UNCONTESTED

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

STAFF SUMMARY REPORT (Heather Ottaway)
MEETING DATE: October 14, 2009

ITEM: 5A and 6A

SUBJECT: East Bay Municipal Utility District, Orinda Water Treatment Plant, Orinda, Alameda County - Issuance of NPDES Permit and Adoption of Cease and Desist Order

CHRONOLOGY: December 1996 – Individual Permit issued to the District
September 2003 – General Permit issued for discharges from surface water treatment facilities for potable supply
December 2003 – District enrolled under General Permit
April 2009 – General Permit re-issued

DISCUSSION: This Revised Tentative Order (Appendix A) would issue an individual NPDES permit for the East Bay Municipal Utility District's (District) Orinda Water Treatment Plant because the District cannot readily comply with new requirements in the April 2009 General Permit. In accordance with federal and State policy, the new requirements would also apply to the discharge under the individual permit, so a regulatory means is needed to ensure the District comes into compliance with the new requirements. The Revised Tentative Cease and Desist Order (Appendix B) would address this compliance issue. Specifically, the new requirements are effluent limits for dichlorobromomethane. This compound is a disinfection by-product.

The District's Orinda Plant is one of six water treatment facilities the District operates in the East Bay to treat water prior to distribution to Alameda and Contra Costa County residents. It has a design capacity of 200 million gallons per day and receives raw water from the Pardee Reservoir, located in the foothills of the Sierra Nevada. When the raw water reaches the Plant, it passes through dual media filters to remove soil and other small particles. Filter backwash water from this process is stored in settling basins before discharge to San Pablo Creek and San Pablo Reservoir. The District also discharges any raw water that exceeds either the Plant's capacity or consumer needs.

The District submitted comments (Appendix C) on the tentative order that was distributed for public review. Our responses (Appendix D) describe changes reflected in the Revised Tentative Order. We believe we have resolved the most significant issues and expect this matter to be uncontested. No comments were received on the Tentative Cease and Desist Order; however it has been revised to incorporate some minor editorial changes.

RECOMMEN-
DATION: Adopt the Revised Tentative Order and Revised Tentative Cease and Desist Order.

CIWQS Place ID: 246192

APPENDICES: A. Revised Tentative Order (Item 5A)
B. Revised Tentative Cease and Desist Order (Item 6A)
C. Comment Letter
D. Response to Comments

Appendix A
Revised Tentative Order

California Regional Water Quality Control Board
San Francisco Bay Region

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Arnold Schwarzenegger
Governor

REVISED TENTATIVE ORDER NO. R2-2009-XXX
NPDES NO. CA0038342

WASTE DISCHARGE REQUIREMENTS
FOR THE EAST BAY MUNICIPAL UTILITY DISTRICT
ORINDA WATER TREATMENT PLANT

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

Table 1. Discharger Information

Discharger	East Bay Municipal Utility District
Name of Facility	Orinda Water Treatment Plant
Facility Address	190 Camino Pablo
	Orinda, CA 94563
	Contra Costa County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	

The discharge by the East Bay Municipal Utility District from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
E-001	Excess raw water	37º53'35" N	122º11'02" W	San Pablo Creek
E-002	Excess raw water	37º53'33" N	122º11'07" W	San Pablo Creek
E-003	Clarified backwash water	37º53'40"N	122º12'08" W	San Pablo Creek
E-004	Raw water during drought conditions	37º53'34" N	122º12'02" W	San Pablo Creek

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**October 14, 2009**
This Order shall become effective on:	**December 1, 2009**
This Order shall expire on:	**November 30, 2014**
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 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 the date indicated above.

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Bruce H. Wolfe, Executive Officer

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I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	East Bay Municipal Utility District
Name of Facility	Orinda Water Treatment Plant
Facility Address	190 Camino Pablo
	Orinda, CA 94563
	Contra Costa County
Facility Contact, Title, and Phone	Chris Burquez Supervisor, Water Treatment (510) 287-1963
Mailing Address	East Bay Municipal Utility District 375 Eleventh Street (MS #704) Oakland, CA 94607
Type of Facility	Potable Water Treatment Plant
Facility Design Flow	200 million gallons per day (MGD) -- maximum flow rate 135 MGD – average daily flow rate

II. FINDINGS

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

A. Background. East Bay Municipal Utility District (hereinafter Discharger) is currently discharging pursuant to Order No. R2-2003-0062, the Regionwide National Pollutant Discharge Elimination System (NPDES) Permit for Discharges from Surface Water Treatment Facilities for Potable Supply, General Permit No. CAG382001. The Discharger submitted a Notice of Intent, dated February 27, 2008, to comply with the General NPDES Permit, Order No. R2-2003-0062, for the discharge of raw water and clarified backwash from the Orinda Water Treatment Plant (hereinafter Facility). 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. Orinda Water Treatment Plant. The Discharger owns and operates the Facility, one of six potable water treatment facilities operated by the Discharger in the East Bay for treatment of water prior to distribution to residents of Alameda and Contra Costa Counties. The Facility has the largest output of the six facilities, with a maximum capacity of 200 MGD. The Facility serves all or parts of Alameda, Albany, Berkeley, El Cerrito, Emeryville, Moraga, Oakland, Orinda, Piedmont, Richmond and San Leandro. The other treatment facilities (Upper San Leandro in Oakland, San Pablo in Kensington, Sobrante in El Sobrante, Lafayette, and Walnut Creek) supply water in varying amounts to the balance of the Discharger's service area.

C. Raw Water. The Facility receives raw water from the Pardee Reservoir, located in the foothills of the Sierra Nevada, via the three 90-mile Mokelumne Aqueducts. The raw water flows by gravity from the Pardee Reservoir to the East Bay. Raw water is treated as it enters the Mokelumne Aqueducts at Pardee with liquid lime for corrosion protection and sodium hypochlorite for disinfection. Additional sodium hypochlorite is added to the Mokelumne Aqueducts at the Walnut Creek water treatment plant as needed to meet drinking water requirements (i.e., when the Lafayette or Walnut Creek water treatment plants are adding reclaimed water into the aqueducts). The Discharger does not use copper sulfate to treat raw water in the Mokelumne Aqueducts. Depending upon seasonal and other influences, raw water from the Pardee Reservoir, however, may contain detectable levels of naturally occurring copper.

The Mokelumne Aqueducts are typically operated so no chlorine residual remains in the water reaching the Facility through Lafayette Aqueduct No.1. A chlorine residual between approximately 0.09 and 0.15 mg/L is maintained in the water reaching the Facility through Lafayette Aqueduct No.2 for compliance with drinking water requirements. The raw water is dechlorinated using a sodium bisulfite dechlorination solution as it approaches the Facility prior to any potential discharge at the South Spillway (E-002). Online analyzers monitor the South Spillway for flow, total chlorine residual, and pH.

During drought conditions, part of the Mokelumne Aqueduct system will be designated for raw water transfers from other water sources (e.g., Contra Costa Water District or Folsom South Canal). These flows will bypass the Facility, through the diversion structure (E-004). Should these flows require chlorination for compliance with drinking water requirements, these flows will also be subsequently dechlorinated prior discharge to San Pablo Creek.

D. Water Treatment Processes. With a design capacity of 200 MGD, the Facility currently treats an average of 135 MGD of raw water using the following processes:

1. Coagulation/flocculation. Chemicals (e.g., polyaluminum chloride and cationic polymers) with mechanical equipment (e.g., flash mixer) are used to cause fine particles to clump together and aid in the filtering and removal of organics and particulate matter that may affect the potability and the taste and odor of the finished water.

2. Filtration. Media (e.g., sand, anthracite) is used to remove remaining suspended particles.

3. Disinfection. Chemicals (e.g., sodium hypochlorite, usually before and after coagulation and after filtration) are used to inactivate bacteria, viruses, and other pathogens that may cause harm to public health.

4. Fluoridation. Chemicals (e.g., hydrofluorosilicic acid) are used as an aid to dental health.

5. pH adjustment. Chemicals (e.g., sodium hydroxide) are used to reduce the corrosivity of water and prevent rust formation.

6. Chloramination. Aqueous ammonia is used to react with the free chlorine so that a more persistent combined chlorine residual is formed.

E. Filter Backwash. At the Facility, raw water passes through dual media filters to remove soil and other small particles, and both alum and a polymer are added to facilitate solids removal. Every 8 to 96 hours each filter is backwashed to remove the accumulated solids. The frequency of backwashing depends upon the quality of the incoming water, which varies with the seasons. The volume generated during each backwash varies between 100,000 and 300,000 gallons.

F. Settling Basins. Backwash water is pumped to one of two adjacent ¾-acre, 1.5 million gallon concrete lined settling basins for removal of suspended solids prior to discharge. The filter design includes a system that collects any water leakage, which is piped to the settling basins. The two basins alternate between active and passive modes of operation. One basin receives washwater from backwashed filters, while the other holds the settled solids for removal. The settling basins are designed to store approximately two months of washwater solids production. After approximately two months of service, the active basin is taken out of service, and washwater flows are diverted to the other basin. Filter backwash from the active basin is intermittently released to San Pablo Creek.

G. Settling Basin Maintenance. Accumulated solids from the bottom of the basins, with an estimated 0.5% to 3.0% solids content, are pumped from the passive settling basin to a tank truck loading station. Tank trucks haul the solids offsite for disposal.

H. Outfalls. The Discharger discharges wastewater from the following outfalls:

1. **E-001 and E-002**. These two outfalls provide for the discharge of raw aqueduct water flows in excess of plant intake and are shown on the Site Map included as **Attachment B**. If necessary, aqueduct release water is dechlorinated prior to discharge and released to San Pablo Creek. Nearly all excess flows are discharged through E-002; E-001 is used only in emergency situations.

2. **E-003**. Discharges from this outfall, shown on the Site Map included as **Attachment B**, may include filter backwash water, filter waste gate leakage, and any spillage that may occur at the sludge truck loading station. Filter backwash from the active settling basin is dechlorinated and intermittently released via E-003 to San Pablo Creek.

3. **E-004**. Discharge from this bypass to San Pablo Creek may occur when the Facility transitions from normal operations using water from the Pardee Reservoir to raw water from other sources. In such instances, the hypochlorite feed is shut-off at the Walnut Creek Water Treatment Plant, and the hypochlorite feed at Pardee is minimized to eliminate detectable chlorine residual in the water reaching the Facility. On-line chlorine residual analyzers on the aqueducts at the Walnut Creek Pumping

Plant verify no detectable chlorine residual in the Pardee water, and, if necessary, raw water bypasses are dechlorinated using sodium bisulfite dechlorination solution prior to any discharge.

I. Wastewater is discharged from E-001, E-002, E-003, and E-004 to San Pablo Creek, a water of the United States, which flows to San Pablo Reservoir within the San Pablo Creek Watershed. **Attachment B** provides a map of the area around the Facility. **Attachment C** provides a flow schematic of the Facility.

J. Legal Authorities. This Order is issued pursuant to federal Clean Water Act (CWA) Section 402 of the and implementing 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 Facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to CWC Article 4, Chapter 4, Division 7 (commencing with Section 13260).

K. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information the Discharger submitted, through monitoring and reporting programs, and other available information. The Fact Sheet (**Attachment F**), which contains background information and rationale for this Order's requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. **Attachments A through G** are also incorporated into this Order.

L. California Environmental Quality Act (CEQA). Under CWC Section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA.

M. Technology-Based Effluent Limitations. NPDES regulations at 40 CFR 122.44(a) require permits to include applicable technology-based limitations and standards. This Order includes technology-based effluent limitations, which are based on:

1. San Francisco Bay Region Basin Plan, Table 4-2, effluent limits for all treatment facilities.

2. Best professional judgment (BPJ) pursuant to CWA Section 402(a)(1)(B) and NPDES regulations at 40 CFR 125.3.

A detailed discussion of the technology-based effluent limitations is included in the Fact Sheet (**Attachment F**).

N. Water Quality-Based Effluent Limitations. 40 CFR Section 122.44(d) requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where a reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) may be established (1) using USEPA criteria guidance under CWA Section 304(a), supplemented where necessary by other relevant information; (2) on an

indicator parameter for the pollutant of concern; or (3) using a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in Section 122.44(d)(1)(vi). This Order includes WQBELs for toxic pollutants.

O. Water Quality Control Plan. The Regional Water Board adopted a Water Quality Control Plan for the San Francisco Bay Basin (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to San Pablo Creek and San Pablo Reservoir are as listed in Table 5. Requirements of this Order implement the Basin Plan.

Table 5. Beneficial Uses

Receiving Water Name	Beneficial Uses
San Pablo Creek	Fish migration (MIGR) Non-contact water recreation (REC-2) Fish spawning (SPWN) Warm freshwater habitat (WARM) Wildlife habitat (WILD) Municipal and domestic supply (MUN)
San Pablo Reservoir	Cold fresh water habitat (COLD) Municipal and domestic supply (MUN) Water contact recreation (REC-1) Non-contact water recreation (REC-2) Fish spawning (SPWN) Warm freshwater habitat (WARM) Wildlife habitat (WILD)

P. Basin Plan Prohibitions for which Exceptions are Necessary. The Basin Plan contains a prohibition against discharge of any wastewater that has particular characteristics of concern to beneficial uses at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1 (Basin Plan Prohibition 1, Table 4-1). The Regional Water Board finds that the discharge permitted under this Order is not subject to this prohibition because it does not contain particular characteristics of concern to beneficial uses of the receiving waters provided that the Discharger implements Best Management Practices (BMPs) and complies with the requirements of this Order.

Q. National Toxics Rule (NTR) and California Toxics Rule (CTR). USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995, and November 9, 1999. About 40 criteria in the NTR apply in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that apply in the State. The

CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

R. State Implementation Policy. On March 2, 2000, the State Water Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria USEPA promulgated for California through the NTR and to 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.

S. Case-by-Case Exceptions from SIP Provisions. SIP Section 5.3, as authorized by federal regulations at 40 CFR § 131.13, provides that the State Water Board may grant an exception to meeting a priority pollutant criterion/objective or any other SIP provision, including ambient water quality criteria or effluent limits for priority toxic pollutants established in the CTR, where the State Water Board determines (1) the exception will not compromise protection of enclosed bay, estuarine, and inland surface waters for beneficial uses; and (2) the public interest will be served. No current SIP exception applies to this discharge; however, the Discharger intends to seek a SIP exception for effluent limitations for disinfection byproducts, such as dichlorobromomethane.

T. Compliance Schedules and Interim Requirements. This Order does not include compliance schedules and interim effluent limitations or discharge specifications.

U. Alaska Rule. On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQSs) 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.

V. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based (total suspended solids, total chlorine residual, pH and settleable matter) and water quality-based (dichlorobromomethane) effluent limitations. The bases for the restrictions on these pollutants are discussed in the Fact Sheet (**Attachment F**). This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. Water quality-based effluent limitations have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. The toxic pollutant (dichlorobromomethane) water quality-based effluent limitations were derived from the CTR, which is the applicable standard pursuant to Section 131.38.

The procedures for calculating the individual water quality-based effluent limitation are based on the SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR Section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement CWA requirements.

W. Antidegradation Policy. 40 CFR Section 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 No. 68-16, which incorporates the federal antidegradation policy where the federal policy applies under federal law. It also requires that the existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet, the permitted discharge is consistent with the antidegradation policies.

X. 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 the effluent limitations in the previous Order.

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

Z. Monitoring and Reporting. 40 CFR 122.48 requires 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 (**Attachment E**) establishes monitoring and reporting requirements to implement federal and State requirements.

AA. Standard and Special Provisions. Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in **Attachment D**. The Discharger must comply with all standard provisions and with those additional conditions that apply under 40 CFR 122.42. The Regional Water Board has also included in this Order standard provisions and special provisions

(**Attachment G**) and applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the Fact Sheet (**Attachment F**).

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

CC. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

THEREFORE, IT IS HEREBY ORDERED, that this Order terminates the Facility's enrollment under Order No. R2-2003-0062 Regionwide General NPDES Permit for Discharges from Surface Water Treatment Facilities for Potable Water, General Permit No. CAG382001, except for enforcement purposes, and, in order to meet the provisions contained in CWC division 7 (commencing with Section 13000) and regulations adopted thereunder, and the provisions of the federal CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

A. Discharge of wastewater at a location or in a manner different than as described in this Order is prohibited.

B. Discharge of chlorinated water without full dechlorination is prohibited.

C. The discharge of bottom sediments from water storage facilities in such a manner as to cause nuisance or adversely affect beneficial uses of San Pablo Creek or San Pablo Reservoir is prohibited.

