board cannot pre-approve of such bypasses in this permit. Instead, this permit would authorize the Executive Officer to approve such a bypass, but only if (1) the Discharger can demonstrate that the bypass is in compliance with the three conditions of 40CFR 122.41(m)(4)(i) (restated in Attachment D Federal Standard Provision, section I.G.3), and (2) the bypass caused no lasting harm to beneficial uses. This latter condition would be determined through receiving water monitoring and assessment required in the MPR Section VII.C (page E-9).

3. **Discharge Prohibition III.C** (Average dry weather flow not to exceed dry weather design capacity): This prohibition is based on the Plant design treatment capacity. Exceedance of

the Plant's average dry weather flow design capacity of 3.2 MGD may result in lowering the reliability of achieving compliance with permit requirements.

4. **Discharge Prohibition III. D** (No sanitary sewer overflows to waters of the United States): Basin Plan Table 4-1, Discharge Prohibition No. 15, and the CWA prohibit the discharge of wastewater to surface waters except as authorized under an NPDES permit. Publicly-owned treatment works must achieve secondary treatment standards, at a minimum, and any more stringent limitations 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. Shallow Water Discharge and Basin Plan Discharge Prohibition 1

Basin Plan Table 4-1, Discharge Prohibition 1, prohibits discharges not receiving a minimum 10:1 initial dilution or to dead end sloughs, but Basin Plan Section 4 allows for exceptions in certain circumstances. This Order grants the Discharger an exception for discharges to Peyton Slough based on the following rationale.

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

- An inordinate burden would be placed on the discharger relative to the beneficial uses protected and an equivalent level of environmental protection can be achieved by alternate means, such as an alternative discharge site, a higher level of treatment, and/or improved treatment reliability.

- A discharge is approved as part of a reclamation project; or

- It can be determined that net environmental benefits will be derived as a result of the discharge.

The Basin Plan further states:

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

Partly to address these types of discharges, the Regional Water Board adopted Resolution No. 94-086 entitled, *Policy on the Use of Wastewater to Create, Restore, and/or Enhance Wetlands*. Pursuant to this resolution, the Regional Water Board has historically granted an exception to Prohibition 1 for this Discharger, finding that the use of treated wastewater to support a 20-acre constructed marsh is a reclamation program that has demonstrated a net environmental benefit. This Order continues this exception based on the Discharger's continued reclamation program.

1. The Discharger maintains and implements a significant reclamation project. The effluent from the Plant sustains a 20-acre constructed marsh for wastewater treatment, Moorhen

Marsh, which also provides high quality wildlife habitat for indigenous and migrating birds and animal species and results in a net environmental benefit. The Discharger also actively manages the natural downstream marsh, McNabney Marsh, with assistance from the Peyton Slough Wetland Advisory Committee. It accepts wastewater discharges and is also operated to allow tidal action for improved water circulation and quality. This marsh provides important wildlife and aquatic habitat.

2. To address the Discharger's treatment reliability, Provision VI.C.4.a. of this Order requires the Discharger to submit a Reliability Status Report to ensure continued and future collection and treatment system reliability and qualification for an exception to Discharge Prohibition 1.

C. Technology-Based Effluent Limitations

1. Scope and Authority

CWA Section 301(b) requires USEPA to develop secondary treatment standards for publicly-owned treatment works at a level of effluent quality attainable through applying secondary or equivalent treatment. USEPA promulgated such technology-based effluent guidelines at 40 CFR Part 133. These secondary treatment regulations include the following minimum requirements that apply to Plant discharges.

Table F-6. Secondary Treatment Requirements

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 unit	6.0 - 9.0	

2. Applicable Effluent Limitations

This Order establishes the following effluent limits for conventional and non-conventional pollutants at Discharge Point 001 with compliance measured at Monitoring Location E-001.

a. BOD_5 and TSS. The BOD_5 and TSS effluent limitations, including the 85 percent removal requirement, are technologically feasible for advanced wastewater treatment technologies. 40 CFR 122.45(d) specifies that discharge limitations for publicly-owned treatment works are to be stated as average weekly limitations and average monthly limitations, unless impracticable. For Discharge Point 001, BOD_5 and TSS effluent limits are representative of secondary level wastewater treatment and are retained from the previous Order.

b. Oil and Grease. The effluent limitations for oil and grease are based on Basin Plan Table 4-2 for shallow water dischargers and are retained from the previous Order.

c. pH. The effluent limitations for pH are based on Basin Plan Table 4-2 for shallow water dischargers and are retained from the previous Order.

d. Enterococcus bacteria. The effluent limitation for enterococcus bacteria replaces the limit contained in the previous Order for total coliform bacteria. The enterococcus limit is consistent with the Basin Plan amendment the Regional Water Board adopted April 14, 2010.

D. Water Quality-Based Effluent Limitations (WQBELs)

WQBELs have been derived to implement WQOs that protect beneficial uses. Both the beneficial uses and the WQOs have been approved pursuant to federal law. USEPA also approved the SIP procedures for calculating individual WQBELs prior to May 1, 2001. USEPA approved the Basin Plan provisions for calculating WQBELs on May 29, 2000. Most beneficial uses and Basin Plan WQOs were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any WQOs and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the [Clean Water] Act" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than those required to implement water quality standards for CWA purposes.

1. Scope and Authority

a. 40 CFR 122.44(d)(1)(i) requires that permits include WQBELs for pollutants, including toxicity, that are or may be discharged at levels that have reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard (Reasonable Potential). As specified in 40 CFR 122.44(d)(1)(i), permits are required to include WQBELs for all pollutants "which the Director determines are or may be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard." The process for determining Reasonable Potential and calculating WQBELs when necessary is intended (1) to protect the receiving water beneficial uses as specified in the Basin Plan, and (2) to achieve applicable WQOs contained in the CTR, NTR, and Basin Plan.

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

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

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

c. MDELs are necessary in this Order to protect against acute water quality effects. The MDELs prevent fish kills and mortality to aquatic organisms.

2. Beneficial Uses and WQOs

The WQOs that apply 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 sources.

a. 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, chromium (VI), copper in marine and freshwater, lead, mercury, nickel, silver, zinc, and cyanide. The narrative toxicity objective states, in part, "All 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, "Controllable 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 designed to implement these WQOs.

b. CTR. The CTR specifies numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 57 priority toxic pollutants. These criteria apply to all inland surface waters and enclosed bays and estuaries of the San Francisco Bay Region, although Basin Plan Tables 3-3 and 3-4 include numeric WQOs for certain of these priority toxic pollutants that supersede the CTR criteria. Human health criteria are further identified as for consumption of "water and organisms" and "organisms only." Because the receiving waters are not designated for the MUN beneficial use, the CTR criteria applicable to "organisms only" are used for this RPA.

c. NTR. The NTR establishes numeric aquatic life criteria for selenium and numeric human health criteria for 33 toxic pollutants for waters of San Francisco Bay upstream to, and including Suisun Bay and the San Joaquin-Sacramento River Delta. These NTR criteria apply to Peyton Slough, a tributary to Carquinez Strait.

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

Peyton Slough and Carquinez Strait are the receiving waters for the discharge at Discharge Point 001. These waters are tidally influenced. Salinity data measured at the Pacheco Creek RMP station show that 55 percent of the data fall between 1 ppt and 10 ppt, indicating an estuarine environment. The reasonable potential analysis (RPA) and effluent limitations in this Order are therefore based on the more stringent of the fresh and saltwater criteria.

e. Receiving Water Hardness. Ambient hardness values are used to calculate freshwater WQOs that are hardness dependent. A hardness of 244 mg/L was used to determine the WQOs for this Order. This value is the adjusted geometric mean of 67 hardness data (censored to remove hardness data greater than 400 mg/L and salinity of greater than 1 ppt) collected by the Discharger from sample location E-001. The effluent data were used to calculate receiving water hardness assuming that the receiving waters (i.e., Peyton Slough) are effluent-dominated.

f. Site-Specific Metals Translators. 40 CFR 122.45(c) requires that effluent limitations for metals be expressed as total recoverable metal. Since WQOs for metals are typically expressed as dissolved metal, translators must be used to convert metals concentrations from dissolved to total recoverable and vice versa. In the CTR, USEPA establishes default translators that may be used in NPDES permits. However, site-specific conditions, such as water temperature, pH, suspended solids, and organic carbon, greatly affect the form of metal (dissolved, nonfilterable, or otherwise) present in the water and therefore available to cause toxicity. In general, the dissolved form is most available and most toxic to aquatic life compared to the non-filterable forms. Site-specific translators can be developed to account for site-specific conditions, thereby preventing exceedingly stringent or under-protective WQBELs. The Discharger has not developed site-specific translators because the tide gate was not fully operational during the previous permit term, and therefore conditions in the receiving water were not representative of conditions expected once the tide gate operations begin. Site-specific translators for copper developed by other Region 2 shallow water dischargers were reviewed, and because of similar discharge conditions, the translators the Fairfield Suisun Sewer District developed for its receiving water were used to interpret the WQOs for calculation of WQBELs in this Order. However, the Discharger is required to develop its own site-specific copper translators for use in the next permit reissuance.

g. 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.

3. Determining the Need for WQBELs

Assessing whether a pollutant has Reasonable Potential is the fundamental step in determining whether or not a WQBEL is required. Using the methods prescribed in SIP Section 1.3, the Plant effluent data from Discharge Point 001 at Monitoring Location E-001 was analyzed to determine if the Plant discharge demonstrates Reasonable Potential. The Reasonable Potential Analysis compared the effluent data with numeric and narrative WQOs in the Basin Plan, NTR, and CTR.

a. Reasonable Potential Analysis (RPA). The RPA identifies the observed maximum effluent concentration (MEC) in the effluent for each pollutant based on effluent

concentration data. There are three triggers in determining Reasonable Potential according to SIP Section 1.3.

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

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

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

b. Effluent Data. The Discharger monitors for priority pollutants using analytical methods that provide the best detection limits reasonably feasible. The effluent data and the nature of the discharge were analyzed to determine if the discharge has Reasonable Potential. The RPA was based on the effluent monitoring data collected from October 2006 through November 2009.

c. Ambient Background Data. Ambient background values are typically used to determine Reasonable Potential and to calculate effluent limitations, when necessary. 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 WQOs intended to protect human health from carcinogenic effects, the arithmetic mean of observed ambient water concentrations.

The background data used in the RPA were generated at the Yerba Buena RMP station. Yerba Buena RMP station data from 1993 through 2006 were used for the RPA. The RMP does not monitor for 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 (BACWA) submitted a collaborative receiving water study entitled, *San Francisco Bay Ambient Water Monitoring Interim Report* (2003). This study includes monitoring results from sampling events in 2002 and 2003 for the remaining priority pollutants not monitored by the RMP and includes the Yerba Buena RMP station. The BACWA report, *Ambient Water Monitoring: Final CTR Sampling Update* report, dated June 15, 2004, provides additional data.

d. Reasonable Potential Determination. The MECs, most stringent applicable WQOs, and background concentrations used in the RPA are presented in the following table, along with the RPA results (Yes or No) for each pollutant analyzed. Reasonable Potential was not determined for all pollutants because WQC do not exist for all pollutants and monitoring data are not available for others. The RPA determined that copper, dioxin-TEQ, benzo(a)anthracene, and total ammonia demonstrate Reasonable Potential by Trigger 1.

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 discharge subject to this Order; therefore, the Regional Water Board cannot draw a conclusion about reasonable potential for the discharge 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.

