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*Secretary for*
*Environmental Protection*

# California Regional Water Quality Control Board

## San Francisco Bay Region

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**Edmund G. Brown, Jr.**
*Governor*

**ORDER NO. R2-2012-0005**
**NPDES NO. CA0037613**

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

**Table 1. Discharger Information**

| | |
|---|---|
| **Discharger** | Dublin San Ramon Services District (DSRSD)<br>Livermore-Amador Valley Water Management Agency (LAVWMA)<br>East Bay Dischargers Authority (EBDA) |
| **Name of Facilities** | Dublin San Ramon Services District Wastewater Treatment Plant and its Collection System |
| **Facility Address** | 7399 Johnson Drive<br>Pleasanton, CA 94588<br>Alameda County |
| The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge. | |

**Table 2. Discharge Location**

| Discharge Point | Effluent Description | Discharge Point Latitude | Discharge Point Longitude | Receiving Water |
|---|---|---|---|---|
| 001 | Secondary Treated Municipal Wastewater and Zone 7 reverse osmosis reject water | 37º 41’ 40” N | 122º 17’ 42” W | Lower San Francisco Bay |

**Table 3. Administrative Information**

| | |
|---|---|
| This Order was adopted by the Regional Water Board on: | **January 18, 2012** |
| This Order shall become effective on: | **March 1, 2012** |
| This Order shall expire on: | **February 28, 2017** |
| The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than: | **180 days prior to the Order expiration date** |

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

Digitally signed by Bruce Wolfe
Date: 2012.01.19 13:28:45 -08'00'

Bruce H. Wolfe, Executive Officer

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# I. FACILITY INFORMATION

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

**Table 4. Facility Information**

| | |
|---|---|
| **Discharger** | Dublin San Ramon Services District (DSRSD)<br>Livermore-Amador Valley Water Management Agency (LAVWMA)<br>East Bay Dischargers Authority (EBDA) |
| **Name of Facility** | Dublin San Ramon Services District Wastewater Treatment Plant and its Collection System |
| **Facility Address** | 7399 Johnson Drive<br>Pleasanton, CA 94588<br>Alameda County |
| **Facility Contact, Title, and Phone** | Daniel Gallagher, Operations Manager, (925) 846-4565 |
| **Mailing Address** | Dublin San Ramon Services District<br>7051 Dublin Blvd.<br>Dublin, CA 94568 |
| **Type of Facility** | Publicly Owned Treatment Works (POTW) |
| **Facility Permitted Flow[1]** | 17.0 MGD – ADWF flow capacity (current)<br>20.7 MGD – ADWF (proposed)[2]<br>3.2 MGD – Zone 7 flow (interruptable)[3]<br>60.0 MGD – WWF design flow capacity (current)[4]<br>74.0 MGD – WWF design flow capacity (proposed)[5] |

[1] Flows in million gallons per day, MGD; ADWF: average dry weather flow, WWF: wet weather flow

[2] If the Discharger satisfies Provision VI.C.2.d, the total permitted ADWF will be 23.9 MGD, which includes the current facility permitted dry weather capacity of 17.0 MGD, 3.2 MGD in Zone 7 brine reject flow, and a 3.7 MGD proposed facility expansion.

[3] By an industrial user pretreatment permit with the Alameda County Flood Control and Water Conservation District (Zone 7), Zone 7 discharges 3.2 MGD of groundwater reverse osmosis reject water to the Facility. This discharge flow is in addition to the permitted dry weather treatment capacity.

[4] Wet Weather Flow (WWF). DSRSD has instantaneous pumping capacity to convey treated wastewater to the LAVWMA storage and pumping facilities. The maximum LAWVMA flow to the EBDA system, under an EBDA/LAVWMA agreement, is 4l.2 MGD, including Zone 7 groundwater reverse osmosis reject flow, if capacity is available. During peak EBDA WWF, only 19.72 MGD capacity is available to LAWVMA in the EBDA system. If EBDA system capacity is not available due to peak WWF, LAWVMA is authorized to discharge up to 21.5 MGD of its peak WWF to San Lorenzo Creek by a separate Regional Water Board Order (Order No. R2-2011-0028). Under the industrial pretreatment permit issued by DSRSD, Zone 7 groundwater reverse osmosis reject water is interruptible flow. The Order requires that DSRSD specify in the pretreatment permit that at times of peak WWF, discharge of Zone 7 groundwater reverse osmosis reject water to DSRSD will be suspended so as to not cause or contribute to any exceedance of EBDA's peak WWF limitation, or to any discharge under Order No. R2-2011-0028.

[5] If the Discharger satisfies Provision VI.C.2.d, the total permitted WWF will be 74 MGD, which includes the current facility permitted wet weather capacity of 60 MGD, and a proposed facility expansion that will provide 14 MGD of additional wet weather capacity.

# II. FINDINGS

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

A. **Background.** DSRSD is currently discharging under Order No. R2-2006-0054 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0037613, which was adopted on August 9, 2006.

EBDA and the City of Livermore have also applied for reissuance of waste discharge requirements and NPDES permits to discharge wastewaters through the EBDA outfall. The waste discharge requirements for EBDA and the City of Livermore are contained in separate Regional Water Board Orders (Order Nos. R2-2006-0053 and R2-2006-0055, respectively). DSRSD, the City of Pleasanton, and the City of Livermore are member agencies of LAVWMA.