D. On-site storage of oil, fuel or any other chemical causing contamination of storm water runoff or water and wastewater discharge is prohibited.

E. The discharge shall not cause a condition of pollution, contamination, or nuisance as defined in CWC section 13050.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations for Conventional and Non-Conventional Pollutants

The Discharger shall maintain compliance with the effluent limitations in Table 6 at all Discharge Points (E-001, E-002, E-003, and E-004) with compliance measured at Monitoring Locations described in the attached MRP (**Attachment E**).

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

Parameter	Units	Effluent Limitations				
		Daily Maximum	Weekly Average	Monthly Average	Instantaneous Maximum	Instantaneous Minimum
Total Suspended Solids (TSS)	mg/L	--	45	30	--	--
Settleable Matter(1)	mL/L-hr	0.2	--	0.1	--	--
pH(2)	standard units	--	--	--	8.5	6.5
Total Chlorine Residual(3)	mg/L	--	--	--	0.0	--

Unit Abbreviations
µg/L = micrograms per liter
mg/L = milligrams per liter
mL/L/hr = milliliters per liter per hour

Footnotes for Table 6:
(1) The settleable matter limits only apply to Discharge Point E-003.
(2) Exceedance of the pH limit will not constitute a violation of this Order if the Discharger can demonstrate, through receiving water monitoring that the discharge does not cause the natural background pH to be depressed below 6.5 nor raised above 8.5, or if outside this range, the receiving water has not been altered from normal ambient pH by more than 0.5 standard units.
(3) The Regional Water Board has determined that residual chlorine field test kits and analyzers (USEPA-approved Standard Methods 4500-Cl F and G) have a minimum reporting level of 0.05 mg/L; therefore, the Discharger will be considered out of compliance with the total chlorine residual limit if the total residual chlorine effluent concentration is greater than or equal to 0.05 mg/L.

B. Effluent Limitations for Toxic Pollutants

The Discharger shall maintain compliance with the effluent limitations in Table 7 at all Discharge Points (E-001, E-002, E-003, and E-004) with compliance measured at Monitoring Locations described in the attached MRP (**Attachment E**). If a case-by-case exception to the SIP is approved by the State Water Board in connection with the applicable effluent limit for dichlorobromomethane or any other constituent, the effluent limitations in this permit could be deemed to reflect the effluent limitations approved by the State Water Board.

Table 7. Effluent Limitations for Toxic Pollutants

Parameter	Units	Effluent Limitations				
		Daily Maximum	Weekly Average	Monthly Average	Instantaneous Maximum	Instantaneous Minimum
Dichlorobromomethane	ug/L	1.1	--	0.56	--	--

C. Whole Effluent Acute Toxicity

1. Representative samples of the effluent at Discharge Point E-003, with compliance measured at EFF-003 as described in the MRP (**Attachment E**), shall meet the following limits for acute toxicity. Bioassays shall be conducted in compliance with MRP Section V.A (**Attachment E**).

a. 3-sample median value of not less than 90% survival.

b. Single-sample maximum value of not less than 70 percent survival.

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

a. **3-sample median.** If one of the past two or fewer bioassays shows less than 90 percent survival, then survival of less than 90 percent for the next bioassay represents a violation of the effluent limit.

b. **Single-sample maximum.** A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit.

3. Bioassays shall be performed using either rainbow trout or fathead minnows unless specified otherwise in writing by the Executive Officer. Bioassays shall be conducted in compliance with *Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms*, currently 5th Edition (EPA-821-R-02-012), with exceptions granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP) upon the Discharger's request with justification.

V. RECEIVING WATER LIMITATIONS

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

1. Erosion of the stream bank and streambed.

2. Floating materials including solids, liquids, foams and scum, suspended and, deposited materials, in concentrations that cause nuisance or adversely affect beneficial uses.

3. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely effect to beneficial uses.

4. Alteration of temperature or apparent color beyond present natural background levels.

5. Visible, floating, suspended, or deposited oil or other products of petroleum origin.

6. Toxic or other deleterious substances in concentrations or quantities that 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 shall not increase turbidity above background levels by more than the following:

Receiving Water Background	Incremental Increase
<50 units (NTU)	5 units, maximum
50-100 units	10 units, maximum
>100 units	10% of background, maximum

C. The discharge shall not cause a violation of any water quality standard applicable to the receiving waters. If more stringent applicable water quality standards are promulgated or approved, the Regional Water Board may revise or modify this Order in accordance with such more stringent standards.

VI. PROVISIONS

A. Standard Provisions

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

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

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

1. Reopener Provisions

The Regional Water Board may modify or reopen this Order prior to its expiration date as authorized by law:

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

b. If new or revised water quality objectives (WQOs) or total maximum daily loads (TMDLs) come into effect for the receiving waters (whether statewide, regional, or site-specific). In such cases, effluent limitations or triggers for toxic pollutants in this Order may 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 conditions 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 an antidegradation and anti-backsliding analysis.

2. Effluent Characterization and Evaluation

The Discharger shall evaluate on an annual basis if concentrations of any constituents increase over past performance. The Discharger shall investigate the cause of the increase. The investigation may include, but need not be limited to, an increase in the effluent monitoring frequency, monitoring of internal process streams, and monitoring of influent sources. This requirement may be satisfied through identification of these constituents as "pollutants of concern" in the Discharger's Best Management Practices (BMPs) Plan. A summary of the annual evaluation of data and source investigation activities shall also be provided in the annual self monitoring report. The Discharger shall submit a final report that presents all the data to the Regional Water Board no later than 180 days prior to the Order expiration date. The final report shall be submitted with the application for permit reissuance.

3. Best Management Practices (BMPs) Plan

The Discharger submitted a BMPs plan on June 25, 2009, that identifies potential pollutants, pollution control and effluent treatment methods, chlorine management, and staff responsibilities and training. The Discharger shall implement the BMPs plan and update the plan annually, as necessary.

4. Construction, Operation, and Maintenance Specifications

The backwash water settling basins shall be operated so as to optimize solids settling. The Discharger shall submit appropriate sections in its Operation and Maintenance (O&M) Manual regarding basin operation and maintenance procedures annually to the Regional Water Board. A letter report describing any updates to a previously submitted O&M Manual shall be acceptable in lieu of the O&M Manual itself.

ATTACHMENT A – DEFINITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Reporting Level (RL)
RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order

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

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

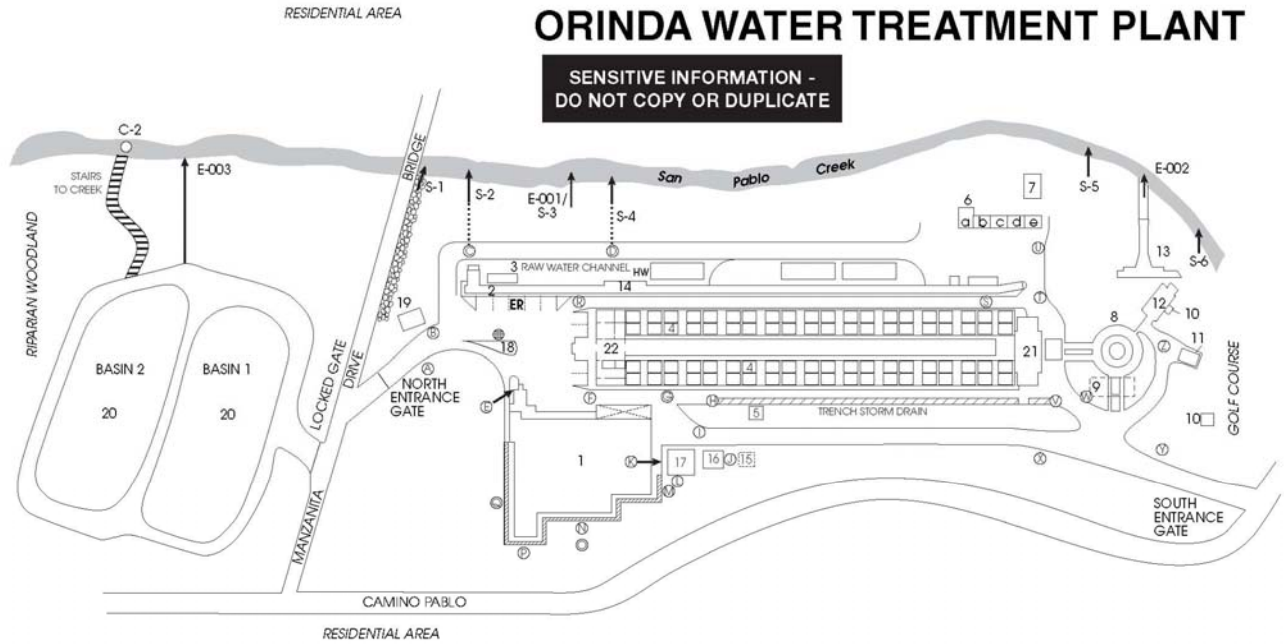
Source of Drinking Water
Any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

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

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

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

ATTACHMENT B – MAP



PLANT LAYOUT

1. Chemical Building & Administrative Offices
   - Ammonium hydroxide
   - Fluoride
   - Polymer
   - Sodium bisulfite
   - Sodium hydroxide
   - Sodium hypochlorite
2. North Coagulant Feed Point
3. Jet mixer
4. Filters (30'x20'x10')
5. #2 Effluent Pit
6. Grounds Maintenance Building
   a. storage
   b. toolroom and fertilizer storage
   c. garage–fuel storage
   d&e. office & lockers
7. Maintenance Shop
8. #1 Effluent, Glory Hole (East Portal)
9. Los Altos Pumping Plant #2
10. Access Shaft
11. Pesticide storage
12. Los Altos Pumping Plant #1
13. South Spillway
14. Confluence Rapid Mix
15. Underground Diesel Storage
16. Emergency Generator
17. Electrical Switch Gear Center
18. Truck Loading Station - Sludge Truck
19. Washwater Pumping Station
20. Settling Ponds
21. Water Treatment Section Offfices
22. Maintenance Support East

Ⓐ to Ⓩ Storm Drains

⊕ Loading Station Sump

ER Emergency Response Vehicle 972

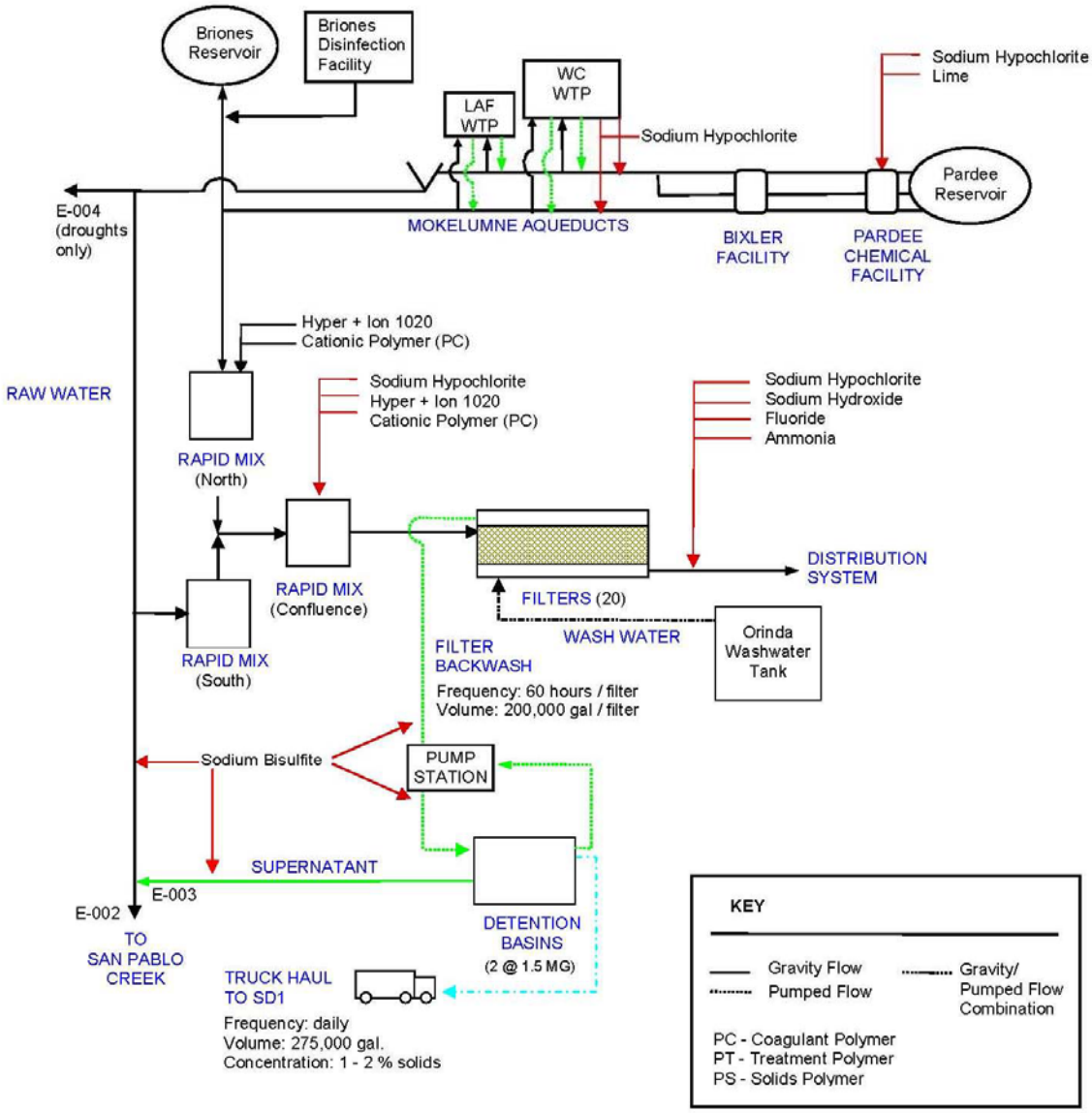
HW Hazardous Waste Storage Locker

BP-08B • 3/05

N

FACILITY DIAGRAM

ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – STANDARD PROVISIONS (FEDERAL)

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

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

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

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

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

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

F. Inspection and Entry

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

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

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

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

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

G. Bypass

1. Definitions

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

b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)

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

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

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

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and

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

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

5. Notice

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

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

H. Upset

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

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was

caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)

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

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

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

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

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

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

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

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

IV. STANDARD PROVISIONS – RECORDS

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

B. Records of monitoring information shall include:

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

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

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

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

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

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

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

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

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

B. Signatory and Certification Requirements

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

2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).)

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility

for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and

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

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 C.F.R. § 122.22(d).)

C. Monitoring Reports

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

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

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

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

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

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

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

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

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

F. Planned Changes

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

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

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

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the

application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 C.F.R.§ 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

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

H. Other Noncompliance

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

I. Other Information

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

VI. STANDARD PROVISIONS – ENFORCEMENT

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe (40 C.F.R. § 122.42(a)):

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(1)):

a. 100 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(1)(i));

b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(1)(ii));

c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or

d. The level established by the Regional Water Board in accordance with Section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels" (40 C.F.R. § 122.42(a)(2)):

a. 500 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(2)(i));

b. 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(2)(ii));

c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or

d. The level established by the Regional Water Board in accordance with Section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

40 CFR 122.48 requires that all NPDES permits specify monitoring and reporting requirements. California Water Code (CWC) Sections 13267 and 13383 also authorize the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, that implement these regulations.

I. GENERAL MONITORING PROVISIONS

A. Reporting responsibilities of waste dischargers are specified in CWC Sections 13225(a), 13267(b), 13268, 13383 and 13387(b).

B. The principal purposes of a monitoring program by a waste discharger, also referred to as a self-monitoring program, are (1) to document compliance with waste discharge requirements (WDRs) and prohibitions established by the Regional Water Board; (2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge; (3) to develop or assist in the development of effluent or other limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards; and (4) to prepare water and wastewater quality inventories.