Table F-7. Reasonable Potential Analysis Summary

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	0.36	4300	1.8	No
2	Arsenic	1.73	36	2.46	No
3	Beryllium	0.03	No Criteria	0.215	Ud
4	Cadmium	0.06	0.95	0.13	No
5a	Chromium (III)	177	430	4.4	No
5b	Chromium (VI)	< 0.6	11	4.4	No
6	**Copper**	**8.2**	**7.2**	**2.55**	**Yes**
7	Lead	0.93	2.4	0.804	No
8	**Mercury (303d listed) [(5)]**	**---**	**---**	**---**	**---**
9	Nickel	3.68[(6)]	8.3	3.73	No
10	Selenium (303d listed)	2.0	5	0.39	No
11	Silver	0.32	2.2	0.052	No
12	Thallium	< 0.01	6.3	0.21	No
13	Zinc	42	86	5.09	No
14	Cyanide	2.5	2.9	<0.4	No
15	Asbestos	Not Available	No Criteria	Not Available	Ud
16	2,3,7,8-TCDD (303d listed)	7.0E-07	1.4E-08	8.2E-09	No
	Dioxin TEQ (303d listed)	**1.1E-07**	**1.4E-08**	**5.32E-08**	**Yes**
17	Acrolein	< 0.5	780	< 0.5	No
18	Acrylonitrile	< 0.33	0.66	0.03	No
19	Benzene	< 0.03	71	< 0.05	No
20	Bromoform	< 0.03	360	< 0.5	No
21	Carbon Tetrachloride	< 0.04	4.4	0.06	No
22	Chlorobenzene	< 0.03	21,000	< 0.5	No
23	Chlorodibromomethane	< 0.03	34	< 0.05	No
24	Chloroethane	< 0.03	No Criteria	< 0.5	Ud
25	2-Chloroethylvinyl ether	< 0.1	No Criteria	< 0.5	Ud
26	Chloroform	0.06	No Criteria	< 0.5	Ud
27	Dichlorobromomethane	< 0.04	46	< 0.05	No
28	1,1-Dichloroethane	< 0.04	No Criteria	< 0.05	Ud
29	1,2-Dichloroethane	0.3	99	0.04	No
30	1,1-Dichloroethylene	< 0.07	3.2	< 0.5	No
31	1,2-Dichloropropane	< 0.03	39	< 0.05	No
32	1,3-Dichloropropylene	< 0.03	1700	< 0.5	No
33	Ethylbenzene	< 0.04	29,000	< 0.5	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]
34	Methyl Bromide	< 0.05	4000	< 0.5	No
35	Methyl Chloride	0.4	No Criteria	< 0.5	Ud
36	Methylene Chloride	0.4	1600	22	No
37	1,1,2,2-Tetrachloroethane	< 0.04	11	< 0.05	No
38	Tetrachloroethylene	< 0.04	8.85	< 0.05	No
39	Toluene	<0.06	200,000	< 0.3	No
40	1,2-Trans-Dichloroethylene	< 0.05	140,000	< 0.5	No
41	1,1,1-Trichloroethane	< 0.03	No Criteria	< 0.5	Ud
42	1,1,2-Trichloroethane	< 0.05	42	< 0.05	No
43	Trichloroethylene	< 0.05	81	< 0.5	No
44	Vinyl Chloride	< 0.05	525	< 0.5	No
45	2-Chlorophenol	< 0.7	400	< 1.2	No
46	2,4-Dichlorophenol	< 0.7	790	< 1.3	No
47	2,4-Dimethylphenol	< 0.8	2300	< 1.3	No
48	2-Methyl- 4,6-Dinitrophenol	0.91	765	< 1.2	No
49	2,4-Dinitrophenol	< 0.6	14000	< 0.7	No
50	2-Nitrophenol	< 0.6	No Criteria	< 1.3	Ud
51	4-Nitrophenol	< 0.6	No Criteria	< 1.6	Ud
52	3-Methyl 4-Chlorophenol	< 0.6	No Criteria	< 1.1	Ud
53	Pentachlorophenol	< 0.6	7.9	< 1	No
54	Phenol	< 0.6	4,600,000	< 1.3	No
55	2,4,6-Trichlorophenol	< 0.6	6.5	< 1.3	No
56	Acenaphthene	< 0.03	2700	0.0019	No
57	Acenaphthylene	< 0.02	No Criteria	0.0013	Ud
58	Anthracene	< 0.02	110,000	5.9E-04	No
59	Benzidine	< 0.03	0.00054	< 0.00015	No
60	**Benzo(a)Anthracene**	**0.90**	**0.049**	**5.3E-03**	**Yes**
61	Benzo(a)Pyrene	< 0.02	0.049	3.3E-03	No
62	Benzo(b)Fluoranthene	< 0.02	0.049	4.6E-03	No
63	Benzo(ghi)Perylene	< 0.02	No Criteria	4.5E-03	Ud
64	Benzo(k)Fluoranthene	< 0.02	0.049	1.8E-03	No
65	Bis(2-Chloroethoxy)Methane	< 0.7	No Criteria	< 0.3	Ud
66	Bis(2-Chloroethyl)Ether	< 0.7	1.4	< 0.3	No
67	Bis(2-Chloroisopropyl)Ether	< 0.6	170,000	Not Available	No
68	Bis(2-Ethylhexyl)Phthalate	2	5.9	< 0.7 [4]	No
69	4-Bromophenyl Phenyl Ether	< 0.8	No Criteria	< 0.23	Ud
70	Butylbenzyl Phthalate	< 0.7	5200	0.0056	No
71	2-Chloronaphthalene	< 0.6	4300	< 0.3	No
72	4-Chlorophenyl Phenyl Ether	< 0.9	No Criteria	< 0.3	Ud
73	Chrysene	< 0.02	0.049	2.8E-03	No
74	Dibenzo(a,h)Anthracene	< 0.02	0.049	6.4E-04	No
75	1,2-Dichlorobenzene	< 0.03	17,000	< 0.3	No
76	1,3-Dichlorobenzene	< 0.03	2600	< 0.3	No
77	1,4-Dichlorobenzene	< 0.04	2600	< 0.3	No
78	3,3 Dichlorobenzidine	< 0.6	0.077	< 0.0001	No
79	Diethyl Phthalate	< 0.6	120,000	< 0.21	No
80	Dimethyl Phthalate	< 0.6	2,900,000	< 0.21	No
81	Di-n-Butyl Phthalate	< 0.6	12,000	0.016	No
82	2,4-Dinitrotoluene	< 0.6	9.1	< 0.27	No
83	2,6-Dinitrotoluene	< 0.5	No Criteria	< 0.29	Ud
84	Di-n-Octyl Phthalate	0.90	No Criteria	< 0.38	Ud
85	1,2-Diphenylhydrazine	< 0.6	0.54	0.0037	No
86	Fluoranthene	<0.02	370	0.0109	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]
87	Fluorene	< 0.02	14,000	2.1E-03	No
88	Hexachlorobenzene	< 0.7	0.00077	2.2E-05	No
89	Hexachlorobutadiene	< 0.7	50	< 0.3	No
90	Hexachlorocyclopentadiene	< 0.8	17,000	< 0.3	No
91	Hexachloroethane	< 0.6	8.9	< 0.2	No
92	Indeno(1,2,3-cd)Pyrene	< 0.02	0.049	3.98E-03	No
93	Isophorone	< 0.5	600	< 0.3	No
94	Naphthalene	< 0.02	No Criteria	0.013	Ud
95	Nitrobenzene	< 0.7	1900	< 0.25	No
96	N-Nitrosodimethylamine	< 0.6	8.1	< 0.3	No
97	N-Nitrosodi-n-Propylamine	< 0.6	1.4	< 0.001	No
98	N-Nitrosodiphenylamine	< 0.6	16	9.51E-03	No
99	Phenanthrene	< 0.02	No Criteria	3.442E-03	Ud
100	Pyrene	2.7	11,000	0.0194	No
101	1,2,4-Trichlorobenzene	< 0.8	No Criteria	< 0.3	Ud
102	Aldrin	< 0.002	0.00014	2.8E-06	No
103	Alpha-BHC	< 0.002	0.013	4.96E-04	No
104	Beta-BHC	< 0.002	0.046	4.13E-04	No
105	Gamma-BHC	< 0.002	0.063	7.03E-04	No
106	Delta-BHC	< 0.002	No Criteria	5.3E-05	Ud
107	Chlordane (303d listed)	< 0.003	0.00059	1.8E-04	No
108	4,4'-DDT (303d listed)	< 0.002	0.00059	1.7E-04	No
109	4,4'-DDE (linked to DDT)	< 0.003	0.00059	6.9E-04	No
110	4,4'-DDD	< 0.002	0.00084	3.1E-04	No
111	Dieldrin (303d listed)	< 0.002	0.00014	2.6E-04	No
112	Alpha-Endosulfan	< 0.003	0.0087	3.1E-05	No
113	beta-Endolsulfan	< 0.002	0.0087	6.9E-05	No
114	Endosulfan Sulfate	< 0.002	240	8.2E-05	No
115	Endrin	< 0.002	0.0023	4.0E-05	No
116	Endrin Aldehyde	< 0.002	0.81	Not Available	No
117	Heptachlor	< 0.003	0.00021	1.9E-05	No
118	Heptachlor Epoxide	< 0.002	0.00011	9.4E-05	No
119-125	PCBs sum (303d listed)	< 0.02	0.00017	1.5E-03	No
126	Toxaphene	< 0.15	0.0002	Not Available	No
	Tributylin	Not Available	0.0074	0.0022	Ud
	Total PAHs	3.6	15	0.084	No
	Total Ammonia (mg/L N)	**1.7**	**1.24**	**0.20**	**Yes**

Footnotes to Table F-7:

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

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

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

(4) Background data for bis(2-ethylhexyl)phthalate at the Yerba Buena RMP station included two detected values; however, these values are questionable because a second laboratory analysis did not confirm detectable values. Therefore these data were not considered in conducting the RPA. The remaining background values for bis(2-ethylhexyl)phthalate were non-detect values.

(5) Although Reasonable Potential was found for mercury, the discharge of mercury from the Plant is regulated by Regional Water Board Order No. R2-2007-0077, which implements a mercury TMDL and contains monitoring and reporting requirements.

(6) A maximum concentration of 58 µg/L was measured on June 3, 2009. This result was not used in the determination of reasonable potential because it is suspected that it was caused by a contaminated effluent intake sieve. Nickel levels returned to normal (<3 µg/L) once the sieve was replaced.

(1) Constituents with limited data. In some cases, Reasonable Potential cannot be determined because effluent data are limited, or ambient background concentrations are unavailable. Provision VI.C.2.a. of this Order requires the Discharger to 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 permit or to continue monitoring.

(2) Pollutants with No Reasonable Potential. WQBELs are not included in this Order for constituents that do not demonstrate Reasonable Potential; however, monitoring for those pollutants is still required. If concentrations of these constituents are found to have increased significantly, this permit requires the Discharger to investigate the sources of the increases (see Provision VI.C.2.a. and Provision VI.C.3.b.(3) of this Order). This permit also requires the Discharger to implement remedial measures if the increases pose a threat to water quality in the receiving water (see Provision VI.C.3.b.(4) of this Order).

4. WQBEL Calculations

a. Pollutants with Reasonable Potential. WQBELs were developed for the pollutants that were determined to have Reasonable Potential to cause or contribute to WQO exceedances. The WQBELs were calculated based on WQOs and the procedures specified in SIP Section 1.4. The WQOs used for each pollutant with Reasonable Potential are discussed below.

b. Dilution Credit. SIP Section 1.4.2.1 allows for dilution credits in some circumstances. Discharges may be classified as "completely-mixed" or "incompletely-mixed." A completely-mixed discharge is one where not more than a five percent difference in the concentration of a pollutant exists across a transect of the water body at a point within two river widths from the discharge point. The discharge subject to this Order is discharged to the interconnected ponds within the Discharger's 20 acre constructed marsh. The marsh water flows over a weir into Peyton Slough. Because the discharge is not completely mixed when it enters the receiving waters (e.g., it does not receive a minimum initial dilution of at least 10:1), it is classified as an incompletely mixed discharge. Consistent with the previous Order, effluent limitations are therefore calculated assuming no dilution.

c. Calculation of Pollutant Specific WQBELs

(1) Copper

(a) WQOs. The most stringent applicable WQOs for copper are established by the Basin Plan for protection of saltwater aquatic life: 9.4 micrograms per liter (µg/L) and 6.0 µg/L, acute and chronic, respectively. These WQOs are expressed as dissolved metal and incorporate a water effects (WER) ratio of 2.4. They were converted to total recoverable copper using translators of 0.64 (acute) and 0.46 (chronic). Because the Discharger has not yet developed site-specific translators, translators developed by other similar shallow water dischargers were reviewed to determine appropriate translators until the Discharger can develop its own. For

this Order, the translators the Fairfield Suisun Sewer District developed for its receiving water, which is similar to the Discharger's receiving water, were used.

(b) RPA Results. This Order establishes effluent limitations for copper because the MEC of 8.2 µg/L exceeds the governing WQO for copper, demonstrating Reasonable Potential by Trigger 1.

(c) WQBELs. Copper WQBELs, calculated according to SIP procedures with a coefficient of variation (CV) of 0.20, are an AMEL of 11 µg/L and an MDEL of 15 µg/L.