DSRSD, EBDA and LAVWMA are hereinafter collectively referred to as the Discharger. DSRSD submitted a Report of Waste Discharge, dated March 16, 2011, and applied for an NPDES permit renewal to discharge up to 23.9 MGD average dry weather design flow (ADWF) of treated wastewater from the Dublin San Ramon Services District Wastewater Treatment Plant, hereinafter the Facility, which includes the current facility permitted capacity of 17.0 MGD, a 3.7 MGD proposed facility expansion, and 3.2 MGD of reject water from two groundwater reverse osmosis projects.

B. **Facility and Discharge Description.**

1. **DSRSD Wastewater Treatment Plant.** DSRSD owns and operates the wastewater treatment plant, which serves approximately 131,900 people from the City of Dublin, the City of Pleasanton, and the southern portion of the City of San Ramon. The City of Pleasanton owns and operates its own sewage collection and pumping system but delivers its wastewater to DSRSD's Wastewater Treatment Plant for treatment. DSRSD provides secondary treatment consisting of screening, grit removal, primary clarification, activated sludge, secondary clarification, and disinfection using sodium hypochlorite. The Facility also has four concrete lined holding basins with a total capacity of 22 million gallons with 2 feet of freeboard for flow equalization. Sludge is thickened by dissolved air floatation, anaerobically digested, conditioned in onsite facultative sludge lagoons for approximately four years, and then injected into the soil at an onsite DSRSD-owned disposal area. DSRSD transports treated effluent including Zone 7 reject water to the LAVWMA export pump station where it combines with Livermore's treated effluent and is pumped via LAVWMA's pipeline to the EBDA Common Outfall.

2. **Zone 7 Demineralization and Brine Disposal Project.** Zone 7 serves as the overall water quality management agency for the Alameda Creek watershed north of the Niles area of Fremont and has the primary responsibility for managing the Livermore-Amador Valley's surface and groundwater resources. Zone 7 removes salts from approximately 15 MGD of groundwater through reverse osmosis. The reverse osmosis facilities produce a maximum of up to 3.2 MGD of reverse osmosis reject water.

   Zone 7 reverse osmosis reject water is a permitted industrial discharge under DSRSD's Pretreatment Program. The reject water is introduced into DSRSD's wastewater treatment works through a dedicated sewer prior to the final DSRSD monitoring station, but following DSRSD's treatment and disinfection of municipal waste and diversion for reclamation. DSRSD's acceptance of this reverse osmosis reject flow from Zone 7 is interruptible, which ensures compliance with all effluent limitations.

3. **LAVWMA.** LAVWMA is a joint powers agency created in 1974 for wastewater management planning for the service areas of the City of Livermore, the City of Pleasanton, and DSRSD. By contractual agreement, DSRSD is responsible for operating and maintaining LAVWMA's export pump station and pipeline facilities and for performing and submitting the self-monitoring requirements for the LAVWMA facilities. DSRSD's and Livermore's treated wastewaters combine and flow to flow-equalization basins before being pumped via LAVWMA's pipeline to the EBDA system for final dechlorination and discharge to the EBDA Common Outfall. EBDA is responsible for the combined transport, dechlorination, and discharge of LAVWMA's treated wastewater by contractual agreement.

4. **JEPA.** The Joint Exercise of Power Agency (JEPA) delegates the authority and responsibility to EBDA to assure compliance with all effluent discharge requirements. It is the intent of the JEPA to allow determination of compliance with waste discharge requirements by considering EBDA as a total system, to permit the most effective operation of all EBDA and member agency treatment facilities. The JEPA, therefore, empowers EBDA to monitor each agency's discharge and the combined discharge and prescribes that the Joint Authority may, if necessary, undertake modifications to any member agency's treatment facilities to ensure compliance with effluent discharge requirements.

   Since LAVWMA and its member agencies are not signatories to the JEPA, the EBDA/LAVWMA agreement empowers EBDA to monitor discharges by LAVWMA member agencies into the EBDA system and requires LAVWMA, as a condition of continuing service, to comply with all requirements prescribed by the Regional Water Board, except residual chlorine, for which EBDA will be responsible.

5. As used herein, "Common Outfall" means the EBDA Common Outfall; "Combined Discharge" refers to the waste stream at any point where all wastes tributary to that outfall are present; and "Individual Treatment Plant" means a treatment facility operated by a member agency of either EBDA or LAVWMA. Attachment B provides a map of the Facility. Attachment C provides a Facility flow schematic.

C. **Legal Authorities.** This Order is issued pursuant to Clean Water Act (CWA) section 402 and implements regulations adopted by the United States Environmental Protection Agency (USEPA) and 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).

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

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

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

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

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

The Basin Plan implements State Water Board Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Because of marine influence in Lower San Francisco Bay, total dissolved solids levels in Lower San Francisco Bay exceed 3,000 milligrams per liter (mg/L) and thereby meet an exception to State Water Board Resolution No. 88-63. The MUN designation is therefore not applicable to Lower San Francisco Bay.