C. Sampling is required during the entire year when discharging. All analyses shall be conducted using current United States Environmental Protection Agency (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 analyses. 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 Board's Quality Assurance Program.

D. Laboratories analyzing monitoring samples shall be certified by the Department of Public Health, in accordance with CWC Section 13176 and shall include quality assurance/quality control data with their reports.

E. Written reports, strip charts, calibration and maintenance records, and other records shall be maintained by the Discharger, be accessible, and be retained for a minimum of five years. This period of retention shall be extended during the course of any unresolved enforcement or litigation regarding this discharge or when requested by the Regional Water Board or USEPA Regional Administrator. Such records shall show the following for each sample:

1. Identity of sampling and observation stations by number.

2. Date and time of sampling or observations.

3. Method of sampling.

4. Full report for bioassay tests (96-hour static bioassay renewal).

5. Date and time that analyses are started and completed (if applicable), and name of personnel performing the analyses.

6. Complete procedure used, including method of preserving sample and identity and volumes of reagents used. A reference to a specific section of Standard Methods (SM) or the standard USEPA method number is satisfactory.

7. Calculations of results.

8. Results of analyses or observations.

F. If the Discharger wishes to invalidate any measurement, the letter of transmittal will include a formal request to invalidate the measurement, the original measurement in question, the reason for invalidating the measurement, all relevant documentation that supports the invalidation (e.g., laboratory sheet, log entry, test results, etc.), and discussion of the corrective actions taken or planned (with a time schedule for completion) to prevent recurrence of the sampling or measurement problem.

G. A tabulation reflecting accidental or unauthorized waste discharges to waters of the State shall be maintained.

H. A copy of this Order and any other documents relevant to the operation and maintenance of the treatment facility shall be stored at or near the treatment facility. These documents help the Discharger's staff responsible for compliance assurance activities and shall be made available to Regional Water Board staff during inspections.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-1. Monitoring Station Locations

Discharge Point	Monitoring Location	Monitoring Location Description
EFFLUENT		
E-001	**EFF-001**	At any point between the Mokelumne Aqueduct diversion structure, and the point where the Mokelumne water actually enters San Pablo Creek.
E-002	**EFF-002**	As above.
E-003	**EFF-003**	At any point in the outfall between the point of discharge to the receiving water and the point at which all waste tributary to that outfall is present.
E-004	**EFF-004**	As above.
RECEIVING WATERS		
E-001	**RW-001U**	At a point in the receiving water located upstream of the discharge point where impacts from the discharge would not be expected.
	RW-001D	At a point in the receiving water within 50 feet downstream of the discharge outfall.
E-002	**RW-002U**	As above (upstream).
	RW-002D	As above (downstream).
E-003	**RW-003U**	As above (upstream).
	RW-003D	As above (downstream).
E-004	**RW-004U**	As above (upstream).
	RW-004D	As above (downstream).

III. EFFLUENT MONITORING REQUIREMENTS

A. Routine Discharges

Effluent monitoring is only required when discharging to the receiving water. The Discharger shall monitor effluent at routine discharge locations EFF-001, EFF-002, EFF-003, and EFF-004 as follows:

Table E-2. Monitoring Schedule for Routine Discharges

Parameter	Units [1]	Sample Type[2]	Minimum Sampling Frequency			
			EFF-001	EFF-002	EFF-003	EFF-004
Flow rate and volume [3]	MGD/MG	Continuous or daily	1/occurrence	1/day	1/day	1/occurrence
Total Suspended Solids (TSS)	mg/L	Grab	1/occurrence	1/month	1/month	1/occurrence
Total Settleable Matter	mg/L	Grab	--	--	1/month	--
Total Chlorine Residual [4]	mg/L	Continuous or Grab	Continuous or hourly	Continuous or hourly	Continuous or hourly	Continuous or hourly
Turbidity	NTU	Grab	1/occurrence	1/month	1/month	1/occurrence
pH	s.u.	Grab	1/occurrence	2/week	2/week	1/occurrence
Acute Toxicity [5]	% survival	Grab	--	--	1/quarter	--
Chronic Toxicity	TUc	Grab	--	--	1 per 5 years	--
Dichlorobromomethane	µg/L	Grab	1/occurrence	1/month	1/month	1/occurrence
Copper	µg/L	Grab	--	1 in summer & 1 in winter	1 in summer & 1 in winter	--
Priority Pollutants[6]	µg/L	Grab	--	1 per 5 years	1 per 5 years	--

B. Non-Routine Discharges and Water Storage Facility Dewatering

Non-routine discharges (i.e., unplanned or emergency discharges) such as discharges from treatment unit overflows or broken waterlines within the treatment facility shall be monitored as outlined in Table E-3. Discharges from on-site water storage facility dewatering shall also be monitored as indicated in Table E-3.

Table E-3. Monitoring Schedule for Non-Routine Discharges

Parameter	Units [1]	Sample Type[2]	Minimum Sampling Frequency	
			Non-Routine	Water Storage Dewatering
Flow rate and volume [3]	MGD/MG	Continuous or daily	1/occurrence	1/ occurrence
Duration of discharge	Hours and minutes	N/A	1/ occurrence	1/ occurrence
Total Suspended Solids (TSS)	mg/L	Grab	1/ occurrence	3/occurrence[7]
Total Settleable Matter	mg/L	Grab	--	3/occurrence[7]
Total Chlorine Residual [4]	mg/L	Grab	1/ occurrence	1/occurrence
Turbidity	NTU	Grab	1/ occurrence	3/occurrence[7]
pH	s.u.	Grab	1/occurrence	1/ occurrence

Footnotes for Tables E-2 and E-3

[1] Unit Abbreviations
µg/L = micrograms per liter
mg/L = milligrams per liter
MG = million gallons
MGD = million gallons per day
NTU = nephelometric turbidity units
s.u. = standard units
TUc = chronic toxic units

[2] Sample Type
Continuous = measured continuously, and recorded and reported daily
Grab= Grab samples of effluent shall be collected during periods of maximum peak flows and shall coincide with effluent composite sample days.

[3] Flow Monitoring. Flows shall be monitored at each discharge outfall by flow meters or estimated if no flow meter is in place and the following shall be reported in self-monitoring reports:

a. Daily total flow volume (MG).
b. Discharge duration during a day, in hours.
c. Daily average flow rate (MGD), if not measured directly, then calculated using data from a. and b. above. If duration is not recorded, specify averaging period, i.e., 24 hours vs. estimated discharging hours.
d. Monthly total flow volume (MG).
e. Discharge days during a month.
f. Average daily maximum and average daily minimum flow rates (MGD) of discharge days in a month.

All wastewater flows, including commingled storm water, discharged through all discharge points shall be reported. For any discharge point that is not equipped with flow meters, flows can be estimated. The Executive Officer may require the Discharger to install flow meters during the permit term.

[4] Chlorine Residual. Effluent chlorine concentrations shall be monitored continuously or hourly. The Discharger shall report the maximum residual chlorine concentration observed following dechlorination on a daily basis. Total chlorine dosage (kg/day) shall be recorded on a daily basis. The hourly monitoring frequency may be

reduced to once every two hours if the first three samples show compliance with the effluent limit for total chlorine residual.

Alternately, the Discharger may evaluate compliance with this requirement by recording discrete readings from the continuous monitoring every hour on the hour, or by collecting grab samples every hour, for a total of 24 readings or samples per day if the following conditions are met: (a) the Discharger shall retain continuous monitoring readings for at least three years; (b) the Discharger shall acknowledge in writing that the Regional Water Board reserves the right to use all other continuous monitoring data for discretionary enforcement; (c) the Discharger must provide in writing the brand name(s), model number(s), and serial number(s) of the equipment used to continuously monitor dechlorinated final effluent chlorine residual. If the identified equipment is replaced, the Discharger shall provide the Regional Water Board in writing, within 72 hours of the successful startup of the new equipment, the new equipment's brand name, model number, and serial number. The written notification identified in items (a) through (c) shall be in the form of a letter addressed to the Regional Water Board's Executive Officer with a certification statement as listed in **Attachment D** Section V.B.

The reporting limit of 0.05 mg/L for residual chlorine field test kits and analyzers using Standard Methods 4500-Cl F and G is 0.05 mg/L because it is a consistently achievable level for these analytical techniques.

[5] Toxicity tests shall be performed according to Section IV below. Toxicity monitoring is not required for raw water discharges.

[6] The Discharger shall use ultra-clean sampling methods (USEPA 1669) to the maximum extent practicable and ultra-clean analytical methods (USEPA 1631) for mercury monitoring. The Discharger may use alternative methods of analysis (such as USEPA 245) if that alternate methods has a method detection limit (MDL) of 0.0002 µg/L or less.

[7] One sample shall be taken prior to discharge, one just after initiating discharge and one just before terminating discharge. The samples shall be representative of effluent quality.

IV. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Whole Effluent Acute Toxicity

1. Acute toxicity of effluent shall be evaluated by measuring survival of test organisms exposed to 96-hour static renewal bioassays.

2. Test species shall be either rainbow trout or fathead minnows unless specified otherwise in writing by the Executive Officer.

3. All bioassays shall be performed according to 40 CFR 136, currently the "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms," 5th Edition. Exceptions may be granted by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).

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

5. Effluent used for fish bioassays must be dechlorinated prior to testing. Monitoring of the bioassay water shall include, on a daily basis, the following parameters: pH, dissolved oxygen, ammonia (if toxicity is observed), temperature, hardness, and alkalinity. These results shall be reported. If the fish survival rate in the effluent is less than 70 percent or if the control fish survival rate is less than 90 percent, the bioassay test shall be repeated with new fish as soon as practical and shall be repeated until a test fish survival rate of 70% or greater is observed in the effluent or 90% or greater is observed in the control.

B. Whole Effluent Chronic Toxicity

1. Chronic Toxicity Monitoring Requirements

a. *Sampling.* The Discharger shall collect a large grab sample of the effluent at the compliance point specified in Table E-2 above for critical life stage toxicity testing. For toxicity tests requiring renewals, daily grab samples collected on consecutive days are required. If discharge discontinues during the test, renewals shall be made up of retains of the most recent collected effluent sample.

b. *Test Species.* The test species shall be *Ceriodaphnia dubia* and Pimehales promelas (fathead minnows).

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**.** These are *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms,* currently third edition (EPA-821-R-02-014), and *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms,* currently fourth Edition (EPA-821-R-02-013), with exceptions granted by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).

d. *Dilution Series.* The Discharger shall conduct tests at 40%, 20%, 10%, 5% and 2%. The "%" represents percent effluent as discharged. The Discharger may use a buffer only after obtaining written approval from the Executive Officer.

2. Chronic Toxicity Reporting Requirements

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

(1) Sample date(s)

(2) Test initiation date

(3) Test species

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

(5) No Observed Effect Concentration (NOEC) value(s) in percent effluent

(6) Inhibition Concentration (IC) values at IC_{15}, IC_{25}, IC_{40}, and IC_{50} (or Effective Concentration (EC) values at EC_{15}, EC_{25} ... etc.) as percent effluent

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

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

(9) NOEC and Lowest Observed Effect Concentration (LOEC) values for reference toxicant test(s)

(10) IC_{50} or EC_{50} value(s) for reference toxicant test(s)

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

b. *Compliance Summary*. The results of the chronic toxicity testing shall be provided in the Self-Monitoring Report (SMR) and shall include a summary table of chronic toxicity data from at least eleven of the most recent samples. The information in the table shall include items listed above under B.2, specifically item numbers (1), (3), (5), (6) (IC_{25} or EC_{25}), (7), and (8).

V. RECEIVING WATER MONITORING REQUIREMENTS

The Discharger shall monitor both upstream and downstream of discharge outfalls (at the locations described in Table E-1 above) according to Table E-4 below:

Table E-4. Receiving Water Monitoring Requirements

Parameter	Units[1]	Sample Type[2]	Minimum Sampling Frequency
Standard Observations[3]	--	--	Quarterly[4]
Stream Flow Rate[5]	GPD	N/A	Quarterly[4]
Turbidity	NTU	Grab	Quarterly[4]
pH	s.u.	Grab	Quarterly[4]
TSS	mg/L	Grab	Quarterly[4]
Hardness	mg/L as CaCO3	Grab	Quarterly[4]
Priority Pollutants[6]	µg/L	Grab	Once per 5 years

Footnotes for Table E-4

[1] Unit Abbreviations
CaCO3 = calcium carbonate
GPD = gallons per day
µg/L = micrograms per liter
mg/L = milligrams per liter
NTU = Nephelometric turbidity units
s.u. = pH standard unit

[2] Samples shall be collected within one foot below the surface of the receiving water body, unless otherwise stipulated. The Discharger shall note in its annual report any monitoring locations that were dry or that could not be sampled, and explain why they could not be sampled. Pollutants and pollutant parameters shall be analyzed using the analytical methods described in 40 CFR 136. For priority pollutants, the methods must meet the lowest MLs specified in SIP Attachment 4. Where no methods are specified for a given pollutant, the methods must be approved by this Regional Water Board or the State Water Board.

[3] See Regional Standard Provisions (**Attachment G**), section II.C.1

[4] Sampling frequency is quarterly for the first two years after the effective date of this Order.

[5] For any discharge point that is not equipped with flow meters, flows can be estimated. The Executive Officer may require the Discharger to install flow meters during the permit term.

[6] For mercury monitoring, the Discharger shall use ultra-clean sampling methods (USEPA 1669) to the maximum extent practicable and ultra-clean analytical methods (USEPA 1631). The Discharger may use an alternative method of analysis (such as USEPA 245) if that alternate method has a method detection limit (MDL) of 0.0002 µg/L or less.

VI. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs). Until such notification is given, the Discharger shall submit SMRs in accordance with the requirements described below.

2. The Discharger shall submit an annual report 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. 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-5. Monitoring Periods

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period
Continuous	Effective date of permit	All
1/day	Effective date of permit	Daily
1/month	First day of the month following (or on) the effective date of permit	Once per calendar month
1/quarter	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
Per occurrence	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
Annually	January 1 following (or on) permit effective date	January 1 through December 31
1/5 years	Effective date of permit	Once during the permit term

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

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

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

b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified" or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

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

d. The Discharger shall instruct laboratories to establish calibration standards so that the RL (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. The Discharger shall not

use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

5. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with limitations.

6. The Discharger shall attach a cover letter to the SMR. The cover letter shall clearly identify violations, discuss corrective actions taken or planned, and present the proposed time schedule for corrective actions. Identified violations must include a description of the requirement violated and a description of the violation.

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

8. The Discharger has the option to submit all monitoring results in an electronic reporting format approved by the Executive Officer. The Electronic Reporting System (ERS) format includes, but is not limited to, a transmittal letter, summary of violation details and corrective actions, and transmittal receipt. If there are any discrepancies between the ERS requirements and the "hard copy" requirements listed in the MRP, then the approved ERS requirements supersede.

C. Discharge Monitoring Reports (DMRs)

1. As described in Section VI.B.1, 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 DMRs. Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements 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

2. DMRs shall be signed and certified as required by the Federal Standard Provisions (**Attachment D**). The Discharger shall submit the original DMR forms and one copy to one of the addresses listed below:

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 as EPA Form 3320-1.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

I. PERMIT INFORMATION

The facility was previously covered by NPDES General Permit No. CAG382001, Order No. R2-2003-0062 (the previous permit), adopted by the Regional Water Board on September 21, 2003.

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	2 095204N01
Discharger	East Bay Municipal Utility District
Name of Facility	Orinda Water Treatment Plant
Facility Address	190 Camino Pablo Orinda, CA 94563 Contra Costa County
Facility Contact, Title and Phone	Chris Burquez, Supervisor, Water Treatment, (510) 287-1963
Authorized Person to Sign and Submit Reports	Chris Burquez
Mailing Address	East Bay Municipal Utility District 375 Eleventh Street (MS #704) Oakland, CA 94607
Billing Address	Same
Type of Facility	Water Treatment Plant
Major or Minor Facility	Minor
Threat to Water Quality	3
Complexity	C
Pretreatment Program	N
Reclamation Requirements	Not applicable.
Facility Permitted Flow	Not applicable.
Facility Design Flow	200 million gallons per day (max), 135 million gallons per day (average)
Watershed	San Pablo Creek
Receiving Water	San Pablo Creek
Receiving Water Type	Fresh

A. East Bay Municipal Utility District (hereinafter Discharger) is the owner and operator of the Orinda Water Treatment Plant (hereinafter Facility), a potable water treatment plant.