(d) Anti-backsliding. Because the new WQBELs (AMEL of 11 µg/L and MDEL of 15 µg/L) are less stringent than the WQBELs in the previous Order (AMEL of 8.3 µg/L and MDEL of 11 µg/L), the limits from the previous Order are retained to satisfy anti-backsliding requirements.

(e) Compliance Feasibility. Statistical analysis of effluent data for copper, collected from October 2006 through November 2009, shows that the 95th percentile (7.6 µg/L) is less than the AMEL (8.3 µg/L), the 99th percentile (8.3 µg./L) is less than the MDEL (11 µg/L), and the mean (9.5 µg/L) is less than the long term average (9.5 µg/L), suggesting that compliance with these effluent limits is feasible.

(2) Dioxin – TEQ

(a) WQO. The Basin Plan narrative WQO for bioaccumulative substances states,

> Many pollutants can accumulate on particulates, in sediments, or bioaccumulate in fish and other aquatic organisms. Controllable 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.

Because the consensus of the scientific community that dioxins and furans associate with particulates, accumulate in sediments, and bioaccumulate in the fatty tissue of fish and other organisms, the Basin Plan's narrative bioaccumulation WQO applies to these pollutants. Elevated levels of dioxins and furans in San Francisco Bay fish tissue demonstrate that the narrative bioaccumulation WQO is not being met. USEPA has therefore included Carquinez Strait as impaired by dioxin and furans in the current CWA Section 303(d) listing of receiving waters where WQOs are not being met after imposition of technology-based requirements.

The CTR establishes a numeric WQO for 2,3,7,8-tetrachlorinated dibenzo-p-dioxin (2,3,7,8-TCDD) of 1.4 x 10^{-8} µg/L to protect human health when aquatic organisms are consumed. When the CTR was promulgated, USEPA stated its support of the regulation of other dioxin and dioxin-like compounds through the use of toxicity equivalencies (TEQs) in NPDES permits. USEPA stated specifically, "For California waters, if the discharge of dioxin or dioxin-like

compounds has reasonable potential to cause or contribute to a violation of a narrative criterion, numeric WQBELs for dioxin or dioxin-like compounds should be included in NPDES permits and should be expressed using a TEQ scheme." [65 Fed. Reg. 31682, 31695 (2000)].

This Order uses a TEQ scheme based on a set of toxicity equivalency factors (TEFs) the World Health Organization (WHO) developed in 1998, and a set of bioaccumulation equivalency factors (BEFs) USEPA developed for the Great Lakes region (40 CFR 132, Appendix F), to convert the concentration of any congener of dioxin or furan into an equivalent concentration of 2,3,7,8-TCDD. The CTR criterion is used as a criterion for dioxin-TEQ because dioxin-TEQ represents a toxicity-weighted concentration equivalent to 2,3,7,8-TCDD, thus translating the narrative bioaccumulation objective into a numeric criterion appropriate for the RPA.

To determine if the discharge of dioxin or dioxin-like compounds from the Plant has Reasonable Potential to cause or contribute to a violation of the Basin Plan's narrative bioaccumulation WQO, TEFs and BEFs were used to express the measured concentrations of 16 dioxin congeners in effluent and background samples as equivalent as 2,3,7,8-TCDD. These "equivalent" concentrations were then compared to the CTR numeric criterion for 2,3,7,8-TCDD (1.4×10^{-8} µg/L). Although the 1998 WHO scheme includes TEFs for dioxin-like PCBs, they are not included in this Order's TEQ scheme. The CTR has established a specific water quality standard for PCBs, and dioxin-like PCBs are included in the analysis of total PCBs.

(b) RPA Results. This Order establishes effluent limitations for dioxin-TEQ because the MEC (1.1×10^{-7} µg/L) exceeds the CTR water quality criterion for 2,3,7,8-TCDD (1.4×10^{-8} µg/L), demonstrating Reasonable Potential by Trigger 1.

(c) WQBELs. Dioxin-TEQ WQBELs, calculated using SIP procedures with a default CV of 0.60, are an AMEL of 1.4×10^{-8} µg/L and an MDEL of 2.8×10^{-8} µg/L.

(d) Compliance Feasibility. It is feasible for the Discharger to comply with the dioxin-TEQ WQBELs using the reporting method specified in Attachment G. No dioxin congeners have been detected above the minimum levels specified in Attachment G.

(e) Anti-backsliding. Anti-backsliding requirements are satisfied because the previous Order did not include final WQBELs for dioxin-TEQ.

(3) Benzo(a)anthracene

(a) WQO. The most stringent applicable WQO for benzo(a)anthracene is the CTR criterion for protection of human health of 0.049 µg/L.

(b) RPA Results. This Order establishes effluent limitations for benzo(a)anthracene because the MEC of 0.90 µg/L exceeds the governing WQO for benzo(a)anthracene, demonstrating Reasonable Potential by Trigger 1.

(c) Benzo(a)anthracene WQBELs. Benzo(a)anthracene WQBELs, calculated according to SIP procedures with a default CV of 0.60, are an AMEL of 0.049 µg/L and an MDEL of 0.098 µg/L.

(d) Compliance Feasibility. The observed MEC of 0.90 µg/L is greater than both the AMEL (0.049×10^{-7} µg/L) and the MDEL (0.098×10^{-X} µg/L). However, the effluent data contain one outlying value (MEC of 0.9 µg/L) that does not appear to reflect the remaining data. The MEC is the only detected value; the others are non-detects. Assuming this value does not represent foreseeable performance, the Discharger is expected to be able to comply with the effluent limits.

(e) Anti-backsliding. Anti-backsliding requirements are satisfied because the previous Order did not include final WQBELs for benzo(a)anthracene.

(4) Total Ammonia

(a) WQOs. 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 for Central San Francisco Bay and upstream reaches. These WQOs were translated from un-ionized ammonia 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 receiving water pH, salinity, and temperature. To translate the Basin Plan un-ionized ammonia WQOs, pH and temperature data from the RMP station nearest to the discharge, Pacheco Creek station (BF10), were used.

The following equations for freshwater environments were used to determine the fraction of total ammonia that would exist in the toxic, un-ionized form in the receiving water [*Ambient Water Quality Criteria for Ammonia* (saltwater) – 1989, EPA Publication 440/5-88-004, USEPA, 1989]:

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

Where:

pK = 0.09018 + 2729.92/(273 + T), and

T = Temperature in degrees Celsius

To convert the Basin Plan's chronic un-ionized ammonia WQO to an equivalent total ammonia concentration, the median un-ionized ammonia fraction of the receiving water data set was used. To convert the Basin Plan's acute un-ionized ammonia WQO to an equivalent total ammonia concentration, the 90th percentile un-ionized ammonia fraction of the receiving water data set was used.

Using the 90th percentile and median to express the acute and chronic un-ionized ammonia WQOs as equivalent total ammonia concentrations is consistent with USEPA guidance, as expressed by USEPA in *The Metals Translator: Guidance for Calculating a Total Recoverable Limit from a Dissolved Criterion* (EPA Publication Number 823-B-96-007, 1996). The equivalent total ammonia chronic and acute criteria are 1.24 mg/L and 4.66 mg/L, respectively.

(b) RPA Results. This Order establishes effluent limitations for total ammonia because the MEC (1.7 mg/L) exceeds the most stringent WQC (1.24 mg/L) for total ammonia, demonstrating Reasonable Potential by Trigger 1.

(c) WQBELs. Basin Plan Section 4.5.5.2 indicates that WQBELs for toxic pollutants are to be calculated according to the SIP methodology. Basin Plan Section 3.3.20 refers to ammonia as a toxic pollutant; therefore, it is consistent with the Basin Plan to use the SIP methodology to determine and establish effluent limitations for ammonia. WQBELS for total ammonia, calculated according to SIP procedures (with a CV of 1.5) and no credit for dilution (D = 0), are an AMEL of 1.6 mg/L and an MDEL of 4.7 mg/L.

To calculate these total ammonia WQBELs, some statistical adjustments were made because the Basin Plan's chronic WQO for un-ionized ammonia is based on an annual median, while chronic criteria are usually based on a 4-day average. The SIP also assumes a monthly sampling frequency of 4 days per month to calculate effluent limitations based on chronic criteria. To use the SIP methodology to calculate WQBELs for a Basin Plan WQO that is based on an annual median, an averaging period of 365 days and a monitoring frequency of 30 days per month (the maximum daily sampling frequency in a month since the averaging period for a chronic criterion 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 the SIP methodology as guidance, the maximum ambient background total ammonia concentration was used to calculate WQBELs based on the acute criterion, and the median background total ammonia concentration was used to calculate WQBELs 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.

(d) Compliance Feasibility. Statistical analysis of effluent data for total ammonia, collected from October 2006 through November 2009, shows that the 95th percentile (0.93 µg/L) is less than the AMEL (1.6 µg/L), the 99th percentile (1.4 µg/L) is less than the MDEL (4.7 µg/L), and the mean (0.22 µg/L) is less than the long term average of the projected non-parametric distribution of the effluent data after accounting for effluent variability (0.68 µg/L). Therefore, the Discharger is expected to be able to comply with the WQBELs.

(e) Anti-backsliding. Anti-backsliding requirements are satisfied because the total ammonia WQBELs are more stringent than those in the previous Order.

d. Effluent Limit Calculations

The following table shows the WQBEL calculations for copper, dioxin-TEQ, benzo(a)anthracene, and total ammonia.

Table F-8. WQBEL Calculations

PRIORITY POLLUTANTS	Copper	Dioxin-TEQ	Benzo(a) Anthracene	Total Ammonia (acute)	Total Ammonia (chronic)
Units	**ug/L**	**ug/L**	**ug/L**	**mg/L N**	**mg/L N**
Basis and Criteria type	Basin Plan SSO	CTR HH	CTR HH	Basin Plan Aquatic Life	Basin Plan Aquatic Life
Criteria -Acute	14.7	-----	-----	-----	-----
Criteria -Chronic	13.0	-----	-----	-----	-----
SSO Criteria -Acute	-----	-----	-----	-----	-----
SSO Criteria -Chronic	-----	-----	-----	-----	-----
Water Effects ratio (WER)	1	1	1	1	1
Lowest WQO	13.0	1.4E-08	0.049	4.66	1.24
Site Specific Translator - MDEL	-----	-----	-----	-----	-----
Site Specific Translator - AMEL	-----	-----	-----	-----	-----
Dilution Factor (D) (if applicable)	0	0	0	0	0
No. of samples per month	4	4	4	4	30
Aquatic life criteria analysis required? (Y/N)	Y	N	N	Y	Y
HH criteria analysis required? (Y/N)	N	Y	Y	N	N
Applicable Acute WQO	14.7			4.66	
Applicable Chronic WQO	13.0				1.24
HH criteria		1.4E-08	0.049		
Background (Maximum Conc for Aquatic Life calc)	2.55			0.20	0.07
Background (Average Conc for Human Health calc)	-----	7.1E-08	0.0015		
Is the pollutant on the 303d list and/or bioaccumulative (Y/N)?	N	Y	N	N	N
ECA acute	14.7			5	
ECA chronic	13.0				1.2
ECA HH		1.4.E-08	0.049		
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	N	Y	Y	N	N
Avg of effluent data points	5.7			0.22	0.22
Std Dev of effluent data points	1.1			0.33	0.33
CV calculated	0.20	N/A	N/A	1.5	1.5
CV (Selected) - Final	0.20	0.60	0.60	1.5	1.5
ECA acute mult99	0.65			0.14	
ECA chronic mult99	0.80				0.84
LTA acute	9.5			0.68	
LTA chronic	10.4				1.0
minimum of LTAs	9.5			0.68	1.0
AMEL mult95	1.2	1.6	1.6	2.39	---
MDEL mult99	1.5	3.1	3.1	6.90	---
AMEL (aq life)	11.1			1.62	---
MDEL(aq life)	14.7			4.66	---
MDEL/AMEL Multiplier	1.32	2.01	2.01	2.88	---
AMEL (human hlth)		1.4.E-08	0.049		
MDEL (human hlth)	-----	2.8.E-08	0.098		
minimum of AMEL for Aq. life vs HH	11.1	1.4.E-08	0.049	1.6	---
minimum of MDEL for Aq. Life vs HH	14.7	2.8.E-08	0.098	4.7	---
Current limit in permit (30-day average)	8.3	-----	-----	8	8
Current limit in permit (daily)	11.4	-----	-----	6 (average annual)	6 (average annual)
Final limit - AMEL	**11.1**	1.4.E-08	0.049	1.6	---
Final limit - MDEL	**14.7**	2.8.E-08	0.098	4.7	---
Max Effl Conc (MEC)	8.2	1.1.E-07	0.90	1.7	---

5. Whole Effluent Acute Toxicity

a. Permit Requirements. This Order includes effluent limitations for whole effluent acute toxicity based on Basin Plan Table 4-3, which are unchanged from the previous Order. Compliance evaluation is based on 96-hour continuous flow-through bioassays. All bioassays are to be performed according to the USEPA-approved method in 40 CFR Part 136, *Methods for Measuring the Acute Toxicity of Effluents and Receiving Water*, 5th Edition.

b. Ammonia Toxicity. Ammonia WQBELs are based on the protection of aquatic life. Therefore, if the Discharger can demonstrate to the satisfaction of the Executive Officer that toxicity exceeding limitations in this Order is caused by ammonia, and that the ammonia in the discharge does not exceed ammonia effluent limitations, then such toxicity does not constitute a violation of the effluent limitations for whole effluent toxicity. If ammonia toxicity is verified by a Toxicity Identification Evaluation (TIE), the Discharger may use an adjusted protocol approved by the Executive Officer for routine bioassay testing.