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

**Table 5. Basin Plan Beneficial Uses of Lower San Francisco Bay**

| Discharge Point | Receiving Water Name | Beneficial Uses |
|---|---|---|
| 001 | Lower San Francisco Bay | Existing<br>Industrial Service Supply (IND)<br>Ocean Commercial and Sport Fishing (COMM)<br>Shellfish Harvesting (SHELL)<br>Estuarine Habitat (EST)<br>Fish Migration (MIGR)<br>Preservation of Rare and Endangered Species (RARE)<br>Wildlife Habitat (WILD)<br>Water Contact Recreation (REC1)<br>Non-contact water Recreation (REC2)<br>Navigation (NAV) |

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

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

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

K. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes [65 Fed. Reg. 24641 (April 27, 2000) (codified at 40 CFR 131.21)]. Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

**L. Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on carbonaceous biochemical oxygen demand (5-day @ 20°C) (CBOD), total suspended solids (TSS), pH, total residual chlorine, and oil and grease. Derivation of these technology-based limitations is discussed in the Fact Sheet (Attachment F). This Order's technology-based pollutant restrictions implement the minimum applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum federal technology-based requirements as necessary to meet water quality standards.

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

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

**N. Anti-Backsliding Requirements.** CWA Sections 402(o)(2) and 303(d)(4) and NPDES regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. As discussed in the Fact Sheet, the permitted discharge is consistent with the anti-backsliding requirements of the CWA and federal regulations.

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

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

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

**R. 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 written comments and recommendations. The Fact Sheet provides notification details.

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

IT IS HEREBY ORDERED, that this Order supersedes Order No. R2-2006-0054, except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the federal CWA provisions and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

## III. DISCHARGE PROHIBITIONS

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

**B.** Discharge of treated wastewater that does not receive an initial dilution of at least 79:1 (nominal) is prohibited. Compliance shall be achieved by proper operation and maintenance of the discharge outfall to ensure that it (or its replacement, in whole or in part) is in good working order, and is consistent with, or can achieve better mixing than that described in the Fact Sheet (Attachment F). The Discharger shall address measures taken to ensure this in its application for permit reissuance.

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

**D.** The average dry weather flow of the Facility shall not exceed 20.2 MGD. This requirement shall apply as follows: (1) The average dry weather flow from the Facility's treatment units shall not exceed 17.0 MGD, and (2) the Discharger shall ensure that Zone 7 Water Agency reject water shall not exceed 3.2 MGD at any time. Compliance with the average dry weather flow limit from the treatment units shall be determined using actual flows from the treatment units at monitoring station M-002F1 as defined in the attached MRP, Attachment E, over three consecutive dry weather months each year. Compliance with the 3.2 MGD reject discharge flow limit shall be determined using actual total flows from the Facility measured at M-002F2 minus the actual flows from the treatment units measured at M-002F1. The average dry weather flow limit may be increased from 17.0 MGD to 20.7 MGD upon completion of the planned new treatment plant facilities, completion of tasks identified in Provision VI.C.2.d, and approval by the Executive Officer. The Discharger submitted an antidegradation study for plant improvements that affirms that an increase in the effluent discharge flow rate of 20.7 MGD, plus 3.2 MGD of Zone 7 reject water, for a total of 23.9 MGD, conforms to federal and State Antidegradation Policy requirements.

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

## IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

### A. Effluent Limitations for Conventional and Non-Conventional Pollutants

**1.** The Discharger shall comply with CBOD and TSS effluent limits at Monitoring Location M-002F1, and the pH effluent limits at Monitoring Location M-002F2 as described in the attached MRP (Attachment E).

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

| Parameter | Units | Final Effluent Limitations | | | | |
|---|---|---|---|---|---|---|
| | | Average Monthly | Average Weekly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum |
| CBOD | mg/L | 25 | 40 | --- | --- | --- |
| TSS | mg/L | 30 | 45 | --- | --- | --- |
| pH (1) | s.u. | --- | --- | --- | 6.0 | 9.0 |

**Footnotes to Table 6:**

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

**2. $CBOD_5$ and TSS 85 Percent Removal:** The concentration-based average monthly percent removal of $CBOD_5$ and TSS shall not be less than 85 percent, with compliance measured at Monitoring Locations M-002F1, as described in the attached MRP (Attachment E).

**3. Technology Based Effluent Limits – Discharge Point No. 001:** Compliance for total residual chlorine and Oil and Grease shall be measured at the EBDA Common Outfall, with compliance measured at Monitoring Location M-001, as described in the attached MRP (Attachment E).

**Table 7. Technology-Based Effluent Limits – Discharge Point No. 001**

| Parameter | Units | Average Monthly | Maximum Daily | Instantaneous Maximum |
|---|---|---|---|---|
| Oil and Grease | mg/L | 10 | 20 | ---------- |
| Chlorine Residual[1] | mg/L | ---------- | ---------- | 0.0 |

[1] The Discharger may elect to use a continuous on-line monitoring system(s) for measuring flow, chlorine residual and sodium bisulfite (or other dechlorinating chemical) dosage (including a safety factor) and concentration to prove that chlorine residual exceedances are false positives. If convincing evidence is provided, Regional Water Board staff may conclude that these false positive chlorine residual exceedances are not violations of this permit limitation.