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

B. The Facility discharges wastewater to San Pablo Creek, a water of the United States, and is currently regulated by Order R2-2003-0062, which was adopted on September 21, 2003, and remains in effect until March 1, 2010.

II. FACILITY DESCRIPTION

A. General Description of the Facility

1. **Orinda Treatment Plant.** The Discharger owns and operates the Facility, one of six potable water treatment facilities operated by the Discharger in the East Bay for treatment of water prior to distribution to residents of Alameda and Contra Costa Counties. The Facility has the largest output of the six treatment facilities, with a maximum capacity of 200 MGD. The Facility serves all or parts of Alameda, Albany, Berkeley, El Cerrito, Emeryville, Moraga, Oakland, Orinda, Piedmont, Richmond and San Leandro. The other treatment facilities (Upper San Leandro in Oakland, San Pablo in Kensington, Sobrante in El Sobrante, Lafayette and Walnut Creek) supply water in varying amounts to the balance of the Discharger's service area.

2. **Raw Water.** The Facility receives raw water from the Pardee Reservoir, located in the foothills of the Sierra Nevada, via the three 90-mile Mokelumne Aqueducts. The raw water flows by gravity from the Pardee Reservoir to the East Bay. Raw water is treated as it enters the Mokelumne Aqueducts at Pardee with liquid lime for corrosion protection and sodium hypochlorite for disinfection. Additional sodium hypochlorite is added to the Mokelumne Aqueducts at the Discharger's Walnut Creek water treatment plant as needed to meet drinking water requirements (i.e., when the Lafayette or Walnut Creek water treatment plants are adding reclaimed water into the aqueducts). The Discharger does not use copper sulfate to treat raw water in the Mokelumne Aqueducts. Depending upon seasonal and other influences, raw water from the Pardee Reservoir, however, may contain detectable levels of naturally occurring copper.

   The Mokelumne Aqueducts are typically operated so no chlorine residual remains in the water reaching the Facility through Lafayette Aqueduct No. 1. A chlorine residual between approximately 0.09 and 0.15 mg/L is maintained in the water reaching the Facility through Lafayette Aqueduct No. 2 for compliance with drinking water requirements. The raw water is dechlorinated using a sodium bisulfite dechlorination solution as it approaches the Facility, prior to any potential discharge at the South Spillway (E-002). Online analyzers monitor the incoming flow for chlorine residual, flow, and pH.

   During drought conditions, part of the Mokelumne Aqueduct system will be designated for raw water transfers from other water sources (e.g., Contra Costa Water District or Folsom South Canal). These flows will bypass the Facility, through the diversion structure (E-004). Should these flows require chlorination for compliance with drinking water requirements, these flows will also be subsequently dechlorinated prior discharge to San Pablo Creek.

3. **Water Treatment Processes.** With a design capacity of 200 MGD, the Facility currently treats an average of 135 MGD of raw water using the following processes:

   a. Coagulation/flocculation. Chemicals (e.g., polyaluminum chloride and cationic polymers) with mechanical equipment (e.g., flash mixer) are used to cause fine particles to clump together and aid in the filtering and removal of organics and particulate matter that may affect the potability and the taste and odor of the finished water.

   b. Filtration. Media (e.g., sand, anthracite) is used to remove remaining suspended particles.

   c. Disinfection. Chemicals (e.g., sodium hypochlorite, usually before and after coagulation and after filtration) are used to inactivate bacteria, viruses, and other pathogens that may cause harm to public health and to remove taste and odor causing substances.

   d. Fluoridation. Chemicals (e.g., hydrofluorosilicic acid) are be used as an aid to dental health.

   e. pH adjustment. Chemicals (e.g., sodium hydroxide) are used to reduce the corrosivity of water and prevent rust formation.

   f. Chloramination. Aqueous ammonia is used to react with the free chlorine so that a more persistent combined chlorine residual is formed.

4. **Filter Backwash.** At the Facility, raw water passes through dual media filters to remove soil and other small particles, and both alum and a polymer are added to facilitate solids removal. Every 8 to 96 hours each filter is backwashed to remove the accumulated solids. The frequency of backwashing depends upon the quality of the incoming water, which varies with the seasons. The volume generated during each backwash varies between 100,000 and 300,000 gallons.

5. **Settling Basins.** Backwash water is pumped to one of two adjacent ¾-acre, 1.5 million gallon concrete lined settling basins for removal of suspended solids prior to discharge. The filter design includes a system that collects any water leakage, which is piped to the settling basins. The two basins alternate between active and passive modes of operation. One basin receives washwater from backwashed filters, while the other holds the settled solids for removal. The settling basins are designed to store approximately two months of washwater solids production. After approximately two months of service, the active basin is taken out of service, and washwater flows are diverted to the other basin.

6. **Settling Basin Maintenance.** Accumulated solids from the bottom of the basins, with an estimated 0.5% to 3.0% solids content, are pumped from the passive settling basin to a tank truck loading station. Tank trucks haul the solids offsite for disposal.

B. Discharge Points and Receiving Waters

Wastewater is discharged from E-001, E-002, E-003, and E-004 to San Pablo Creek, a water of the United States, which flows to San Pablo Reservoir within the San Pablo Creek Watershed. Table F-2 identifies the locations of these discharge points. **Attachment B** provides a map of the area around the facility. **Attachment C** provides a flow schematic of the facility.

Table F-2. Discharge Locations

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
E-001	Excess raw water	37º53'35"N	122º11'02"W	San Pablo Creek
E-002	Excess raw water	37º53'33"N	122º11'07"W	San Pablo Creek
E-003	Clarified backwash water	37º53'40"N	122º12'08"W	San Pablo Creek
E-004	Raw water during drought conditions	37º53'34"N	122º12'02"W	San Pablo Creek

1. **Outfalls E-001 and E-002.** These two outfalls provide for the discharge of raw aqueduct water flows in excess of plant intake and are shown on the Site Map included as **Attachment B**. If necessary, aqueduct release water is dechlorinated prior to discharge and released to San Pablo Creek. Nearly all excess flows are discharged through E-002; E-001 is used only in emergency situations.

2. **Outfall E-003.** Discharges from this outfall, shown on the Site Map included as **Attachment B**, may include filter backwash water, filter waste gate leakage, and any spillage that may occur at the sludge truck loading station. Filter backwash from the active settling basin is dechlorinated and released intermittently via E-003 to San Pablo Creek. Water is discharged daily, but the volume varies based on the frequency of backwashing, which depends on the quality of the incoming water.

3. **Outfall E-004.** Discharge from this outfall to San Pablo Creek may occur when the Facility transitions from normal operations using water from the Pardee Reservoir to raw water from other sources. In such instances, the hypochlorite feed is shut-off at the Walnut Creek water treatment plant, and the hypochlorite feed at Pardee is minimized to eliminate detectable chlorine residual in the water reaching the Facility. On-line chlorine residual analyzers on the aqueducts at the Walnut Creek Pumping Plant verify no detectable chlorine residual in the Pardee water and, if necessary, raw water bypasses are dechlorinated using sodium bisulfite dechlorination solution prior to any discharge. This outfall is used under drought conditions and is anticipated to be used once every ten years.

C. Summary of Existing Requirements and Self-Monitoring Data

Effluent limitations contained in the previous permit for discharges to San Pablo Creek or San Pablo Reservoir and representative monitoring data from the term of the previous order are presented in the following tables.

Table F-3. Effluent Limits from Previous Permit

Constituents	Instantaneous Maximum	Daily Maximum	Monthly Average	Weekly Average
a. Total Suspended Solids (TSS), mg/L	---	---	30	45
b. Total Settleable Solids, mL/L-hr[1]	---	1.0	---	---
c. Total Chlorine Residual, mg/L	0.0	---	---	---
d. pH, in pH units [2]	6.5-8.5 (not less than 6.5 and not greater than 8.5)			
e. Acute Toxicity	The survival of bioassay test organism(s) in 96-hour bioassays of undiluted effluent shall be a three-sample median of not less than 90% survival AND a single-sample maximum of not less than 70% for continuous discharges; or a single sample maximum of not less than 70% survival for intermittent discharges. A bioassay test showing survival of less than 70% represents a violation of this effluent limit.			

Unit Abbreviations
µg/L = micrograms per liter
mg/L = milligrams per liter
mL/L/hr = milliliters per liter per hour

(1) The settleable matter limits only applied to Discharge Point E-003.
(2) An exceedance of the pH limit does not constitute a violation if the Discharger demonstrates that the source water is also high in pH and the high pH in its discharge effluent is not caused by its operations.

Table F-4 presents the available effluent monitoring data from the four discharge points between 2005 and 2007. Because E-001 is normally shut down, no data are available for this outfall location.

Table F-4. Effluent Characterization 2005-2007

Parameter	Value or Range of Values	Units	Method Detection Limit	# of samples
E-002 (south spillway)				
Turbidity (0.1 NTU)	No data	NTU	0.01	0
Total Suspended Solids	Not detected	mg/L	1.3	32
pH (0.1 standard units)	7.3 to 8.6	pH units	0.1	293
Chlorine Residual	Not detected	mg/L	0.08	293
Copper	3.3	µg/L	0.41	1
Chlorodibromomethane	0.8-1.5	µg/L	0.75	5
Dichlorobromomethane	Not detected	µg/L	0.06 to 0.67	5
E-003 (backwash water from settling basins)				
Turbidity (0.1 NTU)	No data	NTU	0.01	0
Total Suspended Solids	Not detected	mg/L	1.3	39
pH (0.1 standard units)	6.6 to 8.1	pH units	0.1	362
Chlorine Residual	Not detected	mg/L	0.08	362
Copper	7.4 to 39.4	µg/L	0.41 to 9.9	4
Chlorodibromomethane	1.4-4.0	µg/L	0.75	5
Dichlorobromomethane	0.4	µg/L	0.67	5
E-004 (diversion structure)				
Turbidity (0.1 NTU)	1.7 to 16.0	NTU	0.01	20
pH (0.1 standard units)	7.4 to 9.4	pH units	0.1	21
Total Suspended Solids	No data	mg/L	1.3	0
Chlorine Residual	No chlorine is added	--	--	--
Copper	Not detected	µg/L	50	1
Chlorodibromomethane	No data	µg/L	0.75	0
Dichlorobromomethane	No data	µg/L	0.67	0

D. Compliance with Previous Numeric Effluent Limits

Exceedances of numeric effluent limitations for chlorine, pH, and acute toxicity were observed during the previous permit term. The exceedances are summarized in Table F-5. Regional Water Board staff are preparing draft enforcement orders to address these violations.

Table F-5. Compliance with Numeric Effluent Limitations

Date of Violation	Parameter	Units	Effluent Limitation	Reported Effluent Concentration
October 23, 2003	Chlorine	mg/L	0.0	0.1
January 1, 2004	Chlorine	mg/L	0.0	2.0
January 8, 2004	pH	pH units	6.5-8.5	5.0
August 25, 2004	pH	pH units	6.5-8.5	6.4
October 18, 2004	Acute toxicity	% survival	Single-sample maximum 70% or greater	20% survival
March 7, 2005	Chlorine	mg/L	0.0	2.0
March 21, 2005	Acute toxicity	% survival	3 sample median 90% or greater	80%
May 23, 2005	Acute toxicity	% survival	3 sample median 90% or greater	80%
May 30, 2005	Acute toxicity	% survival	Single-sample maximum 70% or greater	25%
June 6, 2005	Acute toxicity	% survival	3 sample median 90% or greater	75%
July 11, 2006	Chlorine	mg/L	0.0	2.2
July 11, 2006	pH	pH units	6.5-8.5	8.9
November 9, 2006	Chlorine	mg/L	0.0	1.1

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

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 shall serve as an NPDES permit for point source discharges from this Facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to CWC Article 4, Chapter 4, Division 7 (commencing with 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 Regional Water Board adopted a Water Quality Control Plan for the San Francisco Bay Basin (Region 2) (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Beneficial uses of any water body specifically identified in Basin Plan Chapter 2 generally apply to its tributary streams. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which establishes a policy that all waters, with certain exceptions, should be considered suitable or

potentially suitable for municipal or domestic supply. Requirements of this Order implement the Basin Plan.

Beneficial uses applicable to San Pablo Creek and San Pablo Reservoir, as described by Chapter 2 of the Basin Plan, are presented in Table F-46. This Order implements State Water Board Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply (MUN).

Table F-6. Basin Plan Beneficial Uses

Receiving Water Name	Beneficial Uses
San Pablo Creek	Fish migration (MIGR) Non-contact water recreation (REC-2) Fish spawning (SPWN) Warm freshwater habitat (WARM) Wildlife habitat (WILD) Municipal and domestic supply (MUN)
San Pablo Reservoir	Cold fresh water habitat (COLD) Municipal and domestic supply (MUN) Water contact recreation (REC-1) Non-contact water recreation (REC-2) Fish spawning (SPWN) Warm freshwater habitat (WARM) Wildlife habitat (WILD)

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, amending it on May 4, 1995, and November 9, 1999, and adopted the CTR on May 18, 2000, amending it on February 13, 2001. These rules include water quality criteria for priority pollutants and apply to Facility discharges.

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

4. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (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 No. 68-16, which incorporates the federal antidegradation policy. It requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies.

   The permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution No. 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 effluent limitations in this Order comply with antidegradation requirements because these limits 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 reduction in the 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. Findings authorizing degradation are thus unnecessary.

6. **Anti-Backsliding Requirements.** CWA Sections 402(o)(2) and 303(d)(4) and federal regulations at title 40 CFR Section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. The effluent limits established by this Order are at least as stringent as those established by previous permit Order No. R2-2003-0062, or are newly established by this Order. Therefore, the effluent limits established by this Order meet applicable antibacksliding requirements.

7. **Monitoring and Reporting Requirements.** 40 CFR 122.48 requires 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 Plan (MRP), included as **Attachment E**, establishes monitoring and reporting requirements to

implement federal and State requirements. The Executive Officer may amend the MRP pursuant to 40 CFR 122.62, 122.63, and 124.5.

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

In November 2006, USEPA approved a revised list of impaired water bodies (the 303(d) list) pursuant to CWA section 303(d), which requires identification of specific water bodies where it is expected that WQSs will not be met after implementation of technology-based effluent limitations on point sources. Where it has not done so already, the Regional Water Board plans to adopt total maximum daily loads (TMDLs) for pollutants on the 303(d) list. TMDLs establish wasteload allocations for point sources and load allocations for non-point sources, and are established to achieve the WQSs for the impaired waterbodies. The SIP requires that final effluent limitations for all 303(d)-listed pollutants be consistent with the TMDLs and associated wasteload allocations.

San Pablo Creek is listed as impaired by diazinon, a pesticide. USEPA approved a pesticide toxicity TMDL "*Diazinon and Pesticide-Related Toxicity in San Francisco Bay Area Urban Creeks*" including San Pablo Creek. The TMDL does not list the Facility as a source of pesticide toxicity; therefore, there is no specific wasteload allocation or other implementation requirements.

San Pablo Reservoir is listed as impaired by chlordane, dieldrin, heptachlor epoxide, mercury, PCBs, and toxaphene.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations 40 CFR Section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, three options exist to protect water quality: (1) 40 CFR 122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA Section 304(a); (2) proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information may be used; or (3) an indicator parameter may be established.

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

A. Discharge Prohibitions

1. Prohibition A (Discharge of wastewater at a location or in a manner different than as described in this Order):

This prohibition is based on the Basin Plan to protect beneficial uses of the receiving water from un-permitted discharges, and the intent of CWC Sections 13260 through 13264 relating to the discharge of waste to State waters without filing for and being issued a permit. The prohibition is unchanged from the previous permit.

2. **Prohibition B (Discharge of chlorinated water without dechlorination):**

   This prohibition is based on Basin Plan Table 4-2 (setting a 0.0 mg/L limit on total chlorine residual).