6. Whole Effluent Chronic Toxicity

a. Permit Requirements. The Order contains a narrative effluent limitation for chronic toxicity based on the narrative objective contained in the Basin Plan. The Order also includes requirements for chronic toxicity monitoring to ensure attainment of the Basin Plan narrative toxicity objective, and a monitoring "trigger" for initiation of accelerated monitoring requirements when exceeded. The Discharger is required to implement a chronic toxicity reduction evaluation (TRE) in some circumstances. These permit requirements for chronic toxicity are consistent with CTR and SIP requirements.

b. Screening Phase Study. The Discharger conducted three sets of chronic toxicity during the term of the previous Order. Results showed that the green algae, *Selenastrum capricornum*, was the most sensitive species tested; however, the toxicity testing laboratory reported that the observed reductions in algal growth were due to effluent salinity and that this would continue to compromise the ability to identify and evaluate toxicity if this species were used for routine testing. Therefore, the Monitoring and Reporting Program (MRP) specifies *Americamysis bahia* (mysid shrimp) as the chronic toxicity test species to be used during chronic toxicity testing. The Discharger is required to conduct another chronic toxicity screening study as described in MRP Appendix E-1 (Attachment E) during the term of this Order to determine if the most sensitive species has changed.

c. Permit Reopener. The Regional Water Board may consider amending this Order to include numeric toxicity limits if the Discharger fails to aggressively implement all reasonable control measures included in its TRE work plan following detection of consistent significant non-artifactual toxicity.

E. Anti-backsliding and Antidegradation

1. Effluent Limitations Retained from Previous Order. Limitations for the following parameters are retained and are unchanged from the previous Order.

- BOD_5 and TSS
- 85% removal requirement for BOD and TSS
- pH
- Oil and grease
- Acute Toxicity
- Copper

Retaining these limitations for these parameters ensures that these limitations are at least as stringent as in the previous Order, meeting CWA anti-backsliding requirements. Retaining these limitations also ensures that the existing receiving water quality will not be degraded as a result of this Order.

2. **New Final Effluent Limitations**. This Order establishes the following new effluent limits for Discharge Point 001.

   - Dioxin-TEQ
   - Benzo(a)Anthracene

   Establishing these effluent limitations effectively creates limitations that are more stringent than in the previous Order. Therefore, they comply with antidegradation and anti-backsliding requirements.

3. **More Stringent Effluent Limitations.** This Order establishes the following effluent limitations at Discharge Point 001 that are more stringent than the effluent limitations for these pollutants contained in the previous Order.

   - Total Ammonia

   Establishing more stringent limitations than those in the previous Order complies with antidegradation and anti-backsliding requirements.

4. **Effluent Limitations Not Retained.** This Order does not retain the following limitations, which were in the previous Order.

   - Mercury
   - Cyanide

   This Order does not retain mercury effluent limits because the Plant mercury discharges are regulated by Regional Water Board Order No. R2-2007-0077, which is a Watershed Permit that implements the San Francisco Bay Mercury TMDL and establishes wasteload allocations for industrial and municipal mercury discharges. Order No. R2-2007-0077 complies with federal and State antidegradation requirements.

   Because the RPA showed that the Plant discharge no longer demonstrates Reasonable Potential to cause or contribute to exceedances of cyanide water quality criteria, this Order does not retain the limitations from the previous Order. This is consistent with the anti-backsliding provisions of State Water Board Order WQ 2001-16. This is also consistent with

anti-degradation requirements at 40 CFR 131.12 because degradation is not expected since the Discharger will maintain its current level of treatment during the permit term.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Receiving water limitations are based on the Basin Plan's numeric and narrative water quality objectives for surface water.

For receiving water dissolved oxygen, the Basin Plan states that for all tidal waters upstream of Carquinez Strait, the dissolved oxygen receiving water limitation is 7.0 mg/L. The Basin Plan also states that for nontidal waters with warm water habitat, the dissolved oxygen receiving water limitation is 5.0 mg/L. Peyton Slough is subject to tidal influence only when the tide gates, owned and operated by Rhodia Inc., are open. Therefore, the Discharger is subject to two different limits. When the tide gates are open, the dissolved oxygen limit is 7.0 mg/L, and when the tide gates are closed, the dissolved oxygen limit is 5.0 mg/L. Consistent with Basin Plan section 3.3.5, when natural factors cause concentrations less than those specified above, the requirement is that the discharge not cause further reduction in ambient dissolved oxygen concentrations.

For receiving water pH, the Discharger hired Nute Engineering to determine the ambient pH range in Peyton Slough and Moorhen Marsh. The study collected data from March to April 2009 and determined that the normal ambient pH range is 6.0 to 9.0 (*Review of Receiving Water Limitation for pH* by Nute Engineering, October 2009).

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

The principal purposes of a monitoring program by a discharger are to:

- document compliance with waste discharge requirements and prohibitions established by the Regional Water Board;
- facilitate self-policing by the discharger in the prevention and abatement of pollution arising from waste discharge;
- develop or assist in the development of limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards; and
- prepare water and wastewater quality inventories.

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

A. Influent Monitoring

Influent monitoring requirements for BOD_5 and TSS allow determination of compliance with this Order's 85 percent removal requirement, and are retained from the previous Order. Influent monitoring for cyanide is based on Basin Plan requirements to implement cyanide site-specific objectives.

B. Effluent Monitoring

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

- Monthly monitoring for mercury is no longer required because mercury discharges are now regulated under Regional Water Board Order No. R2-2007-0077.
- This Order requires routine effluent monitoring for benzo(a)anthracene, which is a priority toxic pollutants with effluent limitations.
- Routine monitoring for cyanide has been eliminated since data no longer indicate Reasonable Potential.
- Monitoring for enterococcus bacteria is required to determine compliance with the new enterococcus limit, which replaces the total coliform bacteria limits in the previous Order.

C. Whole Effluent Toxicity Testing Requirements

Monthly monitoring for acute toxicity with fathead minnow at Discharge Point 001 with compliance measured at Monitoring Location E-001 is retained from the previous Order. Acute toxicity monitoring conducted during the term of the previous Order showed a minimum percent survival of 80 percent.

The MRP establishes chronic toxicity monitoring to determine compliance with the narrative chronic toxicity limitation established in this Order. The Discharger conducted chronic toxicity screening during the term of the previous Order that showed that green algae, *Selenastrum capricornum*, is the most sensitive species. However, because the toxicity laboratory observed that the effluent salinity likely caused the toxicity observed, *Americamysis bahia* is the species to be used during chronic toxicity monitoring. The Discharger is to repeat the chronic toxicity screening prior to permit expiration.

D. Reclamation Monitoring – Marsh and Wetland Specifications

1. **Marsh Operation.** This requirement is retained from the previous permit, and is based on the Basin Plan, Best Professional Judgement, and the need to operate the marsh that preserves the wildlife habitat.

2. **Marsh Management Plan.** This Order requires the Discharger to implement, review, and update its Marsh Management Plan, and to notify the Regional Water Board of any modifications to this plan. This requirement is retained from the previous permit, and is based upon Best Professional Judgement. Additionally, this Order requires continuous

monitoring in portions of the marsh. This is because data from the period 2007 through 2009 indicate that pH variations have the potential to adversely affect aquatic life, and that dissolved oxygen may exhibit significant diurnal swings (while the Discharger only collects grab samples for dissolved oxygen, some of these samples exhibit supersaturation, which could be caused by excessive algal growth, and therefore, lead to a substantial drop in dissolved oxygen levels in the early morning hours). Moreover, the Regional Water Board believes that only quarterly or monthly grab samples may miss the elevated fluctuations, and therefore, not indicate the actual impacts to the marsh aquatic life.

The Discharger shall describe in a separate section of its Annual Report, as required by the Monitoring and Reporting Program, Section IX.B (Attachment E), the results of its annual review of marsh management processes, and include an estimated time schedule to update its Marsh Management Plan to document any revisions in marsh management implemented in the previous year.

3. **Marsh Contingency Plan.** This provision requires the Discharger to implement, review, and update its Marsh Contingency Plan, and to notify the Regional Water Board staff of any modifications to this plan. This provision is unchanged from the previous permit and is based on the Basin Plan.

E. Receiving Water Monitoring

1. **Regional Monitoring Program (RMP).** On April 15, 1992, the Regional Water Board adopted Resolution No. 92-043 directing the Executive Officer to implement the RMP for the San Francisco Bay. Subsequent to a public hearing and various meetings, the Executive Officer required major permit holders in the Region to report on estuary water quality. These permit holders responded to this request by participating in a collaborative effort through the San Francisco Estuary Institute. This effort has come to be known as the San Francisco Bay RMP for Trace Substances. This Order specifies that the Discharger shall continue to participate in the RMP, which involves collection of data on pollutants and toxicity in water, sediment, and estuary biota.

2. **Reclamation and Receiving Water Monitoring Locations.** This Order continues to require monitoring of turbidity, pH, temperature, dissolved oxygen, sulfides, ammonia, salinity, and hardness at the Marsh (Monitoring Locations B-Weir, McN-A, McN-B, and McN-C) and at Peyton Slough (Monitoring Locations C-R, C-1, C-2, and C-3). This Order maintains a monthly monitoring frequency for some of these constituents because data indicated potential adverse effects upon aquatic organisms. The Regional Water Board believes that only quarterly grab samples may miss diurnal or elevated fluctuations in these wetlands.

F. Other Monitoring Requirements

Biosolids monitoring is required pursuant to 40 CFR 503.

The Regional Standard Provisions (Attachment G, section III.A.3.b) require accelerated effluent monitoring for nearly all constituents during all bypasses. Since a bio-filter or bio-tower bypass would primarily affect the Plant's nitrogen removal effectiveness it would be appropriate to require effluent monitoring for total ammonia, pH, and temperature for short duration bypasses. For longer bypasses the primary concern is ammonia toxicity to aquatic biota in the receiving

water, therefore, for these bypasses receiving water monitoring for total ammonia, pH, temperature, and salinity would be appropriate, as well as an assessment of possible effects on beneficial uses (e.g., biota) so the Executive Officer may consider such factors when determining whether to approve the bio-filter or bio-tower bypass pursuant to 40CFR122.41(m)(4)(ii). Therefore, the standard effluent monitoring during bypasses is not required in this permit.

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 Attachment D of this Order. 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 also omits federal conditions that address enforcement authority specified in 40 CFR 122.41(j)(5) and (k)(2) because the enforcement authority under the CWC is more stringent. In lieu of these conditions, this Order incorporates by reference CWC Section 13387(e).

B. 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 the Regional Standard Provisions (Attachment G). This provision requires compliance with these documents and is based on 40 CFR 122.63 and CWC Sections 13267 and 13383.

C. Special Provisions (Provision VI.C)

1. Reopener Provisions

These provisions are based on 40 CFR 123 and allow modification of this Order and its effluent limitations as necessary in response to updated WQOs that may be established in the future and due to other circumstances.