**4. Bacteria – Discharge Point No. 001**

**a. Fecal Coliform Bacteria.** Treated wastewater shall meet the following limits of bacteriological quality at the EBDA Common Outfall, Monitoring Location M-001:

**(1)** The 5-sample geometric mean fecal coliform density of 500 MPN/100mL.

**(2)** 11-sample 90th percentile value of 1,100 MPN/100mL.

**b. Enterococci Bacteria.** The monthly geometric mean shall not exceed 242 MPN/100 mL. This effluent limitation shall be implemented as a geometric mean of a minimum of 5-samples spaced over a calendar month, with compliance measured at Monitoring Location M-001.

**B. Effluent Limitations for Toxic Pollutants at Discharge Point No. 001**

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

**Table 8. Effluent Limitations for Toxic Pollutants – Discharge Point No. 001**

| Parameter | Units | Final Effluent Limitations | |
|---|---|---|---|
| | | Average Monthly Effluent Limit (AMEL) | Maximum Daily Effluent Limit (MDEL) |
| Copper, Total Recoverable | µg/L | 53 | 78 |
| Cyanide, Total | µg/L | 21 | 42 |
| Dioxin-TEQ | µg/L | $1.4 \times 10^{-08}$ | $2.8 \times 10^{-08}$ |
| Total Ammonia, as N | mg/L | 93 | 130 |

**C. Whole Effluent Acute Toxicity – Discharge Point No. 001**

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

   The survival of organisms in undiluted combined effluent shall be:

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

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

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

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

3. Bioassays shall be performed using the most up-to-date USEPA protocol and the requirements described in the MRP, Section V.A. (Attachment E). Bioassays shall be conducted in compliance with *Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms,* currently 5th Edition (EPA-821-R-02-012), with

exceptions granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP) upon the Discharger's request with justification.

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

**D. Whole Effluent Chronic Toxicity – Discharge Point No. 001**

1. The discharge shall not contain chronic toxicity at a level that would cause or contribute to toxicity in the receiving water. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, or any other relevant measure of the health of an organism population or community. Compliance with this limit shall be determined by analyses of indicator organisms and toxicity tests. Compliance shall be measured at Monitoring Location M-001, as described in the MRP (Attachment E).

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

## V. RECEIVING WATER LIMITATIONS

Receiving water limitations are based on WQOs contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in Lower San Francisco Bay.

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

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

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

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

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

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

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

1. Dissolved Oxygen 5.0 mg/L, minimum

   The median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation. When natural factors cause concentrations less than those specified above, the discharge shall not cause further reduction in ambient dissolved oxygen concentrations.

2. Dissolved Sulfide The maximum dissolved sulfide concentration in the receiving water shall not exceed 0.1 mg/L.

3. pH Within 6.5 and 8.5

4. Nutrients Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

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

## VI. PROVISIONS

### A. Standard Provisions

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

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

### B. MRP Requirements

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

### C. Special Provisions

1. **Reopener Provisions**

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

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

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

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

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

**e.** Or as otherwise authorized by law.

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

**2. Effluent Characterization Study and Report**

**a. Study Elements**

The Discharger shall continue to characterize and evaluate discharges from the following discharge points to verify that the "no" or "cannot determine" reasonable potential analysis conclusions of this Order remain valid and to inform the next permit reissuance. The Discharger shall collect representative samples of the discharges as set forth below, with locations as defined in the MRP (Attachment E), at no less than the frequencies specified below:

**Table 9: Priority Pollutant Monitoring**

| Discharge Point | Monitoring Station | Frequency |
|---|---|---|
| 001 | M-001 | 2/year |

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

The Discharger shall evaluate on an annual basis if concentrations of any priority pollutant increase over past performance. The Discharger shall investigate the cause of any increase. The investigation may include, but need not be limited to, an increase in monitoring

frequency, monitoring of internal process streams, and monitoring of influent sources. The Discharger shall establish remedial measures addressing any increase resulting in Reasonable Potential to cause or contribute to an excursion above applicable water quality objectives, except for those priority pollutants with effluent limitations. This requirement may be satisfied through identification of the constituent as a "pollutant of concern" in the Discharger's Pollutant Minimization Program, described in Provision VI.C.3.

**b. Reporting Requirements**

**i. Routine Reporting**

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

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

b. Identity of priority pollutants detected above their applicable water quality criteria, except for those priority pollutants with effluent limitations (see Fact Sheet [Attachment F] Table F-8 for the criteria), together with the detected concentrations of those pollutants.

Consistent with Reporting Requirements VIII.B.2.d, the Discharger shall also electronically report the above data (see Table E-6, SMR Reporting for CIWQS).

**ii. Annual Reporting**

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

**iii. Final Report**

The Discharger shall submit a final report that presents all these data to the Regional Water Board no later than 180 days prior to the Order expiration date. For data and information already submitted electronically into CIWQS, the Discharger does not have to resubmit; however, it must reference the monthly monitoring report(s) where it provided such information. The final report shall be submitted with the application for permit reissuance.

**c. Ambient Background Receiving Water Study**

The Discharger shall collect or participate in collecting background ambient receiving water monitoring data for priority pollutants that is required to perform an RPA and to calculate effluent limitations. The data on the conventional water quality parameters (pH, salinity, and hardness) shall also be sufficient to characterize these parameters in the ambient receiving water at a point after the discharge has mixed with the receiving waters. This provision may be met through monitoring through the collaborative Bay Area Clean Water Agencies (BACWA) study, or a similar ambient monitoring program for San Francisco Bay. This Order may be reopened as appropriate, to incorporate effluent limitations or other

requirements based on Regional Water Board review of these data.