3. **Prohibition C (Discharge of bottom sediments from the settling basins in such a manner as to cause nuisance or adversely affect beneficial uses in San Pablo Creek and/or San Pablo Reservoir):**

   This prohibition is based on narrative objectives specified in Basin Plan Chapter 3 section 3.3 for sediments (3.3.12), settleable matter (3.3.13), suspended (3.3.14) and floating materials (3.3.6). The prohibition is unchanged from the previous permit.

4. **Prohibition D (On-site storage of oil, fuel, or any other chemical causing contamination of storm water runoff or water and wastewater discharge):**

   This prohibition implements the oil and grease water quality objective specified in Basin Plan Chapter 3 section 3.3.7. Although on-site hazardous material storage is subject to other regulations, this prohibition emphasizes that storm water pollution should be prevented.

5. **Prohibition E (Discharge in such a manner as to cause a condition of pollution, contamination, or nuisance as defined in the Clean Water Act):**

   This is a general prohibition is based on the CWA and CWC. The prohibition is unchanged from the previous permit.

B. Technology-Based Effluent Limitations

CWA Section 301(b) and 40 CFR 122.44 require permits to, at a minimum, meet applicable technology-based requirements and any more stringent effluent limitations necessary to meet applicable water quality standards.

The CWA requires the USEPA to develop effluent limitations, guidelines, and standards (Effluent Limitations Guidelines - ELGs) representing application of best practicable treatment control technology (BPT), best available technology economically achievable (BAT), best conventional pollutant control technology (BCT), and best available demonstrated control technology for new sources (NSPS) for specific industrial categories. Where USEPA has not yet developed ELGs for a particular industry or a particular pollutant, CWA Section 402(a)(1) and 40 CFR 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis. When BPJ is used, the permit must reflect specific factors outlined at 40 CFR 125.3.

In this Order, technology-based effluent limitations on the conventional pollutants TSS, settleable matter, pH, and total chlorine residual are based on the Basin Plan Table 4-2 and BPJ. Limitations on non-conventional pollutants turbidity and settable matter are also based on Basin Plan Table 4-2 and BPJ. While these limits were developed primarily for sewage treatment facilities, they also apply to other discharges. They apply to the Facility because it treats backwash water effluent to remove solids before discharge. The Regional Water Board believes these limits are technically achievable, economically feasible, and necessary to protect the receiving waters, and consistent with limits in the Facility's previous permit. These technology-based limits are discussed specifically below.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

a. NPDES regulations at 40 CFR 122.44(d)(1)(i) require permits to include WQBELs for all pollutants (non-priority and priority) "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any narrative or numeric criteria within a State water quality standard" (i.e., that have Reasonable Potential). The process for determining Reasonable Potential and, when Reasonable Potential is determined, calculating WQBELs is intended to (1) protect the designated beneficial uses of receiving waters specified in the Basin Plan, and (2) achieve applicable water quality objectives (WQOs) and water quality criteria (WQC) that are contained in the CTR, NTR, Basin Plan, and other plans and policies.

b. NPDES regulations and the SIP provide the basis to establish 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.** The SIP (Section 1.4) requires that WQBELs be expressed as MDELs and AMELs.

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

2. Water Quality Objectives

The WQOs applicable to receiving waters in the San Francisco Bay Region are from the Basin Plan; the CTR, established by USEPA at 40 CFR 131.38; and the NTR, established by USEPA at 40 CFR 131.36. Some pollutants have WQOs established by more than one of these three sources.

a. Basin Plan. The Basin Plan specifies numeric WQOs for 10 priority toxic pollutants, as well as narrative WQOs for toxicity 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 freshwater, lead, mercury, nickel, silver, zinc, and cyanide. The narrative toxicity objective states in part that "[a]ll waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms." The bioaccumulation objective states in part that "[c]ontrollable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered." Effluent limitations and provisions contained in this Order are designed, based on available information, to implement these objectives.

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 of the San Francisco Bay Region, including San Pablo Creek and San Pablo Reservoir. Basin Plan tables 3-3 and 3-4 include numeric objectives for certain of these priority toxic pollutants. These Basin Plan objectives supersede the CTR criteria for these receiving waters.

c. NTR. The NTR establishes numeric aquatic life criteria for selenium and numeric human health criteria for 33 toxic organic pollutants for waters of San Francisco Bay upstream to, and including Suisun Bay and the Delta. These NTR WQC are applicable to San Pablo Creek.

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

e. Basin Plan Receiving Water Salinity Policy. The Basin Plan and CTR state that the salinity characteristics (i.e., freshwater versus saltwater) of the receiving water shall be considered in determining the applicable WQOs. Freshwater criteria apply to discharges to waters with salinities equal to or less than 1 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 waters with salinities in between these two categories, or tidally influenced fresh waters that support estuarine beneficial

uses, the WQOs are the lower of the salt or freshwater criteria for each substance (the freshwater criteria for some metals are calculated based on ambient hardness).

The receiving water for this discharge is San Pablo Creek, which ultimately flows into San Pablo Reservoir. San Pablo Creek is a freshwater creek. San Pablo Reservoir is a storage facility for drinking water; therefore, it is also freshwater.

f. Receiving Water Hardness. Ambient hardness values are used to calculate freshwater WQOs that are hardness dependent. In determining the WQOs for this Order, Regional Water Board staff used a hardness value of 360 mg/L as $CaCO_3$, the minimum hardness observed in San Pablo Creek upstream of Discharge Point E-002.

3. Determining the Need for WQBELs

NPDES regulations at 40 CFR 122.44(d)(1)(i) require permits to include WQBELs for all pollutants (non-priority and priority) "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any narrative or numeric criteria within a state water quality standard." Thus, 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, Regional Water Board staff analyzed the effluent data to determine if the discharge demonstrates Reasonable Potential. The Reasonable Potential Analysis (RPA) compares the effluent data with numeric and narrative WQOs in the Basin Plan, NTR, and CTR.

a. Reasonable Potential Methodology. The RPA identifies the observed 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) 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) 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.

(3) 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. Regional Water Board staff analyzed available effluent data and the nature of the discharge to determine if the discharge has Reasonable

Potential. The RPA was based on the effluent monitoring data collected by the Discharger between January 2005 and December 2007. This included quarterly grab samples from E-002 and E-003 analyzed for zinc and acute toxicity, and semi-annual grab samples (once in summer and once in winter) analyzed for arsenic, cadmium, chromium VI, copper, lead, mercury, nickel, selenium, silver, chloroform, dichlorobromomethane, chlorodibromomethane, and bromoform. Effluent data for copper collected during this period were found to not be representative of the discharge because samples were collected from copper drainage pipes at E-002 and E-003. Grab samples collected at a point not coming into contact with the copper pipes were collected at E-002 and E-003 in May 2008 and analyzed for copper. Data from this sampling event were used to conduct the reasonable potential analysis for copper. This Order requires semi-annual copper monitoring at the new locations (i.e., at a location not coming into contact with copper drainage pipes).

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 criteria intended to protect human health from carcinogenic effects, the arithmetic mean of observed ambient water concentrations. The Discharger provided the background data used in the RPA. The Discharger analyzed samples from San Pablo Creek in September 2002 for all priority pollutants and in October 2008 for hardness and copper.

d. **RPA Determination.** The maximum effluent concentrations (MECs), most stringent applicable WQC, and background concentrations used in the RPA are presented in Table F-7, along with the RPA results (yes or no) for each pollutant. Reasonable Potential was not determined for all pollutants because there are not applicable WQC for all pollutants and monitoring data were not available for others. Dichlorobromomethane exhibits Reasonable Potential by Trigger 1.

Table F-7. Details of Reasonable Potential Analysis

CTR #	Priority Pollutants	MEC or Minimum DL (µg/L)	Governing WQO (µg/L)	Maximum Background or Minimum DL (µg/L)	RPA Results
1	Antimony	Not available	6	<5	No
2	Arsenic	0.46	50	<0.2	No
3	Beryllium	Not available	4	<0.04	No
4	Cadmium	<0.03	3.1	<0.07	No
5a	Chromium (III)	Not available	50	<0.9	No
5b	Chromium (VI)	2	11	<0.003	No
6	Copper	3.3	28	2.3	No
7	Lead	<0.2	16	<0.9	No
8	Mercury (303d listed)	0.0126	0.025	0.0023	No
9	Nickel (303d listed)	1.3	100	<5	No
10	Selenium	<0.2	5	<0.2	No
11	Silver	<0.051	37	<0.06	No
12	Thallium	Not available	1.7	<0.03	No
13	Zinc	54	355	7.58	No
14	Cyanide	Not available	5.2	<0.003	No
15	Asbestos	Not available	7	<0.021	No
16	2,3,7,8-TCDD (Dioxin) (303d listed)	Not available	0.000000013	<0.71	No
	Dioxin TEQ (303d listed)	Not available	0.000000014		No
17	Acrolein	Not available	320	<5	No
18	Acrylonitrile	Not available	0.059	<1	No
19	Benzene	Not available	1	<0.05	No
20	Bromoform	<0.69	4.3	<0.1	No
21	Carbon Tetrachloride	Not available	0.25	<0.14	No
22	Chlorobenzene	Not available	680	<0.05	No
23	Chlorodibromomethane	0.4	0.401	<0.06	No
24	Chloroethane	Not available	No Criteria	<0.19	Ud
25	2-Chloroethylvinyl Ether	Not available	No Criteria	<0.1	Ud
26	Chloroform	45	No Criteria	6.3	Ud
27	**Dichlorobromomethane**	**4**	**0.56**	**0.15**	**Yes**
28	1,1-Dichloroethane	Not available	5	<0.07	No
29	1,2-Dichloroethane	Not available	0.38	<0.06	No
30	1,1-Dichloroethylene	Not available	0.057	<0.05	No
31	1,2-Dichloropropane	Not available	0.52	<0.12	No
32	1,3-Dichloropropylene	Not available	0.5	Not available	No
33	Ethylbenzene	Not available	300	0.08	No
34	Methyl Bromide	Not available	48	Not available	No
35	Methyl Chloride	Not available	No Criteria	Not available	Ud
36	Methylene Chloride	Not available	4.7	<0.07	No
37	1,1,2,2-Tetrachloroethane	Not available	0.17	<0.11	No
38	Tetrachloroethylene	Not available	0.8	<0.11	No
39	Toluene	Not available	150	<0.07	No
40	1,2-Trans-Dichloroethylene	Not available	10	Not available	No
41	1,1,1-Trichloroethane	Not available	200	<0.08	No

CTR #	Priority Pollutants	MEC or Minimum DL (µg/L)	Governing WQO (µg/L)	Maximum Background or Minimum DL (µg/L)	RPA Results
42	1,1,2-Trichloroethane	Not available	0.6	<0.03	No
43	Trichloroethylene	Not available	2.7	<0.05	No
44	Vinyl Chloride	Not available	0.5	<0.07	No
45	Chlorophenol	Not available	120	Not available	No
46	2,4-Dichlorophenol	Not available	93	<0.03	No
47	2,4-Dimethylphenol	Not available	540	<0.2	No
48	2-Methyl-4,6-Dinitrophenol	Not available	13.4	<1	No
49	2,4-Dinitrophenol	Not available	70	<1	No
50	2-Nitrophenol	Not available	No Criteria	<0.1	Ud
51	4-Nitrophenol	Not available	No Criteria	<2	Ud
52	3-Methyl-4-Chlorophenol	Not available	No Criteria	<0.2	Ud
53	Pentachlorophenol	Not available	0.005892942	<2	No
54	Phenol	Not available	21000	<0.2	No
55	2,4,6-Trichlorophenol	Not available	2.1	<0.1	No
56	Acenaphthene	Not available	1200	<0.046	No
57	Acenephthylene	Not available	No Criteria	<0.062	Ud
58	Anthracene	Not available	9600	<0.0034	No
59	Benzidine	Not available	0.00012	<5	No
60	Benzo(a)Anthracene	Not available	0.0044	<0.0058	No
61	Benzo(a)Pyrene	Not available	0.0044	<0.0079	No
62	Benzo(b)Fluoranthene	Not available	0.0044	<0.0079	No
63	Benzo(ghi)Perylene	Not available	No Criteria	<0.012	Ud
64	Benzo(k)Fluoranthene	Not available	0.0044	<0.041	No
65	Bis(2-Chloroethoxy)Methane	Not available	No Criteria	<0.1	Ud
66	Bis(2-Chloroethyl)Ether	Not available	0.031	<0.2	No
67	Bis(2-Chloroisopropyl)Ether	Not available	1400	<0.1	No
68	Bis(2-Ethylhexyl)Phthalate	Not available	1.8	<0.5	No
69	4-Bromophenyl Phenyl Ether	Not available	No Criteria	<0.1	Ud
70	Butylbenzyl Phthalate	Not available	3000	0.14	No
71	2-Chloronaphthalene	Not available	1700	<0.2	No
72	4-Chlorophenyl Phenyl Ether	Not available	No Criteria	<0.2	Ud
73	Chrysene	Not available	0.0044	<0.0036	No
74	Dibenzo(a,h)Anthracene	Not available	0.0044	<0.0054	No
75	1,2-Dichlorobenzene	Not available	600	<0.05	No
76	1,3-Dichlorobenzene	Not available	400	<0.06	No
77	1,4-Dichlorobenzene	Not available	5	<0.04	No
78	3,3-Dichlorobenzidine	Not available	0.04	<0.1	No
79	Diethyl Phthalate	Not available	23000	0.07	No
80	Dimethyl Phthalate	Not available	313000	<0.1	No
81	Di-n-Butyl Phthalate	Not available	2700	<0.25	No
82	2,4-Dinitrotoluene	Not available	0.11	<0.1	No
83	2,6-Dinitrotoluene	Not available	No Criteria	<0.2	Ud
84	Di-n-Octyl Phthalate	Not available	No Criteria	<0.1	Ud
85	1,2-Diphenylhydrazine	Not available	0.04	Not available	No
86	Fluoranthene	Not available	300	<0.009	No

CTR #	Priority Pollutants	MEC or Minimum DL (µg/L)	Governing WQO (µg/L)	Maximum Background or Minimum DL (µg/L)	RPA Results
87	Fluorene	Not available	1300	<0.0073	No
88	Hexachlorobenzene	Not available	0.00075	<0.0015	No
89	Hexachlorobutadiene	Not available	0.44	<0.4	No
90	Hexachlorocyclopentadiene	Not available	50	<1	No
91	Hexachloroethane	Not available	1.9	<0.4	No
92	Indeno(1,2,3-cd) Pyrene	Not available	0.0044	<0.0045	No
93	Isophorone	Not available	8.4	<0.1	No
94	naphthalene	Not available	No Criteria	<0.037	Ud
95	Nitrobenzene	Not available	17	<0.1	No
96	N-Nitrosodimethylamine	Not available	0.00069	<0.2	No
97	N-Nitrosodi-n-Propylamine	Not available	0.005	<0.1	No
98	N-Nitrosodiphenylamine	Not available	5	<0.1	No
99	Phenanthrene	Not available	No Criteria	<0.0063	Ud
100	Pyrene	Not available	960	<0.0027	No
101	1,2,4-Trichlorobenzene	Not available	5	<0.3	No
102	Aldrin	Not available	0.00013	<0.0018	No
103	alpha-BHC	Not available	0.0039	<0.00061	No
104	beta-BHC	Not available	0.014	<0.001	No
105	gamma-BHC	Not available	0.019	<0.0031	No
106	delta-BHC	Not available	No Criteria	<0.00064	Ud
107	Chlordane (303d listed)	Not available	0.00057	<0.014	No
108	4,4-DDT (303d listed)	Not available	0.00059	<0.0013	No
109	4,4-DDE	Not available	0.00059	<0.00097	No
110	4,4-DDD	Not available	0.00083	<0.00077	No
111	Dieldrin (303d listed)	Not available	0.00014	<0.00077	No
112	alpha-Endosulfan	Not available	0.0087	<0.00067	No
113	beta-Endosulfan	Not available	0.0087	<0.00055	No
114	Endosulfan Sulfate	Not available	110	<0.00078	No
115	Endrin	Not available	0.0023	<0.00063	No
116	Endrin Aldehyde	Not available	0.76	<0.00042	No
117	Heptachlor	Not available	0.00021	<0.00084	No
118	Heptchlor Epoxide	Not available	0.0001	<0.0012	No
119-125	PCBs sum (303d listed)	Not available	0.00017	Not available	No
126	Toxaphene	Not available	0.0002	<0.072	Ud
	Tributyltin	Not available	0.0074	Not available	Ud
	Total PAHs	Not available	15	Not available	Ud

4. WQBEL Calculations

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

b. Shallow Water Discharge. The Discharger's effluent is discharged to San Pablo Creek, a shallow water creek. No dilution credit (D=0) was used to calculate WQBELs.

c. Development of Dichlorobromomethane WQBELs

(1) Dichlorobromomethane WQC. The most stringent applicable WQC for dichlorobromomethane is the CTR criterion for protection of human health for consumption of water and organisms of 0.56 µg/L.