2. Special Studies and Additional Monitoring Requirements

a. Effluent Data Evaluation: This Order does not include effluent limitations for priority pollutants 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 (Attachment G) and as specified in the MRP (Attachment E). If concentrations of these constituents increase significantly, the Discharger is required to investigate the source of the increases and establish remedial measures if the increases result in Reasonable Potential to cause or contribute to an excursion above the applicable WQOs. This provision is based on the SIP and is retained from the previous Order.

b. Ambient Background Receiving Water Study: This provision is based on the Basin Plan, and the SIP. As indicated in this Order, this requirement may be met by participating in a collaborative BACWA study. The provision is necessary to provide data for future RPAs.

c. Site-Specific Copper Translator Study: This Order includes copper limits based on Basin Plan objectives and translators developed for a similar shallow water discharge (Fairfield Suisun Sewer District) that are representative, but not truly reflective, of site-specific conditions; therefore, this Order requires that the Discharger develop site-specific translators for consideration during future permitting actions. If less stringent limits are warranted based on the site-specific translators, the Regional Water Board may grant them if doing so is consistent with anti-backsliding and antidegradation requirements.

3. Best Management Practices and Pollution Minimization Program

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

4. Reliability Status Report

To address the Discharger's exception to Basin Plan Discharge Prohibition 1, through the maintenance of a 20-acre constructed marsh, Provision VI.C.4.a. of this Order requires the Discharger to submit a Reliability Status Report to ensure continued and future collection and treatment system reliability and qualification for the exception. The Regional Water Board will use the Reliability Status Report to allow appropriate review of requests for exceptions to Basin Plan Discharge Prohibition 1.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Biosolids Management Practices Requirements: This provision is based on the Basin Plan Chapter IV, 40 CFR Parts 257 and 503, and the previous Order.

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 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

This provision is based on Basin Plan Sections 7.2.2.2 and 7.2.2.5. It is necessary to ensure that use of copper site-specific objectives is consistent with antidegradation policies.

The Basin Plan requires a Copper Action Plan for source control as part of implementation of copper site-specific objectives. The Regional Water Board adopted these site-specific objectives through Regional Water Board Order No. R2-2007-0042 and USEPA approved the objectives on January 6, 2009. This Order requires the Discharger, through the Copper Action Plan, to implement monitoring and surveillance, pretreatment, source control, and pollution prevention to ensure the attainment of the cyanide site-specific objectives and the protection of water quality and beneficial uses.

7. Cyanide Action Plan

This provision is based on Basin Plan Chapter 4 (see Regional Water Board Resolution R2-2006-0086, Cyanide Site-Specific Objectives). It is necessary to ensure that use of cyanide site-specific objectives is consistent with antidegradation policies.

The Basin Plan requires a Cyanide Action Plan for source control as part of implementation of cyanide site-specific objectives. The Regional Water Board adopted these site-specific objectives through Regional Water Board Order No. R2-2006-0086 and USEPA approved the objectives on July 22, 2008. This Order requires the Discharger, through the Cyanide Action Plan, to implement monitoring and surveillance, pretreatment, source control, and pollution prevention to ensure the attainment of the cyanide site-specific objectives and the protection of water quality and beneficial uses.

VIII. PUBLIC PARTICIPATION

The Regional Water Board is considering the issuance of WDRs that will serve as an NPDES permit for the Mt. View Sanitary District Plant. As a step in the WDR adoption process, the Regional Water Board 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 provided them with an opportunity to submit written comments and recommendations. Notification was provided through the Martinez News-Gazette on August 5, 2010.

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: Heather Ottaway. 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 September 6, 2010**.**

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: November 10, 2010
Time: 9:00 am
Location: Elihu Harris State Office Building
1515 Clay Street, 1st Floor Auditorium
Oakland, CA 94612

Contact: Heather Ottaway, (510) 622-2116, email HOttaway@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 record accuracy, important testimony should be in writing.

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

D. Waste Discharge Requirements Petitions

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

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

E. Information and Copying

The Report of Waste Discharge, related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., except from noon to 1:00 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board 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 Mt. View Sanitary District Plant, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this Order should be directed to Heather Ottaway at 510-622-2116 (e-mail at HOttaway@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 Regional Water Board staff.

2. Wastewater Facilities Status Report

The Discharger shall regularly review, revise, or update, as necessary, its Wastewater Facilities Status Report. This report shall document how the Discharger operates and maintains its wastewater collection, treatment, and disposal facilities to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary to provide adequate and reliable transport, treatment, and disposal of all wastewater from both existing and planned future wastewater sources under the Discharger's service responsibilities.

3. Proper Supervision and Operation of Publicly Owned Treatment Works (POTWs)

POTWs shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Division 4, Chapter 14, Title 23 of the California Code of Regulations.

E. Property Rights

Not Supplemented

F. Inspection and Entry

Not Supplemented

G. Bypass

Not Supplemented

H. Upset

Not Supplemented

I. Other

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

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

2. Collection, treatment, storage, and disposal systems shall be operated in a manner that precludes public contact with wastewater, except 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 limits.

(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 limits 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 limits 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 limits, 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 limits, 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 Regional Water Board staff. The minimum period of retention specified in Section IV, Records, of the Federal Standard Provisions shall be extended during the course of any unresolved litigation regarding the subject discharge, or when requested by the Regional Water Board or Regional Administrator of USEPA, Region IX.

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

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 limits or other waste discharge requirements found during the reporting period;

(2) Details regarding violations: parameters, magnitude, test results, frequency, and dates;

(3) Causes of violations;

(4) Discussion of corrective actions taken or planned to resolve violations and prevent recurrences, and dates or time schedule of action implementation (if previous reports have been submitted that address corrective actions, reference to the earlier reports is satisfactory);

(5) Data invalidation (Data should not be submitted in an SMR if it does not meet quality assurance/quality control standards. However, if the Discharger wishes to invalidate any measurement after it was submitted in an SMR, a letter shall identify the measurement suspected to be invalid and state the Discharger's intent to submit, within 60 days, a formal request to invalidate the measurement. This request shall include the original measurement in question, the reason for invalidating the measurement, all relevant documentation that supports invalidation [e.g., laboratory sheet, log entry, test results, etc.], and discussion of the corrective actions taken or planned [with a time schedule for completion] to prevent recurrence of the sampling or measurement problem.);

(6) If the Discharger blends, the letter shall describe the duration of blending events and certify whether blended effluent was in compliance with the conditions for blending; and

(7) Signature (The transmittal letter shall be signed according to Section V.B of this Order, Attachment D – Standard Provisions.).

b. Compliance evaluation summary

Each report shall include a compliance evaluation summary. This summary shall include each parameter for which the permit specifies effluent limits, the number of samples taken during the monitoring period, and the number of samples that exceed applicable effluent limits.

c. Results of analyses and observations

(1) Tabulations of all required analyses and observations, including parameter, date, time, sample station, type of sample, test result, method detection limit, method minimum level, and method reporting level, if applicable, signed by the laboratory director or other responsible official.

(2) When determining compliance with an average monthly effluent limitation and more than one sample result is available in a month, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of detected but not quantified (DNQ) or nondetect (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

(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:

Dioxin-TEQ = Σ (C_x x TEF_x x 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 (pg/L)	1998 Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency 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 Regional Water Board staff. A report submitted electronically is acceptable. The written report shall include the following:

(1) Date and time of spill, and duration if known;

(2) Location of spill (street address or description of location);

(3) Nature of material spilled;

(4) Quantity of material involved;

(5) Receiving water body affected, if any;

(6) Cause of spill;

(7) Estimated size of affected area;

(8) Observed impacts to receiving waters (e.g., oil sheen, fish kill, water discoloration);

(9) Corrective actions taken to contain, minimize, or clean up the spill;

(10) Future corrective actions planned to be taken to prevent recurrence, and schedule of implementation; and

(11) Persons or agencies notified.

2. Unauthorized Discharges from Municipal Wastewater Treatment Plants1

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;

[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.

(4) Estimated quantity and duration of the unauthorized discharge (to the extent known), and the estimated amount recovered;

(5) Level of treatment prior to discharge (e.g., raw wastewater, primary treated, undisinfected secondary treated, and so on); and

(6) Identity of the person reporting the unauthorized discharge.

b. 24-hour Certification

Within 24 hours, the Discharger shall certify to the Regional Water Board, at www.wbers.net, that the State Office of Emergency Services and the local health officers or directors of environmental health with jurisdiction over the affected water bodies have been notified of the unauthorized discharge.

c. 5-Day Written Report

Within five business days, the Discharger shall submit a written report, via the Regional Water Board's online reporting system at www.wbers.net, that includes, in addition to the information required above, the following:

(1) Methods used to delineate the geographical extent of the unauthorized discharge within receiving waters;

(2) Efforts implemented to minimize public exposure to the unauthorized discharge;

(3) Visual observations of the impacts (if any) noted in the receiving waters (e.g., fish kill, discoloration of water) and the extent of sampling if conducted;

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

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

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

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

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 Plants

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

[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.

H. Other Noncompliance

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										

[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., USEPA 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, USEPA 600/R-94-134, June 1994.

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
77.	1,4-Dichlorobenzene	601	0.5	2										
27.	Dichlorobromomethane	601	0.5	2										
28.	1,1-Dichloroethane	601	0.5	1										
29.	1,2-Dichloroethane	601	0.5	2										
30.	1,1-Dichloroethylene or 1,1-Dichloroethene	601	0.5	2										
31.	1,2-Dichloropropane	601	0.5	1										
32.	1,3-Dichloropropylene or 1,3-Dichloropropene	601	0.5	2										
34.	Methyl Bromide or Bromomethane	601	1.0	2										
35.	Methyl Chloride or Chloromethane	601	0.5	2										
36.	Methylene Chloride or Dichlorormethane	601	0.5	2										
37.	1,1,2,2-Tetrachloroethane	601	0.5	1										
38.	Tetrachloroethylene	601	0.5	2										
40.	1,2-Trans-Dichloroethylene	601	0.5	1										
41.	1,1,1-Trichloroethane	601	0.5	2										
42.	1,1,2-Trichloroethane	601	0.5	2										
43.	Trichloroethene	601	0.5	2										
44.	Vinyl Chloride	601	0.5	2										
45.	2-Chlorophenol	604	2	5										
46.	2,4-Dichlorophenol	604	1	5										
47.	2,4-Dimethylphenol	604	1	2										
48.	2-Methyl-4,6-Dinitrophenol or Dinitro-2-methylphenol	604	10	5										
49.	2,4-Dinitrophenol	604	5	5										
50.	2-Nitrophenol	604		10										
51.	4-Nitrophenol	604	5	10										
52.	3-Methyl-4-Chlorophenol	604	5	1										
53.	Pentachlorophenol	604	1	5										
54.	Phenol	604	1	1		50								
55.	2,4,6-Trichlorophenol	604	10	10										
56.	Acenaphthene	610 HPLC	1	1	0.5									
57.	Acenaphthylene	610 HPLC		10	0.2									
58.	Anthracene	610 HPLC		10	2									
60.	Benzo(a)Anthracene or 1,2 Benzanthracene	610 HPLC	10	5										
61.	Benzo(a)Pyrene	610 HPLC		10	2									
62.	Benzo(b)Fluoranthene or 3,4 Benzofluoranthene	610 HPLC		10	10									
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										

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
59.	Benzidine	625		5										
65.	Bis(2-Chloroethoxy)Methane	625		5										
66.	Bis(2-Chloroethyl)Ether	625	10	1										
67.	Bis(2-Chloroisopropyl)Ether	625	10	2										
69.	4-Bromophenyl Phenyl Ether	625	10	5										
71.	2-Chloronaphthalene	625		10										
72.	4-Chlorophenyl Phenyl Ether	625		5										
73.	Chrysene	625		10	5									
78.	3,3'-Dichlorobenzidine	625		5										
82.	2,4-Dinitrotoluene	625	10	5										
83.	2,6-Dinitrotoluene	625		5										
85.	1,2-Diphenylhydrazine (note)[7]	625		1										
88.	Hexachlorobenzene	625	5	1										
89.	Hexachlorobutadiene	625	5	1										
90.	Hexachlorocyclopentadiene	625	5	5										
91.	Hexachloroethane	625	5	1										
93.	Isophorone	625	10	1										
94.	Naphthalene	625	10	1	0.2									
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											

[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.