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

**d. Permitted Treatment Plant Flows**

The permitted average dry weather flow capacity identified in Prohibition III.D of this Order may be increased to 23.9 MGD by written approval from the Executive Officer, in accordance with the following conditions:

1) Completion of the proposed improvements to the wastewater treatment facility.

2) Documentation of adequate reliability, capability and performance of the wastewater facilities in order to maintain compliance with waste discharge requirements. Hydraulic and organic loading capacities of the treatment facilities shall be evaluated by appropriate combinations of desk-top analyses and treatment process stress testing to simulate design peak loading conditions. Evaluation shall include treatment process operations under both dry weather and wet weather design flow conditions, and effluent disposal capacity including storage and discharge to land through reclamation.

3) Compliance with all applicable provisions of the California Environmental Quality Act (California Public Resources Code Division 13, Chapter 3, Section 21100 et seq.).

4) Adequate financial provisions to ensure adequate operation and maintenance of the wastewater facilities.

5) Documentation of completion or implementation of the above measures, to the Executive Officer's satisfaction.

**3. Best Management Practices and Pollution Minimization Program**

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

**b.** The Discharger shall submit an annual report, acceptable to the Executive Officer, no later than February 28 of each calendar year. Each annual report shall include at least the following information:

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

(2) *A discussion of the current pollutants of concern.* Periodically, the Discharger shall analyze its own situation to determine which pollutants are currently a problem and which pollutants may be potential future problems. This discussion shall include the reasons why the pollutants were chosen.

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

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

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

(6) *Continuation of Public Outreach Program.* The Discharger shall prepare a public outreach program to communicate pollution prevention to its service area. Outreach may include participation in existing community events such as county fairs; initiating new community events, such as displays and contests during Pollution Prevention Week; conducting school outreach programs; conducting plant tours; and providing public information in newspaper articles or advertisements, radio or television stories or spots, newsletters, utility bill inserts, or web sites. Information shall be specific to target audiences. The Discharger shall coordinate with other agencies as appropriate.

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

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

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

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

**c. Pollutant Minimization Program for Pollutants with Effluent Limitations**

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

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

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

**d. Pollutant Minimization Program Submittals for Pollutants with Effluent Limitations**

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

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

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

(3) Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutants in the effluent at or below the effluent limitation;

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

(5) The annual report required by section VI.C.3.b. of this Order shall specifically address the following items:

(a) All Pollutant Minimization Program monitoring results for the previous year;

(b) A list of potential sources of the reportable priority pollutants;

(c) A summary of all actions undertaken pursuant to the control strategy; and

(d) A description of actions to be taken in the following year.

**4. Special Provisions for Municipal Facilities (POTWs Only)**

**a. Pretreatment Program Requirements**

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

(a) Enforcement of National Pretreatment Standards of 40 CFR 403.5 and 403.6;

(b) Implementation of its pretreatment program in accordance with legal authorities, policies, procedures, and financial provisions described in the General Pretreatment regulations (40 CFR 403) and its approved pretreatment program;

(c) Submission of reports to USEPA, the State Water Board, and the Regional Water Board, as described in Attachment H.

(d) Evaluate the need to revise local limits under 40 CFR 403.5(c)(1); and within 180 days after the effective date of this Order, submit a report describing a plan and schedule for implementation. If deemed unnecessary, the report should indicate that the Discharger evaluated local limits, but no changes were needed.

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

**b. Biosolids Management Practices Requirements**

(1) All biosolids generated by the Discharger must be disposed of in a municipal solid waste landfill, reused by land application or landfill alternative daily cover, disposed of in a sludge-only landfill, or disposed of by any other practice in accordance with 40 CFR 503. If the Discharger desires to dispose of biosolids by a different method, a request for permit modification must be submitted to USEPA 180 days before start-up of the alternative disposal practice. All the requirements in 40 CFR 503 are enforceable by USEPA whether or not they are stated in an NPDES permit

or other permit issued to the Discharger. The Regional Water Board should be copied on relevant correspondence and reports forwarded to USEPA regarding sludge management practices.

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

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

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

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

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

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

(8) Permanent on-site biosolids storage or disposal activities are authorized under separate waste discharge requirements. Specifically, Order No. R2-2007-0053 regulates the Discharger's Dedicated Land Disposal Site.

(9) Biosolids Monitoring and Reporting Provisions of this Regional Water Board's Standard Provisions (Attachment G), apply to sludge handling, disposal, and reporting practices.

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

**c. Sanitary Sewer Overflows and Sewer System Management Plan**

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

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

Implementation of the General Collection System WDRs requirements for proper operation and maintenance and mitigation of spills will satisfy the corresponding federal NPDES requirements specified in Attachment D (as supplemented by Attachment G) of this Order. Following notification and reporting requirements in the General Collection System WDRs will satisfy NPDES reporting requirements specified in Attachment D (as supplemented by Attachment G) of the Order for sewage spills from the collection system outside treatment plant boundaries.