(2) RPA Results. This Order finds Reasonable Potential and thus establishes effluent limitations for dichlorobromomethan because the MEC (4 µg/L) exceeds the most stringent applicable criterion (0.56 µg/L), demonstrating Reasonable potential by Trigger 1.

(3) Dichlorobromomethane WQBELs. WQBELs for dichlorobromomethane, calculated according to SIP procedures, with a coefficient of variation of 0.6, are an AMEL of 0.56 µg/L and an MDEL of 1.1 µg/L. The details of this calculation are provided in Table F-8.

Table F-8. Effluent Limit Calculations

PRIORITY POLLUTANTS	Dibromochloromethane
Units	**µg/L**
Basis and Criteria type	CTR HH
CTR Criteria -Acute	
CTR Criteria -Chronic	
SSO Criteria -Acute (December 2004) (Diss.)	
SSO Criteria -Chronic (December 2004) (Diss.)	
Water Effects ratio (WER)	
Lowest WQO	0.56
Site Specific Translator - MDEL	
Site Specific Translator - AMEL	
Dilution Factor (D) (if applicable)	0
No. of samples per month	4
Aquatic life criteria analysis required? (Y/N)	N
HH criteria analysis required? (Y/N)	Y
Applicable Acute WQO	0
Applicable Chronic WQO	0
HH criteria	5.60E-01
Background (Maximum Conc for Aquatic Life calc)	

Background (Average Conc for Human Health calc)	
Is the pollutant Bioaccumulative(Y/N)? (e.g., Hg)	N
ECA acute	
ECA chronic	
ECA HH	5.6E-01
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	Y
Avg of effluent data points	1.7
Std Dev of effluent data points	1.0
CV calculated	0.6
CV (Selected) - Final	0.6
ECA acute mult99	
ECA chronic mult99	
LTA acute	
LTA chronic	
minimum of LTAs	
AMEL mult95	1.6
MDEL mult99	3.1
AMEL (aq life)	
MDEL(aq life)	
MDEL/AMEL Multiplier	2.01
AMEL (human hlth)	0.56
MDEL (human hlth)	1.12
minimum of AMEL for Aq. life vs HH	0.56
minimum of MDEL for Aq. Life vs HH	1.12
Final limit - AMEL	0.56
Final limit - MDEL	1.1
Max Effl Conc (MEC)	4

(4) *Immediate Compliance Infeasible.* Statistical analysis of effluent data for dichlorobromomethane, collected over the period of January 2005 to December 2007, shows that the 95th percentile (3.0 µg/L) is greater than the AMEL (0.56 µg/L); and the 99th percentile (4.06 µg/L) is greater than the MDEL (1.1 µg/L). The Regional Water Board concludes therefore that immediate compliance with these final effluent limitations is infeasible.

(5) *Need for Cease and Desist Order.* Pursuant to State Water Board Order WQ2007-0004, compliance schedules are not authorized for numeric objectives or criteria that were in effect prior to the SIP. This includes the NTR criteria for dichlorobromomethane. Because it is infeasible for the Discharger to immediately comply with the WQBELs for dichlorobromomethane, the Discharger will likely discharge in violation of this Order. Therefore, a Cease and Desist Order will be

proposed concurrent with this Order. The Cease and Desist Order is necessary to ensure that the Discharger achieves compliance. It establishes a time schedule for the Discharger to complete necessary investigative, preventive, and remedial actions to address its imminent and threatened violations.

(6) Antibacksliding. Antibacksliding requirements are satisfied because the previous permit did not included final effluent limitations for dichlorobromomethane.

5. Whole Effluent Toxicity

This Order includes whole effluent acute toxicity limits based on Basin Plan Table 4-3 and are unchanged from the previous permit for Discharge Point E-003. As summarized in Table F-5, there were three acute toxicity effluent limit violations between June 2003 and December 2007.

Because discharge from E-003 is nearly continuous, this Order also incorporates whole effluent chronic toxicity testing for Discharge Point E-003.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

These limitations are based on the previous permit and the narrative and numeric objectives contained in Basin Plan Chapter 3.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

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

1. Document compliance with waste discharge requirements and prohibitions established by the Regional Water Board.

2. Facilitate self-policing by the discharger in the prevention and abatement of pollution arising from waste discharge.

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

4. Prepare water and wastewater quality inventories.

40 CFR 122.48 requires all NPDES permits to specify recording and reporting of monitoring results. CWC sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The MRP (**Attachment E**) establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP.

The MRP is a standard requirement in almost all NPDES permits issued by the Regional Water Board, including this Order. It contains definitions of terms, specifies general sampling and analytical protocols, and sets out requirements for reporting spills, violations, and routine monitoring data in accordance with NPDES regulations, the CWC, and the

Regional Water Board's policies. The MRP also contains a sampling program specific for discharges covered by this Order. It 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 reasonable potential analyses.

A. Influent Monitoring

This Order does not establish routine monitoring for influent. The Discharger may monitor influent on its own initiative.

B. Effluent Monitoring

Effluent monitoring is required at monitoring locations EFF-002 and EFF-003 for TSS, turbidity, total residual chlorine, pH, dichlorobromomethane, and copper at the frequencies identified in the MRP (**Attachment E**). Monitoring for priority pollutants at these two outfalls is required once per five years to determine reasonable potential for the next permit reissuance. Monthly effluent monitoring for total settable matter is required at EFF-003 as an indicator of the operation of the filter backwash settling basins.

Because discharges from discharge points E-001 and E-004 are infrequent, effluent monitoring for TSS, turbidity, pH, and dichlorobromomethane are required once per discharge occurrence.

C. Receiving Water Monitoring

Receiving water monitoring for TSS, pH, and turbidity is required to demonstrate compliance with Basin Plan receiving water objectives. Hardness monitoring is required to provide data to calculate the most stringent water quality criteria for hardness dependant constituents as necessary to determine reasonable potential for the next permit reissuance.

Monitoring for dichlorobromomethane and toxic pollutants is required to collect data to establish ambient background conditions as necessary to calculate reasonable potential for the next permit reissuance.

D. Whole Effluent Toxicity Testing

1. Acute

Quarterly 96-hour bioassay testing is required at Discharge Point E-003, to demonstrate compliance with the effluent limitation for acute toxicity. Bioassays shall be performed using either rainbow trout or fathead minnows unless specified otherwise in writing by the Executive Officer.

2. Chronic

The Discharger is required to monitor effluent from Discharge Point E-003 for chronic toxicity to ensure that the discharge is not toxic and to support a reasonable potential analysis for the permit reissuance. Bioassays shall be performed using both *Ceriodaphnia dubia* and fathead minnows.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions (Provision VI.A)

Attachment D contains Federal Standard Provisions, which in accordance with 40 CFR 122.41 and 122.42 apply to all NPDES discharges and must be included in every NPDES permit. **Attachment G** contains Regional Standard Provisions that supplement **Attachment D**. These standard provisions contain definitions of terms, specify general sampling and analytical protocols, and set out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the CWC, and Regional Water Board policies.

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 Monitoring and Reporting Program (MRP) in **Attachment E** of this Order. The MRP is based on 40 CFR 122.63 and contains a sampling program specific for the Facility. It 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 reasonable potential analyses.

C. Special Provisions (Provision VI.C)

1. Basis for Permit Reopener Provision

Provision VI.C.1 is based on 40 CFR 123 and allows future modification of this Order and its effluent limitations as necessary in response to updated WQOs and other regulatory requirements that may be established in the future.

2. Basis for Effluent Characterization and 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 will be 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 WQC. This provision is based on the SIP and is retained from the previous permit.

3. Basis for Best Management Practices (BMPs) Plan Provision

Provision VI.C.3 requires the Discharger to implement a BMPs plan for the Facility and update the plan annually. The Discharger submitted a BMPs plan on June 25, 2009. The purpose of the BMPs plan is to control and abate the discharge of conventional and non-conventional pollutants from the Facility to surface waters and to achieve compliance with BPT, BCT, and BAT requirements based on BPJ. This Order requires the Discharger to implement BMPs that will reduce and eliminate the discharge of pollutants subject to technology-based effluent limits to the receiving waters. It is practically feasible and economically achievable to implement the BMPs. This provision is unchanged from the previous permit.

4. Basis for Construction, Operation, and Maintenance Specifications Provision. Provision VI.C.4 requires the Discharger to submit or update annually an operations and maintenance manual for the backwash water settling basins. This will ensure that the Discharger will employ the BPT, BCT, and BAT (based on BPJ), to reduce and eliminate discharges of pollutants subject to technology-based limits from backwash water settling basins.

VIII. PUBLIC PARTICIPATION

The Regional Water Board is considering the issuance of WDRs that will serve as a NPDES Permit for the Facility. As a step in the WDRs adoption process, the Regional Water Board has developed tentative WDRs. The Regional Water Board encourages public participation in the WDRs adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for these discharges and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the Oakland Tribune August 19, 2009.

B. Written Comments

Staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to the Executive Officer at the Regional Water Board at the address above on the cover page of this Order, marked “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 9, 2009.

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: October 14, 2009
Time: 9:00 a.m.
Location: Elihu Harris State Office Building
1515 Clay Street
Oakland, CA
1st floor Auditorium
Contact: Heather Ottaway
Phone: (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 discharges, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address is www.waterboards.ca.gov/sanfranciscobay where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Board to review the decision of the Regional Water Board regarding the 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 documents related to this permit, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (510) 622-2300.

F. Register of Interested Persons

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

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Heather Ottaway, Phone: (510) 622-2116, email: 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

July 2009

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

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

FOR

NPDES WASTEWATER DISCHARGE PERMITS

APPLICABILITY

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

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

I. STANDARD PROVISIONS - PERMIT COMPLIANCE

A. Duty to Comply – Not Supplemented

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

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

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

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

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

c. Provisions of emergency standby power.

d. Protection against vandalism.

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

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

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

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

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

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

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

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

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

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

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

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

3. Frequency of Monitoring

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

a. Timing of Sample Collection

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

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

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

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

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

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

b. Conditions Triggering Accelerated Monitoring

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

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

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

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

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

c. Storm Water Monitoring

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

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

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

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

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

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

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

d. Receiving Water Monitoring

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

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

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

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

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

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

1. Biosolids Monitoring Frequency

Biosolids disposal must be monitored at the following frequency:

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

(Metric tons are on a dry weight basis)

2. Biosolids Pollutants to Monitor

Biosolids shall be monitored for the following constituents:

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

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

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

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

1. Receiving Water Observations

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

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

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

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

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

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

f. *Weather conditions*:

1) Air temperature; and

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

2. Wastewater Effluent Observations

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

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

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

3. Beach and Shoreline Observations

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

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

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

4. Land Retention or Disposal Area Observations

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

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

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

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

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

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

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

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

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

IV. STANDARD PROVISIONS – RECORDS

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

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

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

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

1. Analytical Information

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

2. Flow Monitoring Data

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

a. Total volume for each day; and

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

3. Wastewater Treatment Process Solids

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

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

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

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

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

2) Solids content of the dewatered biosolids; and

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

4. Disinfection Process

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

a. For bacteriological analyses:

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

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

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

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

2) Chlorine dosage (kg/day); and

3) Dechlorination chemical dosage (kg/day).

5. **Treatment Process Bypasses**

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

a. Identification of the treatment process bypassed;

b. Dates and times of bypass beginning and end;

c. Total bypass duration;

d. Estimated total bypass volume; and

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

6. **Treatment Facility Overflows**

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

C. Claims of Confidentiality – Not Supplemented

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information – Not Supplemented

B. Signatory and Certification Requirements – Not Supplemented

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

1. Self-Monitoring Reports

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

a. Transmittal letter

Each SMR shall be submitted with a transmittal letter. This letter shall include the following:

1) Identification of all violations of effluent limits or other waste discharge requirements found during the reporting period;

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

3) Causes of violations;

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

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

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

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

b. Compliance evaluation summary

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

c. Results of analyses and observations

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

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

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

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

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

3) Dioxin-TEQ Reporting: The Discharger shall report for each dioxin and furan congener the analytical results of effluent monitoring, including the quantifiable limit (reporting level), and the method detection limit, and the measured concentration. Estimated concentrations shall be reported for individual congeners, but shall be set equal to zero in determining the dioxin-TEQ value. The Discharger shall multiply each measured or estimated congener concentration by its respective toxicity equivalency factor (TEF) shown in Table A and report the sum of these values.

Table A: Toxic Equivalency Factors for 2,3,7,8-TCDD Equivalents

Congener	**TEF**
2,3,7,8-TetraCDD	1
1,2,3,7,8-PentaCDD	1.0
1,2,3,4,7,8-HexaCDD	0.1
1,2,3,6,7,8-HexaCDD	0.1
1,2,3,7,8,9-HexaCDD	0.1
1,2,3,4,6,7,8-HeptaCDD	0.01
OctaCDD	0.0001
2,3,7,8-TetraCDF	0.1
1,2,3,7,8-PentaCDF	0.05
2,3,4,7,8-PentaCDF	0.5
1,2,3,4,7,8-HexaCDF	0.1
1,2,3,6,7,8-HexaCDF	0.1
1,2,3,7,8,9-HexaCDF	0.1
2,3,4,6,7,8-HexaCDF	0.1
1,2,3,4,6,7,8-HeptaCDF	0.01
1,2,3,4,7,8,9-HeptaCDF	0.01
OctaCDF	0.0001

d. Data reporting for results not yet available

The Discharger shall make all reasonable efforts to obtain analytical data for required parameter sampling in a timely manner. Certain analyses require additional time to complete analytical processes and report results. For cases where required monitoring parameters require additional time to complete analytical processes and reports, and results are not available in time to be included in the SMR for the subject monitoring period, the Discharger shall describe such circumstances in the SMR and include the data for these parameters and relevant discussions of any observed exceedances in the next SMR due after the results are available.

e. Flow data

The Discharger shall provide flow data tabulation pursuant to Section IV.B.2.

f. Annual self-monitoring report requirements

By the date specified in the MRP, the Discharger shall submit an annual report to the Regional Water Board covering the previous calendar year. The report shall contain the following:

1) Annual compliance summary table of treatment plant performance, including documentation of any blending events;

2) Comprehensive discussion of treatment plant performance and compliance with the permit (This discussion shall include any corrective actions taken or planned, such as changes to facility equipment or operation practices that may be needed to achieve compliance, and any other actions taken or planned that are intended to improve performance and reliability of the Discharger's wastewater collection, treatment, or disposal practices.);

3) Both tabular and graphical summaries of the monitoring data for the previous year if parameters are monitored at a frequency of monthly or greater;

4) List of approved analyses, including the following:

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

(ii) List of analyses performed for the Discharger by a separate certified laboratory and copies of reports signed by the laboratory director of that laboratory shall not be submitted but retained onsite;

(iii) List of "waived" analyses, as approved;

5) Plan view drawing or map showing the Discharger's facility, flow routing, and sampling and observation station locations;

6) Results of annual facility inspection to verify that all elements of the SWPP Plan are accurate and up to date (only required if the Discharger does not route all storm water to the headworks of its wastewater treatment plant); and

7) Results of facility report reviews (The Discharger shall regularly review, revise, and update, as necessary, the O&M Manual, the Contingency Plan, the Spill Prevention Plan, and Wastewater Facilities Status Report so that these documents remain useful and relevant to current practices. At a minimum, reviews shall be conducted annually. The Discharger shall include, in each Annual Report, a description or summary of review and evaluation procedures, recommended or planned actions, and an estimated time schedule for implementing these actions. The Discharger shall complete changes to these documents to ensure they are up-to-date.).