Appendix B
Comment Letter

MT. VIEW SANITARY DISTRICT
Martinez, California • Founded 1923

September 7, 2010

VIA CERTIFIED MAIL # 7009 1410 0002 2692 9338
VIA E-MAIL: hottaway@waterboards.ca.gov

Ms. Heather Ottaway
Environmental Scientist
California Regional Water Quality Control Board,
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Re: Comments on Tentative Order Issued for the Mt. View Sanitary District Wastewater Treatment Plant (Reissuance of NPDES Permit No. CA0037770)

Dear Ms. Ottaway:

The Mt. View Sanitary District (MVSD) has reviewed the Tentative Order issued by the Regional Water Board on August 3, 2010. The attached comments are being submitted prior to the September 7, 2010 deadline to be considered for inclusion in the final adopted permit. The attached comments are primarily related to clarification on new requirements, such as how to implement the new maximum daily effluent limit for ammonia-nitrogen, and requests for reduction in monitoring frequencies.

MVSD has a long and successful history of operating constructed wetlands, providing environmental education services to the community, and improving important wildlife habitat. The plant was one of the first in Northern California to implement ammonia removal and UV disinfection. In 2009 (under agreements negotiated with California Department of Fish and Game, Rhodia Inc., and the Contra Costa Mosquito and Vector Control District) tide gates in Peyton Slough were opened for the first time in 100 years. McNabney Marsh (the wetlands alongside Peyton Slough) is now undergoing a slow transformation from freshwater ecosystem back to historical estuarine conditions. The agencies involved in this project are enthusiastic about the possibilities for improved ecosystem health and increased species diversity.

MVSD thanks the Regional Water Board staff for their time and the considerations granted during development of this Tentative Order. Please

MT. VIEW SANITARY DISTRICT
3800 ARTHUR ROAD
P.O. BOX 2757
MARTINEZ, CA 94553
925-228-5635
FAX: 925-228-7585

MT. VIEW SANITARY DISTRICT
Martinez, California • Founded 1923

contact me at (925) 228-5635 x 32 (or by email, **MRoe@mvsd.org**) if you have any questions on the attached comments.

Sincerely,

Michael D. Roe
District Manager

Attachment 1 – Comments on Reissuance of NPDES Permit No. CA0037770

Cc: Bill Johnson, wjohnson@waterboard.ca.gov
Lila Tang, ltang@waterboards.ca.gov

ATTACHMENT 1

September 7, 2010

Mt. View Sanitary District
Wastewater Treatment Plant

Comments Regarding the Reissuance of NPDES Permit No. CA0037770

Mt. View Sanitary District (MVSD) appreciates the opportunity to submit the following comments on the Tentative Order (TO) released for review and comment on August 3, 2010.

For suggested revisions to the text of the TO, underline is shown for suggested additions, and ~~strike-out~~ is shown for suggested deletions.

Comments Regarding Tentative Order – Substantive

1. **During the review of the TO, MVSD looked closely at treatment plant equipment capacities under wet weather flow conditions. As a result, the peak wet weather flow capacity of the MVSD wastewater treatment plant was determined to be 10.94 MGD, based on operational limitations of the influent pump station. MVSD requests this change be included in the permit, as indicated below.**

Facility Information I. (Table 4, page 3)

Table 4. Facility Information

Facility Design Flow	3.2 million gallons per day (MGD) (average dry weather design capacity) 10.94 ~~11.5~~ MGD (peak wet weather design capacity)

Findings II.B. (page 3)

1. **Facility Description**. The Discharger owns and operates the Plant that provides advanced secondary treatment for domestic, commercial, and some industrial wastewater from unincorporated areas of Martinez and portions of the City of Martinez. The Discharger has a current average dry weather design treatment capacity of 3.2 million gallons per day (MGD), and can treat peak wet weather flows up to ~~11.5~~ 10.94 MGD…

Attachment F, Permit Information I. (Table F-1, page F-3)

Table F-1. Facility Information

Facility Design Flow	3.2 MGD (average dry weather capacity) 10.94 ~~11.5~~ MGD (peak wet weather design capacity)

Attachment F, Description of Wastewater Treatment II.A. (page F-4)

The Discharger owns and operates the Plant that provides advanced secondary treatment for domestic, commercial, and some industrial wastewater from unincorporated areas of Martinez and portions of the City of Martinez. The Discharger has a current average dry weather design treatment capacity of 3.2 million gallons per day (MGD), and can treat peak wet weather flows up to 10.94 ~~11.5~~ MGD…

2. **The Bio-Filter and Bio-Tower (used for nitrification/denitrification) must be taken off-line periodically to perform essential maintenance activities. The typical downtime is 1 or 2 days every 1 to 5 years for major maintenance actions (e.g., repair/replace gates and rotating assembly) and 2-3 hrs every year for minor activities (e.g., oil change). MVSD does not have redundancy for this treatment process or storage to hold effluent prior to discharge. During periods of equipment maintenance, there is a risk of exceeding the maximum daily effluent limitation for ammonia-nitrogen. Compliance with a maximum daily effluent limit is a new requirement for MVSD. Previous permits included annual average and monthly average effluent limits for ammonia-nitrogen. MVSD operated successfully under this regulatory approach and has not observed any negative environmental impacts to Moorhen Marsh or Peyton Slough during Bio-Filter/Bio-Tower Maintenance. As a result, MVSD asks the Regional Water Board staff to utilize its technical discretion under Federal Standard Provisions (Attachment D) I.G.3 and I.G.4 to approve Bio-Filter/Bio-Tower bypass for essential maintenance. MVSD also requests that accelerated monitoring requirements (in effect during bypass events per Attachment G, III.3.b. 5, page G-12) be limited to sampling/analysis for ammonia-nitrogen, since this is only constituent of concern during Bio-Filter/Bio-Tower Bypass.**

3. **MVSD requests that effluent limitations for nickel be removed from the permit. Nickel was identified as having reasonable potential to exceed applicable water quality objectives based on one extreme outlier data point (58 ug/L detected on 06/03/09) that is nearly 90 times the standard deviation. All other effluent nickel concentrations (19 values measured from 2005 to 2009) ranged from DNQ 1.09 µg/L to 3.68 µg/L. As discussed with Regional Water Board staff and reported in the permit application, this sample result was probably caused by a contaminated effluent intake sieve. After the sieve was replaced, effluent nickel concentrations returned their normal level (3.6 µg/L on 07/08/09). MVSD requests that nickel be recognized as not having reasonable potential, and that monitoring be reduced to quarterly, which is the monitoring frequency for other metals. This change is suggested for the following sections.**

Effluent Limitations for Toxic Pollutants IV.B. (Table 7, page 9)

Table 7. Effluent Limitations for Toxic Pollutants

Parameter	Units	Final Effluent Limitations	
		AMEL	MDEL
~~Nickel~~	~~ug/L~~	~~4.3~~	~~14~~

Attachment E, Effluent Monitoring Requirements IV. (Table E-3, page E-3)

Table E-3. Effluent Monitoring – Monitoring Location E-001

Parameter	Units	Sample Type	Minimum Sampling Frequency
~~Nickel~~	~~ug/L~~	~~(9)~~	~~1/Month~~
Other Metals (Antimony, Arsenic, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Zinc, and Cyanide)	ug/L	(9)	1/Quarter

Attachment F, Reasonable Potential Determination IV.D.3.d. (Table F-7, page F-16)

Table F-7. Reasonable Potential Analysis Summary

CTR #	Priority Pollutants	MEC or Minimum DL(1)(2) (ug/L)	Governing WQO/WQC (ug/L)	Maximum Background or Minimum DL(1)(2) (ug/L)	RPA Results (3)
9	Nickel	~~58~~ 3.68 (6)	8.3	3.73	~~Yes~~ No

(6) A maximum concentration of 58 µg/L was measured on 6/3/09. This result was discarded as an outlier (> 3X the standard deviation) and not used in the determination of reasonable potential.

Attachment F, Calculation of Pollutant Specific WQBELs IV.D.4.c.(2) (page F-20)

~~**(2) Nickel**~~

~~**(a) WQOs.** The most stringent applicable WQOs for nickel are established by the Basin Plan for protection of saltwater aquatic life: 75 ug/L and 8 ug/L, acute and chronic, respectively, expressed as dissolved metal. They were converted to total recoverable nickle using default CTR translators of 0.99 (acute) and 0.99 (chronic).~~

~~**(b) RPA Results.** This Order establishes effluent limitations for nickel because the MEC of 58 ug/L exceeds the governing WQO for nickel, demonstrating Reasonable Potential by Trigger 1.~~

~~**(c) WQBELs.** Nickel WQBELs, calculated according to SIP procedures with a CV of 2.4, are an AMEL of 4.3 ug/L and an MDEL of 14 ug/L.~~

~~**(d) Compliance Feasibility.** Statistical analysis of effluent data for nickel, collected from October 2006 through November 2009, shows that the 95th percentile (15 ug/L) is more than the AMEL (4.3 ug/L), the 99th percentile (50 ug/L) is more than the MDEL (14 ug/L), and the mean (5.6 ug/L) is more than the long term average of the normal distribution of the effluent data after accounting for effluent variability (1.4 ug/L). However, the effluent data contain one outlying value (MEC of 58 ug/L) that does not appear to reflect the distribution of the remaining data. The Discharger has indicated that this MEC was due to an operational error in which a sieve was used on the effluent composite sampler, which contributed trace metals to the sample. The Discharger took the sieve out of service, and the nickel results returned to their normally lower levels. Assuming this value does not represent foreseeable performance, the Discharger is expected to be able to comply with the WQBELs.~~

~~**(e) Anti-backsliding.** Anti-backsliding requirements are satisfied because the previous Order did not include final WQBELs for nickel.~~

Attachment F, Effluent Limit Calculations IV.D.4.d. (Table F-8, page F-24)

Table F-8. WQBEL Calculations (Remove nickel WQBEL column.)

Attachment F, New Final Effluent Limitations IV.E. (page F-26)

2. **New Final Effluent Limitations.** This Order establishes the following new effluent limits for Discharge Point 001.
   - ~~Nickel~~
   - Dioxin-TEQ
   - Benzo(a)anthracene

   Establishing these effluent limitations effectively creates limitations that are more stringent than in the previous Order. Therefore, they comply with antidegradation and anti-backsliding requirements.

Attachment F, Rationale for Monitoring and Reporting Requirements VI.B. (page F-28)

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

- This Order requires routine effluent monitoring for ~~nickel and~~ benzo(a)anthrancene, which ~~are~~ is a priority toxic pollutants with effluent limitations.

4. **MVSD prepares its Annual Pollution Prevention Report based on the preceding fiscal year (July 1 through June 30), with submittal on August 31 of each year. The following correction is requested to clarify this reporting period in the TO.**

Provision IV.C.3. (page 15)

b. Annual Pollution Prevention Report

The Discharger shall submit an annual pollution prevention report, acceptable to the Executive Officer, no later than August 31 of each calendar year. The annual report shall cover the preceding fiscal year (July 1 through June 30). ~~January thorugh December of the preceding year.~~ Each annual report shall include at least the following information:

5. **The TO requires completion of a site-specific copper translator study to determine the appropriate dissolved-to-total copper ratio for use in calculating water quality criteria/objectives and final effluent limitations in the next NPDES permit. The proposed schedule (located in Table 8 of the TO) includes as Task 1, "Submit Site-Specific Translator Study Plan." MVSD submitted a Copper Site-Specific Translator Study Plan to the Regional Water Board staff for review in April 2010. Per phone communication with Bill Johnson on July 1, 2010, the Regional Water Board does not need to approve the translator study plan and MVSD is authorized to implement the study. As a result, Task 1 is no longer needed.**

The proposed schedule for implementing the Site-Specific Translator Study does not allow adequate time to complete the study and submit a final report. The April 2010 study plan includes sample collection twice a month for 5 months during the dry season when the tide gate is open and twice a month for 5 months during the wet season. The tide gate will not be open long enough in 2010 to collect dry season samples. Early discussions regarding tide gate operation in 2011 indicate that it may be open from June to October. However, multiple stakeholders must still agree on tide gate operational parameters and MVSD is concerned

that a full 5 month period may not be achieved in 2011. As a result, MVSD requests that two dry seasons be included in the overall study schedule, just in case sampling cannot be completed during 2011-12. Based on this approach, the study plan will be initiated at the start of the wet season in 2010, final laboratory analyses completed by November 2012, and final Site-Specific Translator Report submitted by January 31, 2013.