**d. FOG Management Program**

If the Discharger receives fats, oils, grease, or food processing wastes for injection into an anaerobic digester, the Discharger shall develop and implement standard operating procedures (SOPs) for this activity. The SOPs shall address spill prevention; spill response; introduction of materials that could cause interference, pass through, or upset of the treatment processes; vector control; and operation and maintenance. The Discharger shall provide training to its staff on the SOPs and shall maintain records onsite for a minimum of 3 years for each load received, describing the hauler, waste type, and amount.

**5. Copper Action Plan**

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

**Table 10. Copper Action Plan**

| Task | Compliance Date |
|---|---|
| **1. Review Potential Copper Sources**<br>The Discharger shall submit an inventory of potential copper sources to the treatment plant. | Completed |
| **2. Implement Copper Control Program**<br>The Discharger shall submit a plan for and begin implementation of a program to reduce copper discharges identified in Task (1) consisting, at a minimum, of | Completed |

| Task | Compliance Date |
|---|---|
| the following elements:<br>a. Provide education and outreach to the public (e.g., focus on proper pool and spa maintenance and plumbers' roles in reducing corrosion).<br>b. If corrosion is determined to be a significant copper source, work cooperatively with local water purveyors to reduce and control water corrosivity, as appropriate, and ensure that local plumbing contractors implement best management practices to reduce corrosion in pipes.<br>c. Educate plumbers, designers, and maintenance contractors for pools and spas to encourage best management practices that minimize copper discharges. | |
| **3. Implement Additional Measures**<br>If the Regional Water Board notifies the Discharger that the three-year rolling mean dissolved copper concentration of the receiving water exceeds 2.2 µg/L, the Discharger shall evaluate its effluent copper concentration trend and if it is increasing, develop and begin implementing additional measures to control copper discharges. The Discharger shall report on the progress and effectiveness of actions taken, together with a schedule for actions to be taken in the next 12 months. | With annual pollution prevention report due February 28 following 90 days after notification |
| **4. Studies to Reduce Copper Pollutant Impact Uncertainties**<br>The Discharger shall conduct or cause to be conducted studies to investigate possible copper sediment toxicity and technical studies to investigate sublethal effects on salmonids. Specifically, the Discharger shall include the manner in which the above will be accomplished and describe the studies to be performed with an implementation schedule. To satisfy this requirement, dischargers may collaborate and conduct these studies as a group. | Completed |
| **5. Report Status of Copper Control Program**<br>The Discharger shall submit a report documenting copper control program implementation and addressing the effectiveness of the actions taken, including any additional copper controls required by Task 3, above, together with a schedule for actions to be taken in the next 12 months. | With annual pollution prevention report due February 28 each year |

### 6. Cyanide Action Plan

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

**Table 11. Cyanide Action Plan**

| Task | Compliance Date |
|---|---|
| **1. Review Potential Cyanide Contributors**<br>The Discharger shall submit an inventory of potential cyanide sources to the treatment plant (e.g., metal plating operations, hazardous waste recycling, etc.) If no cyanide sources are identified, Tasks 2 and 3 are not required, unless the Discharger receives a request to discharge detectable levels of cyanide to the sewer. If so, the Discharger shall notify the Executive Officer and implement Tasks 2 and 3. | Completed |

| Task | | Compliance Date |
|---|---|---|
| 2. | **Implement Cyanide Control Program**<br>The Discharger shall submit a plan and begin implementation of a program to minimize cyanide discharges to its treatment plant consisting, at a minimum, of the following elements:<br>a. Inspect each potential source to assess the need to include that contributing source in the control program.<br>b. Inspect contributing sources included in the control program annually. Inspection elements may be based on USEPA guidance, such as Industrial User Inspection and Sampling Manual for POTWs (EPA 831-B-94-01).<br>c. Develop and distribute educational materials to contributing sources and potential contributing sources regarding the need to prevent cyanide discharges.<br>d. Prepare an emergency monitoring and response plan to be implemented if a significant cyanide discharge occurs. | Completed |
| 3. | **Implement Additional Cyanide Control Measures**<br>If the Regional Water Board notifies the Discharger that ambient monitoring shows cyanide concentrations of 1.0 µg/L or higher in the main body of San Francisco Bay, then within 90 days of the notification, the Discharger shall commence actions to identify and abate cyanide sources responsible for the elevated ambient concentrations, and shall report on the progress and effectiveness of actions taken, together with a schedule for actions to be taken in the next 12 months. | Report in annual pollution prevention report starting with the report due after the notification |
| 4. | **Report Status of Cyanide Control Program**<br>The Discharger shall submit an annual report documenting cyanide control program implementation and addressing the effectiveness of actions taken, including any additional cyanide controls required by Task 3, above, together with a schedule for actions to be taken in the next 12 months. | With annual pollution prevention report due February 28 each year |

## VII. COMPLIANCE DETERMINATION

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

**B.** Actual ADWF for the treatment plant shall be determined for compliance over three consecutive dry weather months each year.

**C.** For purposes of this Order, compliance with technology-based effluent limitations for CBOD, CBOD percent removal, TSS, TSS percent removal and pH shall be determined at the discharge point for the DSRSD Wastewater Treatment Plant (M-002F1 and M-002F2), before comingling with treated wastewater from other facilities in the EBDA system, as described in section IV of the

Fact Sheet. Compliance with all other effluent limitations shall be determined at the Common Outfall with compliance measured at Monitoring Location M-001.