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 Plants[1]

The following requirements apply to municipal wastewater treatment plants that experience an unauthorized discharge at their treatment facilities and are consistent with and supercede requirements imposed on the Discharger by the Executive Officer by letter of May 1, 2008, issued pursuant to California Water Code Section 13383.

a. Two (2)-Hour Notification

For any unauthorized discharges that result in a discharge to a drainage channel or a surface water, the Discharger shall, as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the State Office of Emergency Services (telephone 800-852-7550), the local health officers or directors of environmental health with jurisdiction over the affected water bodies, and the Regional Water Board. The notification to the Regional Water Board shall be via the Regional Water Board's online reporting system at www.wbers.net, and shall include the following:

[1] California Code of Regulations, Title 23, Section 2250(b), defines an unauthorized discharge to be a discharge, not regulated by waste discharge requirements, of treated, partially treated, or untreated wastewater resulting from the intentional or unintentional diversion of wastewater from a collection, treatment or disposal system.

1) Incident description and cause;

2) Location of threatened or involved waterway(s) or storm drains;

3) Date and time the unauthorized discharge started;

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

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

6) Identity of the person reporting the unauthorized discharge.

b. 24-hour Certification

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

c. 5-Day Written Report

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

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

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

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

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

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

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

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

d. Communication Protocol

To clarify the multiple levels of notification, certification, and reporting, the current communication requirements for unauthorized discharges from municipal wastewater treatment plants are summarized in Table B that follows.

F. Planned Changes – Not supplemented

G. Anticipated Noncompliance – Not supplemented

H. Other Noncompliance – Not supplemented

I. Other Information – Not supplemented

VI. STANDARD PROVISIONS – ENFORCEMENT – Not Supplemented

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS – Not Supplemented

Table B

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

Discharger is required to:	Agency Receiving Information	Time frame	Method for Contact
1. Notify	State Office of Emergency Services (OES)	As soon as possible, but not later than **2 hours** after becoming aware of the unauthorized discharge.	Telephone – (800) 852-7550 (obtain a control number from OES)
	Local health department	As soon as possible, but not later than **2 hours** after becoming aware of the unauthorized discharge.	Depends on local health department
	Regional Water Board	As soon as possible, but not later than **2 hours** after becoming aware of the unauthorized discharge.	Electronic[2] www.wbers.net
2. Certify	Regional Water Board	As soon as possible, but not later than **24 hours** after becoming aware of the unauthorized discharge.	Electronic[3] www.wbers.net
3. Report	Regional Water Board	Within **5 business days** of becoming aware of the unauthorized discharge.	Electronic[4] www.wbers.net

[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.

VIII. DEFINITIONS – This section is an addition to Standard Provisions (Attachment D)

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

1. Arithmetic Calculations

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

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

   or

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

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

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

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

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

   In which "N" is the number of samples analyzed in any calendar day and "Q_i" and "C_i" are the flow rate (MGD) and the constituent concentration (mg/L) associated with each of the "N" grab samples that may be taken in any calendar day. If a composite sample is taken, "C_i" is the concentration measured in the composite sample and "Q_i" is the average flow rate occurring during the period over which the samples are composited. The daily concentration of a constituent measured over any calendar day shall be determined from the flow-weighted average of the same constituent in the combined waste streams as follows:

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

   In which "N" is the number of component waste streams and "Q" and "C" are the flow rate (MGD) and the constituent concentration (mg/L) associated with each of the "N" waste streams. "Q_t" is the total flow rate of the combined waste streams.

   c. Maximum allowable mass emission rate, whether for a 24-hour, weekly 7-day, monthly 30-day, or 6-month period, is a limitation expressed as a daily rate determined with the

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
6.	Copper	200.9					25	5	10	0.5	2			1000
7.	Lead	200.9					20	5	5	0.5	2			10,000
8.	Mercury	1631 (note)[3]												
9.	Nickel	249.2					50	5	20	1	5			1000
10.	Selenium	200.8 or SM 3114B or C						5	10	2	5	1		1000
11.	Silver	272.2					10	1	10	0.25	2			1000
12.	Thallium	279.2					10	2	10	1	5			1000
13.	Zinc	200 or 289					20		20	1	10			
14.	Cyanide	SM 4500 CN^- C or I				5								
15.	Asbestos (only required for dischargers to MUN waters)[4]	0100.2 [5]												
16.	2,3,7,8-TCDD and 17 congeners (Dioxin)	1613												
17.	Acrolein	603	2.0	5										
18.	Acrylonitrile	603	2.0	2										
19.	Benzene	602	0.5	2										
33.	Ethylbenzene	602	0.5	2										

[1] The suggested method is the USEPA Method unless otherwise specified (SM = Standard Methods). The discharger may use another USEPA-approved or recognized method if that method has a level of quantification below the applicable water quality objective. Where no method is suggested, the Discharger has the discretion to use any standard method.

[2] Minimum levels are from the *State Implementation Policy*. They are the concentration of the lowest calibration standard for that technique based on a survey of contract laboratories. Laboratory techniques are defined as follows: GC = Gas Chromatography; GCMS = Gas Chromatography/Mass Spectrometry; LC = High Pressure Liquid Chromatography; Color = Colorimetric; FAA = Flame Atomic Absorption; GFAA = Graphite Furnace Atomic Absorption; ICP = Inductively Coupled Plasma; ICPMS = Inductively Coupled Plasma/Mass Spectrometry; SPGFAA = Stabilized Platform Graphite Furnace Atomic Absorption (i.e., U.S. EPA 200.9); Hydride = Gaseous Hydride Atomic Absorption; CVAA = Cold Vapor Atomic Absorption; DCP = Direct Current Plasma.

[3] The Discharger shall use ultra-clean sampling (USEPA Method 1669) and ultra-clean analytical methods (USEPA Method 1631) for mercury monitoring. The minimum level for mercury is 2 ng/l (or 0.002 ug/l).

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

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

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
39.	Toluene	602	0.5	2										
20.	Bromoform	601	0.5	2										
21.	Carbon Tetrachloride	601	0.5	2										
22.	Chlorobenzene	601	0.5	2										
23.	Chlorodibromomethane	601	0.5	2										
24.	Chloroethane	601	0.5	2										
25.	2-Chloroethylvinyl Ether	601	1	1										
26.	Chloroform	601	0.5	2										
75.	1,2-Dichlorobenzene	601	0.5	2										
76.	1,3-Dichlorobenzene	601	0.5	2										
77.	1,4-Dichlorobenzene	601	0.5	2										
27.	Dichlorobromomethane	601	0.5	2										
28.	1,1-Dichloroethane	601	0.5	1										
29.	1,2-Dichloroethane	601	0.5	2										
30.	1,1-Dichloroethylene or 1,1-Dichloroethene	601	0.5	2										
31.	1,2-Dichloropropane	601	0.5	1										
32.	1,3-Dichloropropylene or 1,3-Dichloropropene	601	0.5	2										
34.	Methyl Bromide or Bromomethane	601	1.0	2										
35.	Methyl Chloride or Chloromethane	601	0.5	2										
36.	Methylene Chloride or Dichlorormethane	601	0.5	2										
37.	1,1,2,2-Tetrachloroethane	601	0.5	1										
38.	Tetrachloroethylene	601	0.5	2										
40.	1,2-Trans-Dichloroethylene	601	0.5	1										
41.	1,1,1-Trichloroethane	601	0.5	2										
42.	1,1,2-Trichloroethane	601	0.5	2										
43.	Trichloroethene	601	0.5	2										
44.	Vinyl Chloride	601	0.5	2										
45.	2-Chlorophenol	604	2	5										
46.	2,4-Dichlorophenol	604	1	5										
47.	2,4-Dimethylphenol	604	1	2										
48.	2-Methyl-4,6-Dinitrophenol or Dinitro-2-methylphenol	604	10	5										
49.	2,4-Dinitrophenol	604	5	5										
50.	2-Nitrophenol	604		10										
51.	4-Nitrophenol	604	5	10										
52.	3-Methyl-4-Chlorophenol	604	5	1										
53.	Pentachlorophenol	604	1	5										
54.	Phenol	604	1	1		50								
55.	2,4,6-Trichlorophenol	604	10	10										
56.	Acenaphthene	610 HPLC	1	1	0.5									
57.	Acenaphthylene	610 HPLC		10	0.2									
58.	Anthracene	610 HPLC		10	2									
60.	Benzo(a)Anthracene or 1,2 Benzanthracene	610 HPLC	10	5										
61.	Benzo(a)Pyrene	610 HPLC		10	2									
62.	Benzo(b)Fluoranthene or 3,4 Benzofluoranthene	610 HPLC		10	10									

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
63.	Benzo(ghi)Perylene	610 HPLC		5	0.1									
64.	Benzo(k)Fluoranthene	610 HPLC		10	2									
74.	Dibenzo(a,h)Anthracene	610 HPLC		10	0.1									
86.	Fluoranthene	610 HPLC	10	1	0.05									
87.	Fluorene	610 HPLC		10	0.1									
92.	Indeno(1,2,3-cd) Pyrene	610 HPLC		10	0.05									
100.	Pyrene	610 HPLC		10	0.05									
68.	Bis(2-Ethylhexyl)Phthalate	606 or 625	10	5										
70.	Butylbenzyl Phthalate	606 or 625	10	10										
79.	Diethyl Phthalate	606 or 625	10	2										
80.	Dimethyl Phthalate	606 or 625	10	2										
81.	Di-n-Butyl Phthalate	606 or 625		10										
84.	Di-n-Octyl Phthalate	606 or 625		10										
59.	Benzidine	625		5										
65.	Bis(2-Chloroethoxy)Methane	625		5										
66.	Bis(2-Chloroethyl)Ether	625	10	1										
67.	Bis(2-Chloroisopropyl)Ether	625	10	2										
69.	4-Bromophenyl Phenyl Ether	625	10	5										
71.	2-Chloronaphthalene	625		10										
72.	4-Chlorophenyl Phenyl Ether	625		5										
73.	Chrysene	625		10	5									
78.	3,3'-Dichlorobenzidine	625		5										
82.	2,4-Dinitrotoluene	625	10	5										
83.	2,6-Dinitrotoluene	625		5										
85.	1,2-Diphenylhydrazine (note)[6]	625		1										
88.	Hexachlorobenzene	625	5	1										
89.	Hexachlorobutadiene	625	5	1										
90.	Hexachlorocyclopentadiene	625	5	5										
91.	Hexachloroethane	625	5	1										
93.	Isophorone	625	10	1										
94.	Naphthalene	625	10	1	0.2									
95.	Nitrobenzene	625	10	1										
96.	N-Nitrosodimethylamine	625	10	5										
97.	N-Nitrosodi-n-Propylamine	625	10	5										
98.	N-Nitrosodiphenylamine	625	10	1										
99.	Phenanthrene	625		5	0.05									
101.	1,2,4-Trichlorobenzene	625	1	5										
102.	Aldrin	608	0.005											
103.	α-BHC	608	0.01											
104.	β-BHC	608	0.005											
105.	γ-BHC (Lindane)	608	0.02											
106.	δ-BHC	608	0.005											
107.	Chlordane	608	0.1											
108.	4,4'-DDT	608	0.01											
109.	4,4'-DDE	608	0.05											

[6] Measurement for 1,2-Diphenylhydrazine may use azobenzene as a screen: if azobenzene is measured at >1 ug/l, then the Discharger shall analyze for 1,2-Diphenylhydrazine.

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
110.	4,4'-DDD	608	0.05											
111.	Dieldrin	608	0.01											
112.	Endosulfan (alpha)	608	0.02											
113.	Endosulfan (beta)	608	0.01											
114.	Endosulfan Sulfate	608	0.05											
115.	Endrin	608	0.01											
116.	Endrin Aldehyde	608	0.01											
117.	Heptachlor	608	0.01											
118.	Heptachlor Epoxide	608	0.01											
119-125	PCBs: Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260	608	0.5											
126.	Toxaphene	608	0.5											

Appendix B
Revised Tentative Cease and Desist Order

California Regional Water Quality Control Board
San Francisco Bay Region

1515 Clay Street, Suite 1400, Oakland, California 94612
(510) 622-2300 • Fax (510) 622-2460
http://www.waterboards.ca.gov/sanfranciscobay

Linda S. Adams
Secretary for
Environmental Protection

Arnold Schwarzenegger
Governor

REVISED TENTATIVE CEASE AND DESIST ORDER NO. R2-2009-XXXX

REQUIRING THE EAST BAY MUNICIPAL UTILITY DISTRICT, ORINDA WATER TREATMENT PLANT, TO CEASE AND DESIST DISCHARGING PARTIALLY-TREATED WASTEWATER TO WATERS OF THE STATE

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

1. The East Bay Municipal Utility District (hereinafter Discharger) owns and operates a water treatment plant (hereinafter Facility), located at 190 Camino Pablo, Orinda, Contra Costa County, CA 94563. The Plant is one of six water treatment facilities operated by the Discharger in the East Bay for treatment of water prior to distribution to residents of Alameda and Contra Costa Counties. It has a design capacity of 200 million gallons per day (MGD).

2. The wastewater discharge has been regulated by waste discharge requirements in Order No. R2-2003-0062 (NPDES General Permit No. CAG382001, the previous permit).

3. Immediately preceding the adoption of this Cease and Desist Order, the Regional Water Board adopted Order No. R2-2009-XXXX (hereinafter "Permit"), reissuing waste discharge requirements for the Discharger. The Permit contains prohibitions, limitations, and provisions regulating the discharge. Final effluent limitations for toxic pollutants established by the Permit include those listed in Table 1, below.

Table 1. Water Quality-Based Effluent Limitations (WQBELs) for Dichlorobromomethane

Parameter	Final Effluent Limits		Monitoring Stations
	Average Monthly (µg/L)	Maximum Daily (µg/L)	
Dichlorobromomethane	0.56	1.1	EFF-001, EFF-002, EFF-003, EFF-004

4. As stated in the Fact Sheet accompanying the Permit, the Regional Water Board concludes that the Discharger cannot immediately comply with the WQBELs for dichlorobromomethane, because the 95th percentile (3.0 µg/L) and 99th percentile (4.06 µg/L) of the effluent data set, from January 2003 through December 2007 exceed the average monthly and maximum daily effluent limitations.

5. The SIP requires that compliance schedules not be allowed past May 2010. This timeframe is not adequate for the Discharger to achieve compliance with the new limits for dichlorobromomethane. Because the Discharger cannot immediately comply with final effluent limitations for dichlorobromomethane, discharges from the Facility threaten to

violate the final effluent limitations established by Order No. R2-2009-XXXX for this pollutant.

6. Water Code § 13301 authorizes the Regional Water Board to issue a Cease and Desist Order when it finds that a waste discharge is taking place, or threatening to take place, in violation of Regional Water Board requirements.

7. Because the Discharger will violate or threatens to violate required effluent limitations, this Cease and Desist Order is necessary to ensure that the Discharger achieves compliance. This Order establishes a time schedule for the Discharger to complete necessary investigative, preventive, and remedial actions to address imminent and threatened violations of effluent limitations for dichlorobromomethane.

8. The time schedule in this Order is intended to be as short as possible. It accounts for the considerable uncertainty in determining effective measures (e.g., treatment modifications and treatment plant upgrades) necessary to achieve compliance. This Order allows some time to pursue a case-by-case SIP exception before requiring further actions, such as treatment plant upgrades, which are likely to be costly. The time schedule is based on reasonably expected times needed to pursue a case-by-case SIP exception; identify on-site treatment alternatives, if necessary; test and select from among alternatives; and construct plant upgrades. The Regional Water Board may revisit these assumptions as more information becomes available.

9. As part of the time schedule to achieve compliance, this Order requires the Discharger to comply with an interim effluent limit based on past treatment performance. The interim maximum daily effluent limitation for dichlorobromomethane shall be 4.9 µg/L. This limitation is a performance-based interim limitation based on the 99.87th percentile of the Discharger's dichlorobromomethane effluent data collected from January 2003 through December 2007. There was not a effluent limitation or interim effluent limit for dichlorobromomethane in the previous permit. The interim effluent limit is intended to ensure that the Discharger maintains at least its existing level of treatment performance while completing all tasks required by this Order.