The suggested changes to the TO schedule are shown below:

Copper Translator Study VI.C.2.e. (Table 8, page 15)

Table 8. Site-Specific Copper Translator Study

Tasks	Compliance Date
~~**1. Submit Site-Specific Translator Study Plan**~~ ~~The study plan shall outline the data collection necessary to establish dissolved-to-total metal translators. The study plan shall provide for development of copper site-specific translators in accordance with US EPA guidelines.~~	~~June 1, 2011~~
1. **Commence Implementation of Site-Specific Translator Study Plan** The Discharger shall implement the site-specific translator study plan. The study will use field sampling data close to the discharge point and in the vicinity of the discharge point, or as otherwise provided for in the study plan.	December 1, 2010
2. **Submit Site-Specific Translator Report** The report shall document the results of the site-specific translator study and propose site-specific copper translators.	~~November 1, 2012~~ January 31, 2013

6. **MVSD requests reduction of some effluent monitoring requirements to reflect the unlikelihood of exceeding water quality objectives, the District's exemplary past performance, and to reduce operating costs. For example, MVSD conducted 62 acute toxicity tests in the previous permit term, and the minimum percent survival observed was 80 percent. MVSD requests a reduction in acute toxicity monitoring frequency from monthly to quarterly. The acute toxicity testing reduction and additional changes are suggested below.**

Attachment E, Effluent Monitoring Requirements IV. (Table E-3, page E-3)

Table E-3. Effluent Monitoring – Monitoring Location E-001

Parameter	Units	Sample Type	Minimum Sampling Frequency
Acute Toxicity [5]	% survival	C-24	~~1/Month~~ 1/Quarter
Cyanide	~~m~~µg/L	G	1/Quarter
Dioxin-TEQ	µg/L	(9)	~~2/Year~~ 1/Year
Benzo(a)Anthracene	µg/L	(9)	~~2/Year~~ 1/Year
Other Metals (~~Antimony,~~ Arsenic, ~~Beryllium,~~ Cadmium, Silver, ~~Thallium,~~ and Zinc~~, and Cyanide~~)	µg/L	(9)	1/Quarter
Remaining Priority Pollutants	µg/L	(9)	1/Year

7. **The TO requires effluent, reclamation, and receiving water monitoring for total and dissolved sulfides, when dissolved oxygen concentrations are less the 2.0 mg/L. However, the water quality objective specified in the Basin Plan is based only on dissolved sulfide concentration (in order to prevent odors and aquatic life toxicity). To assess compliance with Basin Plan objectives and reduce monitoring costs, MVSD requests that sulfide monitoring requirements in the TO be changed to allow analysis of dissolved sulfides only. The requested changes are presented below.**

Attachment E, Effluent Monitoring Requirements IV. (Table E-3, page E-4)

Table E-3 Effluent Monitoring - Monitoring Location E-001

Parameter	Units	Sample Type	Minimum Sampling Frequency
Dissolved Sulfides (7)	mg/L	G	1/Week

Attachment E, Reclamation Monitoring Requirements VI. (Table E-4, page E-8)

Table E-4. Monitoring Locations B-Weir, McN-A, McN-B, and McN-C

Parameter	Units	Sample Type	Minimum Sampling Frequency
Sulfides, ~~Total and~~ Dissolved (2)	mg/L	G	Monthly

Attachment E, Receiving Water Monitoring Requirements VII. (Table E-5, page E-9)

Table E-5. Receiving Water Monitoring - Monitoring Locations C-R, C-1 to C-3

Parameter	Units	Sample Type	Minimum Sampling Frequency
Sulfides, ~~Total and~~ Dissolved (2)	mg/L	G	1/Month

Comments Regarding Tentative Order – Typographical/Non-Substantive

8. MVSD suggests correction of the following typographical errors:

Whole Effluent Chronic Toxicity IV.D.3. (page 10)

The formatting of the sublevels should be lower-case letters (e.g., a., b., c.) instead of parenthesized numbers (e.g., (1), (2), (3)).

Whole Effluent Chronic Toxicity IV.D. (page 10)

1. There shall be no chronic toxicity in the discharge ~~as discharged~~.

Reliability Status Report VI.C.4. (page 17)

The formatting of the sublevels should be lower-case letters (e.g., a., b., c.) instead of parenthesized numbers (e.g., (1), (2), (3)).

Sanitary Sewer Overflows and Sewer System Management Plan VI.C.5.b. (page 19)

…Attachments D and G of the Order specify reporting requirements for unauthorized discharges from anywhere within the Plant downstream of the Plant boundaries.

Cyanide Action Plan VI.C.7. (Table 10, page 21)

1.	**Submit Cyanide Control Program Action Plan** The Discharger shall submit a plan for minimizing cyanide discharges as required by Order No. R2-2010-0056." (remove quotation mark)

Effluent Monitoring Requirements IV. (Table E-3, page E-4, footnote 8)

(8) The Discharger shall calculate the un-ionized ammonia fraction using the effluent water pH and temperature at the time of sampling. See Fact Sheet, Section IV.D.4.c.(5) for the un-ionized ammonia calculation.

Reclamation Monitoring Requirements VI. (Table E-4, page E-8, footnotes)

°C = degree ~~Celcius~~ Celsius

Discharge Monitoring Reports (DMRs) IX.C. (page E-11)

…~~Once~~ Until notified by the State of Regional Water Board, the Discharger shall submit hard copy DMRs.

Calculation of Pollutant Specific WQBELs IV.D.4.c. (page F-19)

…For this Order, the translators the Fairfi~~l~~eld Suisun Sewer District developed for its receiving water, which is similar to the Discha~~h~~rger's receiving water, were used.

Whole Effluent Acute Toxicity IV.D.5. (page F-25)

a. Permit Requirements. This Order includes effluent limitations for whole effluent acute toxicity based on Basin Plan Table 4-3, which are unchanged from the previous Order. ~~to reflect the monthly testing of acute toxicity.~~ Compliance evaluation is based on 96-hour ~~static renewal~~ continuous flow-through bioassays…

Rationale for Receiving Water Limitations V. (page F-27)

For receiving water pH, the Discharger hired Nute Engineering to determine the ambient pH range in Peyton Slough and Moo~~r~~rhen Marsh…

Whole Effluent Toxicity Testing Requirements VI.C. (page F-28 to F-29)

The MRP establishes chronic toxicity monitoring to determine compliance with the narrative chronic toxicity limitation established in this Order. The Discharger conducted a chronic toxicity screening during the term of the previous Order that showed that green algae, *Selenastrum capricornum*, is the most sensitive species. However, because the toxicity laboratory observed that the effluent salinity likely caused the toxicity observed, *Americamysis bahia* is the species to be used during chronic toxicity monitoring. The Discharger is to repeat the chronic toxicity screening prior to permit expiration.

Public Participation VIII.B. (page F-33)

Staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address on the cover page of this Order. Attention ~~Adrienne Miller~~ Heather Ottaway. 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 September 6, 2010.

Summary of Existing Requirements and Self-Monitoring Report Data II.C. (Table F-3,page F-5)

Parameter	Units	Effluent Limitations			Monitoring Data (09/06 to 11/09)		
		Monthly Average	Weekly Average	Daily Maximum	Highest Monthly Average	Highest Weekly Average	Highest Daily Discharge
Oil and Grease	mg/L	10	-	20	DNQ 2.9	-	DNQ 2.9
pH	s.u.	Within 6.5 - 8.5			Minimum - 6.65 Maximum - 7.9		

Summary of Existing Requirements and Self-Monitoring Report Data II.C. (Table F-4, page F-6)

Parameter	Units	Final Limits		Interim Limits		Monitoring Data (09/06 to 11/09)
		Daily Maximum	Monthly Average	Daily Maximum	Monthly Average	Highest Daily Concentration
Cyanide	µg/L	15	6.5	5.5	-	DNQ 2.5

Receiving Water Monitoring VI.E. (page F-30)

2. **Reclamation and Receiving Water Monitoring Locations.** This Order continues to require monitoring of turbidity, pH, temperature, dissolved oxygen, sulfides, ammonia, salinity, and hardness at the marsh (Monitoring Location B-Weir, McN-A, McN-B, and McN-C) and at Peyton Slough (Monitoring Locations C-R, C-1, C-2, and C-3). This Order maintains a monthly monitoring frequency for some of these constituents because data indicated potential adverse ~~a~~effects upon aquatic organisms. The Regional Water Board believes that only quarterly grab samples may miss diurnal or elevated fluctuations in these wetlands.

Appendix C
Response to Comments

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

Response to Written Comments
on Tentative NPDES Permit for
FOR THE MT. VIEW SANITARY DISTRICT
WASTEWATER TREATMENT PLANT

We received one comment letter on the tentative order, which was circulated for public review from August 3 through September 7, 2010. The Mt. View Sanitary District submitted comments on September 7, 2010. The format of this staff response begins with a brief introduction of the District's comments, followed by staff's response. Interested persons should refer to the original letter to ascertain the full substance and context of each comment.

District Comment 1
The District requests a change to the peak wet weather flow capacity of the wastewater treatment plant from 11.5 MGD to 10.94 MGD.

Response 1
We changed the peak wet weather flow capacity from 11.5 MGD to 10.94 MGD in the Order. Specifically, in Table 4, Facility Information; section II.B.1, Facility Description; and Fact Sheet Table F-1 and section II.A.

District Comment 2
The District requests that the Order allow bypass of the bio-filter and bio-tower during essential maintenance. It also requests a reduction in the monitoring required during by-pass events. Specifically, it prefers to monitor only ammonia nitrogen, not all constituents of concern. The District asks the Regional Water Board to use its discretion under Federal Standard Provisions (Attachment D) sections I.G.3 and I.G.4 to approve Bio-Filter and Bio-Tower bypasses for essential maintenance.

Response 2
We did not revise the tentative order to pre-authorize bypass of the bio-filter and bio-tower; however, we revised the monitoring requirements for such circumstances and clarified applicable bypass provisions. Federal regulations at 40 CFR 122.41(m) (reiterated in the Federal Standard Provisions, Attachment D, section I.G) prohibit bypasses except under specific conditions. Bypasses are allowed for essential maintenance as long as the discharge continues to comply with effluent limitations (40 CFR 122.41[m][2]). Additionally, the federal regulations (40 CFR 122.41[m][4][ii]) allow for approval of other bypasses after considering their adverse effects, and only when the bypasses meet three conditions (40 CFR 122.41[m][4][i]): (1) they are unavoidable to prevent loss of life, personal injury, or severe property damage; (2) there are no feasible alternatives; and (3) the discharger submits required notices to the Regional Water Board.

As we understand it, the District has two types of maintenance related bypasses of the bio-filter or bio-tower: short duration bypasses for minor maintenance that last 1 to 3 hours, and long

duration bypasses for major maintenance that last several days. Because it is expected the discharge during short duration bypasses will meet the proposed effluent limitations for ammonia (the bio-filter and bio-tower serves primarily to remove ammonia), the bypass exception under 40 CFR 122.41[m][2] can apply. Additionally, we revised the Monitoring and Reporting Program (Attachment E) to specify that accelerated effluent monitoring is only necessary for total ammonia, pH, and temperature (the measurements necessary to calculate an un-ionized ammonia concentration). Since a bio-filter and bio-tower bypass would primarily affect the plant's nitrogen removal effectiveness, the all inclusive monitoring regimes typically required for other bypasses are unnecessary.

For bypass during major maintenance activities, the discharge will likely not comply with the proposed ammonia effluent limits, so the District will need to follow the second exception under 40 CFR 122.41[m][4][ii]. At this time, we have little information regarding the possible adverse effects of a bio-filter and bio-tower bypass on the beneficial uses of the receiving water so the permit cannot approve these bypasses at this time despite the District's request. However, following such a bypass in the future, the District could investigate possible adverse effects and provide evidence for use in considering such effects. While this process for bypass approval is already a part of Prohibition III.B, we have added language to the prohibition and receiving water monitoring requirements to clarify this process for the District. The receiving water monitoring involves ammonia, pH, temperature, and salinity, and assessment of long term adverse effects from the bypass.