## ATTACHMENT A – DEFINITIONS

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

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

where: $\Sigma x$ is the sum of the measured ambient water concentrations, and n is the number of samples.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**Not Detected (ND)** are those sample results less than the laboratory's MDL.

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

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

**Pollutant Minimization Program (PMP)** means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to California Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

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

**Reporting Level (RL)** is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences.

Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

**Sanitary Sewer Overflow** is any overflow, spill, release, discharge, or diversion of untreated or partially treated wastewater from a sanitary sewer system. Sanitary sewer overflows include: (1) overflows or releases of untreated or partially treated wastewater that reach waters of the United States; (2) overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and (3) wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publically owned portion of a sanitary sewer system.

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

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

**Standard Deviation ($\sigma$)** is a measure of variability that is calculated as follows:

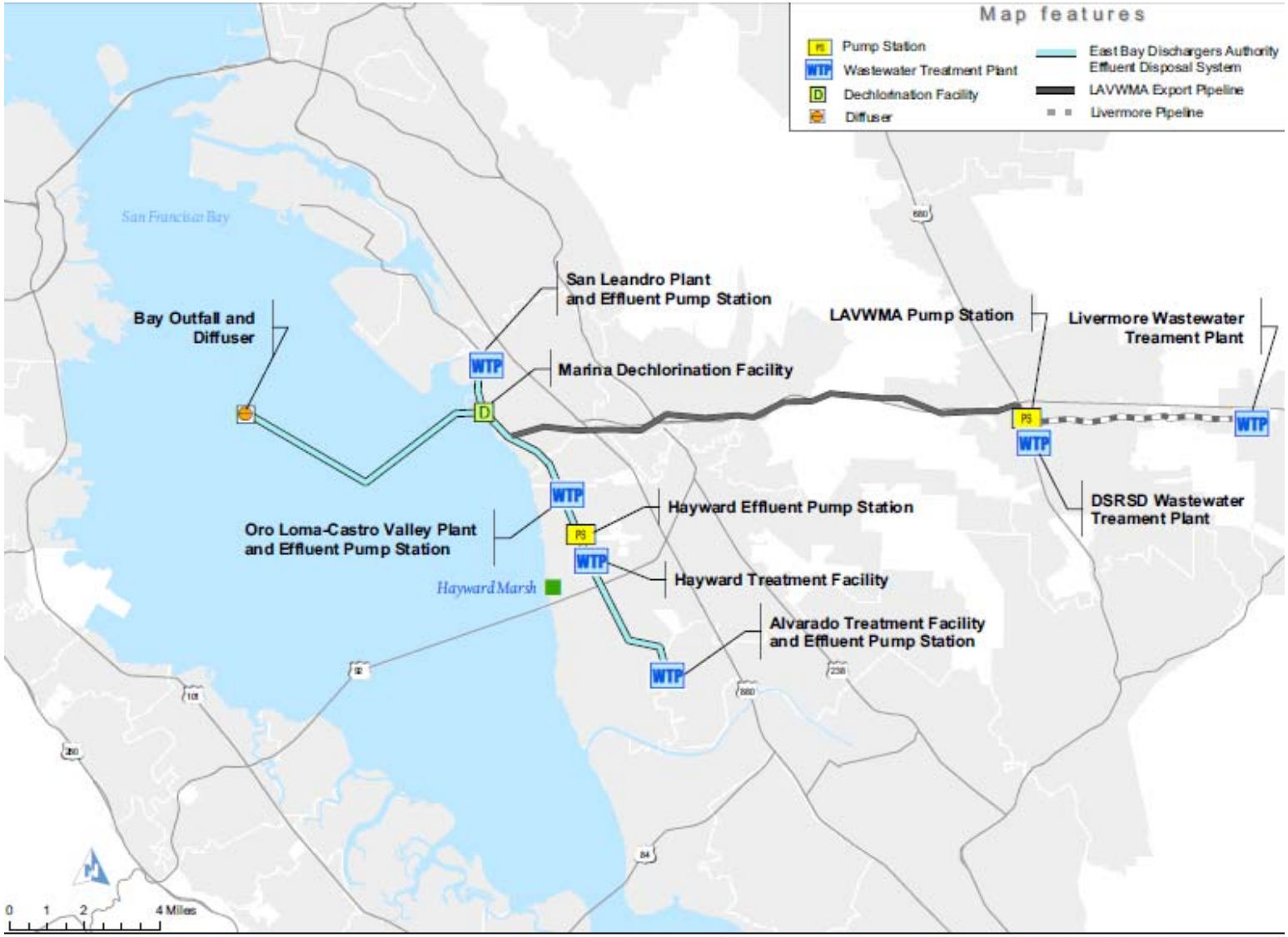
$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

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

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

## ATTACHMENT B – FACILITY MAP

## ATTACHMENT C – PROCESS FLOW DIAGRAM



# ATTACHMENT D –STANDARD PROVISIONS

## I. STANDARD PROVISIONS – PERMIT COMPLIANCE

### A. Duty to Comply

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

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

### B. Need to Halt or Reduce Activity Not a Defense

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

### C. Duty to Mitigate

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

### D. Proper Operation and Maintenance

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

### E. Property Rights

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

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

## F. Inspection and Entry

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

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

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

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

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

## G. Bypass

1. Definitions

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

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

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

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

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

   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment

should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR § 122.41(m)(4)(i)(B)); and