10. This Order is an enforcement action and, as such, in accordance with 14 CCR § 15321, is exempt from the provisions of the California Environmental Quality Act (Public Resources Code § 21000 et seq.).

11. The Regional Water Board has notified the Discharger and interested persons of its intent to consider adoption of this Cease and Desist Order and has provided an opportunity to submit written comments and appear at a public hearing. The Regional Water Board, in a public hearing, has heard and considered all comments.

IT IS HEREBY ORDERED, in accordance with Water Code § 13301, that the Discharger shall cease and desist from discharging and threatening to discharge wastes in violation of its Permit by complying with the following provisions.

1. **Prescribed Actions.** The Discharger shall comply with the required actions in Table 2 in accordance with the time schedule provided therein to comply with the effluent limitations contained in the Permit. Deliverables listed in Table 2 shall be acceptable to the Executive Officer, who will review them for adequacy and compliance with the

Table 2 requirements. The Discharger shall implement all actions set forth in each deliverable, unless the Executive Officer finds the deliverable to be unacceptable.

Table 2. Time Schedules and Prescribed Actions for Dichlorobromomethane

Action	Deadline
a. Comply with the following interim effluent limit at Monitoring Stations EFF-001, EFF-002, EFF-003, and EFF-004 Interim daily maximum effluent limit = 4.9 µg/L	December 1, 2009
b. Provide documentation to the State Water Board that supports a case-by-case exception from SIP provisions for the dichlorobromomethane effluent limits in the Permit.	December 31, 2009
c. If by December 31, 2012, discharge data continue to show the discharge is out of compliance (as defined in 2.4.5. of the State Implementation Policy) with the Permit effluent limits, and a case-by-case exception has not been issued or is in progress, submit a report by the deadline for this action. The report should identify more aggressive actions to ensure compliance, including, but not limited to, modeling receiving water quality and reviewing options for disinfection alternatives or upgrades to the treatment plant. The report shall identify an implementation schedule for investigating these options, selecting a preferred option, and implementing the chosen option. At a minimum, the report shall plan for the following activities: (1) Bench scale testing or pilot scale testing or both (2) Development of preliminary design specifications (3) Development of final design specifications (4) Procurement of funding (5) Acquisition of necessary permits and approvals (6) Construction	February 28, 2013
d. Begin implementation of the plan required in action “c” within 45 days following the deadline for action “c,” and submit a status report.	April 15, 2013
e. Achieve compliance with effluent limits specified in IV.B. of the Permit, unless the State Water Board approves a case-by-case exception that makes the final limits for dichlorobromomethane unnecessary.	November 30, 2014

2. **Reporting Delays**. If the Discharger is delayed, interrupted, or prevented from meeting one or more of the deadlines described in Table 2, due to circumstances beyond its reasonable control, the Discharger shall promptly notify the Executive Officer, provide the reasons and justification for the delay, and propose a time schedule for resolving the delay.

3. **Consequences of Non-Compliance**. If the Discharger fails to comply with the provisions of this Order, the Executive Officer is authorized to take further enforcement action or to request the Attorney General to take appropriate action against the Discharger in accordance with Water Code §§ 13331, 13350, 13385, and 13386. Such actions may include injunctive and civil remedies, if appropriate, or the issuance of an Administrative Civil Liability Complaint for Regional Water Board consideration.

4. **Effective Date**. This Order shall be effective on the effective date of the Permit, December 1, 2009.

I, Bruce H. Wolfe, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on October 14, 2009.

BRUCE H. WOLFE
Executive Officer

Appendix C
Comment Letter

EAST BAY
MUNICIPAL UTILITY DISTRICT

September 8, 2009

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

Dear Ms. Ottaway:

Re: Tentative Order, NPDES Permit No. CA0038342, and Tentative Cease and Desist Order for EBMUD Orinda Water Treatment Plant

Thank you for the opportunity to comment on the Tentative Order, NPDES Permit No. CA0038342, and Tentative Cease and Desist Order for the East Bay Municipal Utility District (EBMUD) Orinda Water Treatment Plant (WTP).

We greatly appreciate the time and efforts that you and other Regional Board staff have put forth in working with us in developing these Orders and in addressing the potential compliance issues associated with the recently revised General Waste Discharge Requirements for Discharges from Surface Water Treatment Facilities for Potable Supply (General Permit), Order No. R2-2009-0033, NPDES Permit No. CAG382001, which becomes effective March 1, 2010.

We have no additional comments on the Tentative Cease and Desist Order. However, we do have comments on the Tentative Order, NPDES Permit No. CA0038342. These comments center around the recent revisions that were not previously discussed with us.

1. **Beneficial Uses** (Page 9). We do not believe San Pablo Creek to be suitable, or potentially suitable, for municipal or domestic water supply; thus, it should not be so designated by the Regional Board. As supported by State Water Resources Control Board Resolution No. 88-63, San Pablo Creek should be exempted for the following reasons: San Pablo Creek does not provide sufficient water supply; the system is designed to collect storm water runoff; and there is potential upstream contamination due to sewer overflows and storm water runoff.

2. **Effluent Limitations** (Page 12). We appreciate your rearranging this section by pollutant, rather than discharge point, which makes this section easier to read and understand.

3. **Effluent Monitoring Requirements** (Attachment E, Section III). The Orinda WTP is currently subject to the General Permit and, after potential compliance issues associated with the recently revised General Permit are resolved, it would be covered by the General Permit in the future. Thus, the two Monitoring and Reporting Programs should be comparable. While we understand and accept the need for revising some of the monitoring requirements (e.g., effluent dichlorobromomethane and receiving water parameters), we have the following comments:

a. What is the reasoning for deleting Table E-3 (Monitoring Schedule for Non-Routine Discharges) and Table E-4 (Monitoring Schedule for On-Site Water Storage Facility Dewatering)? We feel that they should be included for consistency.

b. Page E-4, Table E-2. Please revise the minimum sampling frequency for Total Chlorine Residual to be "Continuous or hourly," for consistency with the General Permit, rather than "Continuous."

c. Page E-4, Table E-2, footnote [5]. Please replace the entire footnote with that from the General Permit which states "*The hourly monitoring frequency may be reduced to once every two hours if the first three samples show compliance with the effluent limit for total chlorine residual given in Table 1 of this Order. The total residual chlorine and THMs monitoring requirements are waived for water treatment plants that do not chlorinate.*"

d. Page E-4, Table E-2. Please delete the requirement for conducting chronic toxicity monitoring, for consistency with the General Permit. Or, require testing using only *ceriodaphnia dubia* as the EBMUD laboratory is already familiar with the testing for that species.

e. Page E-8, Table E-3. Please add footnote allowing stream flow rate to be estimated.

4. Reporting Requirements (Attachment E, Section VI). The Reporting requirements for the Orinda Individual NPDES Permit and the General Permit should be comparable. Please revert back to an Annual Self-Monitoring Report, for consistency with the General Permit and to lessen the burden of additional reporting. As written, the Orinda Individual NPDES Permit requires several additional requirements (e.g., Contingency Plan, Spill Prevention Plan, Storm Water Pollution Prevention Plan, Annual Facility Inspections, Annual Training, and Storm Water Monitoring) beyond the requirements listed in the General Permit (which requires an Annual Data Evaluation, Annual Best Management Practices Plan Update, and Operations and Maintenance Manual Update).

5. Compliance with Previous Numeric Effluent Limits (Attachment F, Section II). Please delete the violation on January 2, 2004. A single operation upset on January 1, 2004 lead to simultaneous violations on both January 1, 2004 and January 2, 2004. For accuracy, please add the following two violations to your table:

Dave of Violation	Parameter	Units	Effluent Limitation	Reported Effluent Concentration
March 21, 2005	Acute Toxicity	% survival	3 sample median 90% or greater	80%
May 23, 2005	Acute Toxicity	% survival	3 sample median 90% or greater	80%

Thank you for your consideration. Should you have any questions regarding these comments, please contact Ms. Susan Suzuki, Senior Environmental Health and Safety Specialist, at (510) 287-0327.

Sincerely,

JOHN H. SCHROETER, P.E.
Manager of Environmental Compliance

Cc: EBMUD (M. Ambrose, S. Suzuki, V. Fauntleroy, C.C. Chan, P. Martin, J.F. Smith, C. Burquez)
Barg Coffin Lewis & Trapp, LLP (B. Haughton)

Appendix D
Response to Comments

TENTATIVE WASTE DISCHARGE REQUIREMENTS
FOR THE EAST BAY MUNICIPAL UTILITY DISTRICT
ORINDA WATER TREATMENT PLANT

RESPONSE TO WRITTEN COMMENTS

We received one comment letter on the tentative order circulated for public review from August 10, 2009, through September 9, 2009. East Bay Municipal Utility District (District) submitted comments on September 8, 2009. The format of this staff response begins with a brief introduction of the District's comment, followed with 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 removal of the MUN beneficial use for San Pablo Creek because San Pablo Creek is not suitable, or potentially suitable, for municipal or domestic water supply. According to the District, San Pablo Creek does not provide sufficient water supply, the system is designed to collect storm water runoff, and there is potential upstream contamination due to sewer overflows and storm water runoff.

Response 1

We retained the MUN beneficial use for San Pablo Creek based on State Water Board Resolution No. 88-63 (Adoption of Policy Entitled "Sources of Drinking Water"). The Regional Water Board incorporated Resolution No. 88-63 into the Basin Plan in 1989 via Regional Water Board Resolution No. 89-093, which states that beneficial uses not designated in then Table II-1 of the Basin Plan are assigned the MUN designation in accordance with Resolution No. 88-63. Resolution No. 88-63 states, "Where a body of water is not currently designated as MUN but, in the opinion of the Regional Board, is presently or potentially suitable for MUN, the Regional Board shall include MUN in the beneficial use designation." We conclude that San Pablo Creek is suitable or potentially suitable for MUN because it drains directly into San Pablo Reservoir, a drinking water reservoir; therefore, the waters of San Pablo Creek are currently being used for drinking water. Although the District asserts that San Pablo Creek does not support the MUN beneficial use based on several of the exceptions included within Resolution No. 88-63, we do not agree that the exceptions apply in this case for the following reasons:

1. The District claims San Pablo Creek does not provide sufficient water. However, the District provided no evidence to indicate that San Pablo Creek could not support a well yielding 200 gallons per day. Resolution No. 88-63 states that MUN should not be a designated use for surface and ground waters where "the water source does not provide sufficient water to supply a single well capable of producing an average, sustained yield or 200 gallons per day."

2. The District claims the system is designed to collect storm water runoff. However, San Pablo Creek is a natural system that has not been specifically designed or modified to

collect storm water runoff; therefore this exception does not apply. Resolution No. 88-63 states that MUN should not be a designated use for surface waters where "the water is in systems designed or modified to collect or treat municipal or industrial wastewaters, process waters, mining wastewaters, or storm water runoff, provided that the discharge from such systems is monitored to assure compliance with all relevant water quality objectives as required by the Regional Boards."

3. The District claims there is potential upstream contamination due to sewer overflows and storm water runoff. However, storm water runoff and sanitary sewer system Best Management Practices are in place in the San Pablo Creek watershed as required by other Water Board orders, including the Statewide Sanitary Sewer Order (Order No. 2006-0003-DWQ) and NPDES permit (Order No. R2-1999-058), which requires implementation of a storm water management program for the 16 incorporated cities in Contra Costa County (i.e., the area that drains to San Pablo Creek). Resolution No. 88-63 states that MUN should not be a designated use for surface and ground waters where "there is contamination, either by natural processes or by human activity (unrelated to the specific pollution incident), that cannot reasonably be treated for domestic use using either Best Management Practices or best economically achievable treatment practices."

District Comment 2
The District appreciates organizing the Effluent Limitations section on Page 12 of the Order by pollutant rather than discharge point, which makes the section easier to read and understand.

Response 2
The comment is noted.

District Comment 3
The District requests that the Monitoring and Reporting Program (Attachment E, Section III) be comparable to the General Waste Discharge Requirements for Discharges From Surface Water Treatment Facilities For Potable Supply Order R2-2009-0033 (General Permit), and presents the following specific comments for consistency with the General Permit:

a. *Provide the reasoning for deleting Table E-3 (Monitoring Schedule for Non-Routine Discharges) and Table E-4 (Monitoring Schedule for On-Site Water Storage Facility Dewatering)? The District requests that these tables be included.*

b. *Revise the minimum sampling frequency for Total Chlorine Residual to be "Continuous or hourly" rather than "Continuous" in Table E-2.*

c. *Replace footnote [5] in Table E-2 with that from the General Permit.*

d. *Delete the requirement for conducting chronic toxicity monitoring, or require testing using only ceriodaphnia dubia (the EBMUD laboratory is already familiar with the testing for that species).*

e. *Add footnote to Table E-3 to allow the stream flow rate to be estimated.*

Response 3

a. We added these tables to the Order for consistency with the General Permit.

b. We made the suggested change.

c. We modified Table E-2 footnote [4] (we assumed that the comment relates to footnote [4], which refers to chlorine residual and not footnote [5], which refers to toxicity monitoring) to be consistent with the General Permit, but have retained the requirements related to continuous monitoring. If the District conducts continuous monitoring, the conditions in footnote [4] must be met.

d. We do not agree with the District that chronic toxicity monitoring should be removed from the Order. Because the discharge from E-003 occurs nearly continuously, chronic toxicity should be included to determine if the discharge is chronically toxic. Furthermore, it is standard practice to require a toxicity screening with up to five species to identify the three most sensitive species for chronic toxicity testing in NPDES permits. This level of analysis may be onerous given the nature of the discharge. Therefore, as an initial screening, we are only requiring testing with *ceriodaphnia dubia* and fathead minnows once during the term of the Order to identify if the discharge from E-003 is toxic to either of these species.

e. We included a footnote to Table E-3 to allow the stream flow rate to be estimated; this is consistent with the General Permit.

District Comment 4
The reporting requirements for the Orinda individual NPDES permit and the General Permit should be comparable. The District requests that an annual Self-Monitoring Report be required instead of quarterly Self-Monitoring Reports, for consistency with the General Permit and to lessen the burden of additional reporting. As written, the Orinda individual permit requires several additional requirements (e.g., Contingency Plan, Spill Prevention Plan, Storm Water Pollution Prevention Plan, Annual Facility Inspections, Annual Training, and Storm Water Monitoring) beyond the requirements listed in the General Permit (which requires an Annual Data Evaluation, Annual Best Management Practices Plan Update, and Operations and Maintenance Manual Update).

Response 4
For consistency with the requirements of the General Permit, we have revised the Order to require an annual self-monitoring report rather than quarterly self-monitoring reports.

The General Permit (Attachment G) actually contains the other requirements. That permit incorporates its Attachment G by reference. In June 2009, we updated our Regional Standard Provisions, and Monitoring and Reporting Requirements primarily through deletion of duplicative requirements with the federal standard provisions at Attachment D. This updated attachment is now included as Attachment G in the same document as the tentative order for clearer reference. Provision VI.A.2 at page 15 of the Order has also been revised for clearer reference to the new attachment.

District Comment 5

The District requests deletion of the violation on January 2, 2004 from Attachment F, Section II. A single operation upset on January 1, 2004 lead to simultaneous violations on both January 1, 2004 and January 2, 2004. For accuracy, the District also requests addition of acute toxicity violations in March 2005 and May 2005 to Table F-5.

Response

We deleted the January 2, 2004, violation from Table F-5 and added the two toxicity violations.

Regional Board Staff Initiated Change

We changed the allowable chlorine residual from greater than or equal to 0.08 mg/L to greater than or equal to 0.05 mg/L to be consistent with the San Francisco Public Utilities Commission Drinking Water Transmission System Permit, Order No. R2-2008-0102, and the tentative Municipal Regional Stormwater Permit (MRP). The National Oceanic and Atmospheric Administration commented on the tentative MRP that an allowable chlorine residual of 0.08 mg/L is too high to be protective of aquatic life. Although many field test kits can detect chlorine residual concentrations down to 0.02 mg/L, it requires calibration that may not be available in the field. Data show that it is possible to reliably detect chorine residual down to 0.05 mg/L using these kits.