Changes to the Order concerning this issue are shown below:

Discharge Prohibitions III.B (page 8)

> The bypass of untreated or partially treated wastewater to waters of the United States is prohibited, except as provided for in the conditions stated in Attachment D, Sections I.G.2 and I.G.4, of this Order. <u>For the rare and occasional bypass of the bio-filter or bio-tower for major maintenance, the Regional Water Board approves the bypass provided the Discharger demonstrates to the complete satisfaction of the Executive Officer that the bypass met the requirements set forth in the Federal Standard Provisions (Attachment D, Section I.G.3), and the bypass caused no lasting harm to beneficial uses as demonstrated through this Order's receiving water monitoring, specifically as required in Attachment E, Section VII.C.</u>

Discharge Prohibitions, Fact Sheet Section IV.A.2 (page F-9)

> **Discharge Prohibition III.B** (No bypass or overflow of untreated or partially treated wastewaters): This prohibition is based on 40 CFR 122.41(m). <u>The conditional approval for bio-filter and bio-tower bypass is based on 40CFR 122.41(m)(4)(ii). Though already a part of the exceptions in the discharge prohibition itself, the conditional approval is included for clarity because the Discharger has raised this issue during permit reissuance. The Discharger verbally reported that it must bypass the bio-filter or bio-tower for major maintenance roughly every one to two years for a few days at a time. Also, there is no feasible means to provide redundancy for the bio-filter or bio-tower treatment nor is there large enough storage to avoid this bypass. 40CFR 122.41(m)(4)(ii) allows for anticipated bypasses only when they meet three conditions: (1) they are unavoidable to prevent loss</u>

of life, personal injury, or severe property damage; (2) there are no feasible alternatives; and (3) the Discharger submits required notices. Under these conditions, anticipated bypasses may or may not be approved after considering their adverse effects. Because the possible adverse effects of such a bypass are unknown at this time, the Regional Water Board cannot pre-approve of such bypasses in this permit. Instead, this permit would authorize the Executive Officer to approve such a bypass, but only if (1) the Discharger can demonstrate that the bypass is in compliance with the three conditions of 40CFR 122.41(m)(4)(i) (restated in Attachment D Federal Standard Provision, section I.G.3), and (2) the bypass caused no lasting harm to beneficial uses. This latter condition would be determined through receiving water monitoring and assessment required in the MPR Section VII.C (page E-9).

Receiving Water Monitoring Requirements, MRP Section VII.C (page E-9)

C. The Discharger shall monitor total ammonia, pH, temperature, and salinity daily during at least the first bypass during major maintenance of the bio-filter or bio-tower that occurs during the term of this Order. The Discharger shall also conduct an assessment using a qualified biologist to evaluate impacts, if any, from the bypass on receiving water beneficial uses (e.g., to biota), especially in the vicinity of the receiving water outfall before, during, and following the first anticipated bio-filter or bio-tower bypass. The purpose of the assessment before bypass is to establish a baseline for comparison. When notice of an anticipated bypass of the bio-filter or bio-tower is provided to the Executive Officer of the Regional Water Board, the Discharger shall include a proposal for how the assessment will be conducted. This assessment may be combined with data collected from previous bypasses, and if possible should be conducted during a different time of the year than previous assessments to account for seasonal variability. If the Executive Officer determines that results are inconclusive, evaluation of additional bypasses shall be required.

(New Section) Modifications to the Regional Standard Provisions, MRP Section IX (page E-9)

IX. MODIFICATIONS TO THE REGIONAL STANDARD PROVISIONS

The monitoring that the Regional Standard Provisions (Attachment G, section III.A.3.b) requires for bypasses shall not be required for bio-filter or bio-tower bypasses. Instead, effluent monitoring for total ammonia, pH, and temperature only is required for bypasses of 1 to 3 hours, and receiving water monitoring and biological assessment for bypasses lasting 1 to 3 days are required pursuant to Section VII.C. of this MRP.

Other Monitoring Requirements, Fact Sheet Section VI.F (page F-29)

F. Other Monitoring Requirements

Biosolids monitoring is required pursuant to 40 CFR 503.

The Regional Standard Provisions (Attachment G, section III.A.3.b) require accelerated effluent monitoring for nearly all constituents during all bypasses. Since a bio-filter or bio-tower bypass would primarily affect the Plant's nitrogen removal effectiveness it would be appropriate to require effluent monitoring for total ammonia, pH, and temperature for short duration bypasses. For longer bypasses the primary concern is ammonia toxicity to aquatic biota in the receiving water, therefore, for these bypasses receiving water monitoring for total ammonia, pH, temperature, and salinity would be appropriate, as well as an assessment of possible effects on beneficial uses (e.g., biota) so the Executive Officer may consider such factors when determining whether to approve the bio-filter or bio-tower bypass pursuant to 40CFR122.41(m)(4)(ii). Therefore, the standard effluent monitoring during bypasses is not required in this permit.

District Comment 3

The District requests that effluent limitations for nickel be removed from the permit. Nickel was identified as having reasonable potential to exceed water quality objectives based on one outlying data point (58 µg/L detected on 06/03/09) that is nearly 90 times the standard deviation. All other effluent concentrations (19 values measured from 2005 to 2009) ranged from an estimated value of 1.09 µg/L to 3.68 µg/L. This sample result was probably caused by a contaminated effluent intake sieve. After the sieve was replaced, effluent nickel concentrations returned to their normal level. The District also requests that the monitoring frequency for nickel be reduced from monthly to quarterly to be consistent with the monitoring for other metals.

Response 3

We agree that the 58 µg/L data point does not appear to represent the District's typical effluent quality considering the District's evidence about the sieve; therefore, we removed the effluent limitations for nickel. The District was proactive in identifying the cause of the high value and taking steps to mitigate the problem, which resulted in an immediate return to normal nickel concentrations. Recently reported nickel values (08/05/09 to 06/09/10) are all below 3 µg/L. We also reduced the monitoring frequency for nickel to annual like all the other priority pollutants without effluent limitations in the Order.

We removed or modified references to nickel in Table 7 and the Fact Sheet as indicated below:

Effluent Limitations and Discharge Specifications, Section IV.B (page 9)

Table 7. Effluent Limitations for Toxic Pollutants

Parameter	Units	Final Effluent Limitations (1)	
		AMEL	MDEL
Copper	µg/L	8.3	11.4
~~Nickel~~	~~µg/L~~	~~4.3~~	~~14~~
Dioxin-TEQ	µg/L	1.4×10^{-8}	2.8×10^{-8}
Benzo(a)Anthracene	µg/L	0.049	0.098
Total Ammonia	mg/L	1.6	4.7

Reasonable Potential Determination, Fact Sheet Section IV.D.3.d (Table F-7, page F-16)

Table F-7. Reasonable Potential Analysis Summary

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)
9	Nickel	~~58~~ 3.38 (6)	8.3	3.73	~~Yes~~ No

(6) A maximum concentration of 58 µg/L was measured on 06/03/09. This result was not used in the determination of reasonable potential because it is suspected that it was caused by a contaminated effluent intake sieve. Nickel levels returned to normal (<3 µg/L) once the sieve was replaced.

Calculation of Pollutant Specific WQBELs, Fact Sheet Section IV.D.4.c(2) (page F-20)

~~**(2) Nickel**~~

~~**(a) WQOs.** The most stringent applicable WQOs for nickel are established by the Basin Plan for protection of saltwater aquatic life: 75 µg/L and 8 µg/L, acute and chronic, respectively, expressed as dissolved metal. They were converted to total recoverable nickle using default CTR translators of 0.99 (acute) and 0.99 (chronic).~~

~~**(b) RPA Results.** This Order establishes effluent limitations for nickel because the MEC of 58 µg/L exceeds the governing WQO for nickel, demonstrating Reasonable Potential by Trigger 1.~~

~~**(c) WQBELs.** Nickel WQBELs, calculated according to SIP procedures with a CV of 2.4, are an AMEL of 4.3 µg/L and an MDEL of 14 µg/L.~~

~~**(d) Compliance Feasibility.** Statistical analysis of effluent data for nickel, collected from October 2006 through November 2009, shows that the 95th percentile (15 µg/L) is more than the AMEL (4.3 µg/L), the 99th percentile (50 µg/L) is more than the MDEL (14 µg/L), and the mean (5.6 µg/L) is more than the long term average of the normal distribution of the effluent data after accounting for effluent variability (1.4 µg/L). However, the effluent data contain one outlying value (MEC of 58 µg/L) that does not appear to reflect the distribution of the remaining data. The Discharger~~

~~has indicated that this MEC was due to an operational error in which a sieve was used on the effluent composite sampler, which contributed trace metals to the sample. The Discharger took the sieve out of service, and the nickel results returned to their normally lower levels. Assuming this value does not represent foreseeable performance, the Discharger is expected to be able to comply with the WQBELs.~~

~~**(c) Anti-backsliding.** Anti-backsliding requirements are satisfied because the previous Order did not include final WQBELs for nickel.~~

New Final Effluent Limitations, Fact Sheet Section IV.E (page F-26)

2. New Final Effluent Limitations. This Order establishes the following new effluent limits for Discharge Point 001.

- ~~Nickel~~
- Dioxin-TEQ
- Benzo(a)anthracene

Rationale for Monitoring and Reporting Requirements, Fact Sheet Section VI.B (page F-28)

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

- This Order requires routine effluent monitoring for ~~nickel and~~ benzo(a)anthracene, which ~~are~~ is a priority toxic pollutant~~s~~ with effluent limitations.

District Comment 4
The District requests that the annual pollution prevention report submitted on August 31 each year cover the time period July 1 through June 30 of the preceding fiscal year.

Response 4
We agree. We inadvertently stated that the report should cover the period from January through December. We now changed the text to specify that the report should cover the period from July 1 through June 30 of the preceding fiscal year since the annual report is due on August 31 of each year.

District Comment 5
The District requests changes to the schedule for the site-specific translator study required by the Order. Task 1, "Submit Site-Specific Translator Study Plan," should be removed because the District submitted a study plan in April 2010. Additionally, other dates should be modified because the proposed schedule does not allow adequate time to complete the study and submit a final report.

Response 5
We agree. We removed Task 1 and modified the compliance date for submitting the final report from November 1, 2012, to January 31, 2013. We also changed the date for implementing the

study from December 1, 2010, to January 1, 2011, to be consistent with the anticipated effective date of the Order. Table 8 reflects these changes.

District Comment 6
The District requests reduction of some effluent monitoring requirements to reflect the unlikelihood of exceeding water quality objectives, to reflect the District's exemplary past performance, and to reduce operating costs.

Response 6
We modified the monitoring frequencies for some of the parameters as requested. We reduced monitoring for dioxin-TEQ from twice per year to once per year, consistent with other similar permits. We removed monitoring for "other metals" once per quarter; these parameters are included with priority pollutants monitoring required once per year. We kept the once per month monitoring frequency for acute toxicity because this is consistent with other similar permits. We also kept the monitoring frequency of twice per year for benzo(a)anthracene to evaluate compliance with the effluent limitations for this constituent.

District Comment 7
The District requests that sulfide monitoring requirements be changed to allow analysis of dissolved sulfides only. The tentative order would require effluent, reclamation, and receiving water monitoring for total and dissolved sulfides, when dissolved oxygen concentrations are less than 2 mg/L. However, the water quality objective specified in the Basin Plan is based only on the dissolved sulfide concentration.

Response 7
We agree that it is appropriate for the District to monitor for dissolved sulfides only, not total sulfides, and only when dissolved oxygen is less than 2 mg/L. This is consistent with monitoring requirements in other permits.

District Comment 8
The District identified several typographical errors.

Response 8
We corrected the identified typographical errors.

Regional Board Staff Initiated Change
We modified Tasks 1 and 2 of the Cyanide Action Plan (Table 10 page 21) because the District did not identify any potential cyanide sources. The District was required by Order No. R2-2010-0056 to submit an inventory of potential sources of cyanide to the treatment plant to the Regional Board. According to the Cyanide Action Plan included in Order No. R2-2010-0056 if no sources were identified development and implementation of a cyanide plan was not required. Because the District did not identify potential cyanide sources, submittal and implementation of a cyanide control program (Tasks 1 and 2 in Table 10) are not required. We modified Table 10 as follows.

Table 10. Cyanide Action Plan

Task		Compliance Date
1.	~~**Submit Cyanide Control Program Action Plan**~~ **Review Potential Cyanide Contributors** The Discharger ~~shall submit a plan for minimizing cyanide discharges as required by Order No. R2-2010-056.~~ has submitted an inventory of potential sources of cyanide to the treatment plant (e.g., metal plating operations, hazardous waste recycling, etc.). Since no sources of cyanide were identified, Tasks 2 and 3 are not required, unless the Discharger receives a request to discharge detectable levels of cyanide to its treatment plant. If so, the Discharger shall notify the Executive Officer and implement Tasks 2 and 3.	Complete
2.	**Implement Cyanide Control Program** The Discharger shall ~~begin implementation of the plan required by Task 1 to minimize cyanide discharges.~~ 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. Monitor each potential source identified 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 and potential 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.	With annual pollution prevention report due August 31, 2011