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

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

5. Notice

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

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

**H. Upset**

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

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

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

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

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

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

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

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

## II. STANDARD PROVISIONS – PERMIT ACTION

### A. General

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

### B. Duty to Reapply

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

### C. Transfers

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

## III. STANDARD PROVISIONS – MONITORING

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

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

## IV. STANDARD PROVISIONS – RECORDS

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

**B**. Records of monitoring information shall include:

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

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

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

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

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

6. The results of such analyses. (40 CFR § 122.41(j)(3)(vi).)

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

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

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

## V. STANDARD PROVISIONS – REPORTING

### A. Duty to Provide Information

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

### B. Signatory and Certification Requirements

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

2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR § 122.22(a)(3).).

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

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

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

responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR § 122.22(b)(2)); and

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

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

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

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

## C. Monitoring Reports

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

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

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

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

**D. Compliance Schedules**

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

**E. Twenty-Four Hour Reporting**

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

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

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

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

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

**F. Planned Changes**

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

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

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

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application

process or not reported pursuant to an approved land application plan. (40 CFR§ 122.41(l)(1)(iii).)

### G. Anticipated Noncompliance

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

### H. Other Noncompliance

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

### I. Other Information

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

## VI. STANDARD PROVISIONS – ENFORCEMENT

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

## VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

### A. Publicly-Owned Treatment Works (POTWs)

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

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

2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of this Order. (40 CFR § 122.42(b)(2).)

3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 CFR § 122.42(b)(3).)

# ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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# ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

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

## I. GENERAL MONITORING PROVISIONS

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

**B.** The Discharger shall conduct all monitoring in accordance with Attachment D, section III, as supplemented by Attachment G of this Order. Equivalent test methods must be more sensitive than those specified in 40 CFR 136, must be specified in the permit, and must be approved for use by the Executive Officer, following consultation with the State Water Quality Control Board (State Water Board) Quality Assurance Program.

## II. MONITORING LOCATIONS

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

**Table E-1. Monitoring Station Locations**

| Type of Sampling Location | Monitoring Location Name | Monitoring Location Description |
|---|---|---|
| Influent (DSRSD) | M-INF-F | Any point in the DSRSD headworks at which all waste tributary to that plant is present and preceding any phase of treatment or sidestream. |
| Effluent (Common Outfall) | M-001 | At any point in the EBDA Common Outfall at which all waste tributary to that outfall is present after final dechlorination at the Marina Dechlorination Facility. |
| Effluent (DSRSD) | M-002F2 | At any point in the Facility at which adequate disinfection has taken place just prior to where DSRSD transfers control of its effluent to LAVWMA facilities. |
| Effluent (DSRSD) | M-002F1 | At any point in the Facility at which adequate disinfection has taken place and prior to the addition of Zone 7 reject. DSRSD may accomplish this arithmetically using data from M-002F2 minus the influence from the Zone 7 reject. For flow and loadings: subtract Zone 7 input from M-002F2. For concentration: subtract the flow weighted concentration in Zone 7 from M-002F2 concentrations for the same constituents. |
| Biosolids (DSRSD) | B-002F | Biosolids Monitoring at the treatment plant |

## III. INFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor influent at M-INF-F as follows:

**Table E-2. Plant Influent Monitoring**

| Parameter | Units | Sample Type | Minimum Sampling Frequency |
|---|---|---|---|
| Flow Rate [1] | MGD | C-24 | Continuous |
| Carbonaceous Biochemical Oxygen Demand (5-day @ 20 Deg. C) (CBOD) | mg/L | C-24 | 2/Week |
| Total Suspended Solids (TSS) | mg/L | C-24 | 4/Week |
| Cyanide, Total | µg/L | G | 1/Quarter |

**Footnotes to Table E-2:**

Units:

MGD = million gallons per day
mg/L = milligrams per liter
µg/L = micrograms per liter
C-24 = 24-hour Composite

(1) For influent flows, the following information shall also be reported monthly:

Daily: Daily Average Flow (MG)
Monthly: Monthly average flow (MGD)
Monthly: Maximum daily flow (MGD)
Monthly: Minimum daily flow (MGD)

## IV. EFFLUENT MONITORING REQUIREMENTS

### A. EBDA Common Outfall – Monitoring Location M-001

The Discharger shall monitor the discharge to the EBDA Common Outfall at Monitoring Location M-001 as follows:

**Table E-3. EBDA Common Outfall Effluent Monitoring, Monitoring Location M-001**

| Parameter | Units | Sample Type | Minimum Sampling Frequency |
|---|---|---|---|
| Flow Rate[1] | MGD | Continuous | Continuous |
| CBOD | mg/L | C-24 | 2/Week |
| TSS | mg/L | C-24 | 4/Week |
| Oil and Grease[2] | mg/L | G | 1/Quarter |
| pH[3] | s.u. | G | 2/Week |
| Chlorine Residual [4] | mg/L | Cont/G | Cont or /1/H |
| Fecal Coliform | MPN/100mL | G | 2/Week |
| Enterococcus Bacteria | MPN/100mL | G | 2/Week |
| Total Ammonia, as N | mg/L | C-24 | 2/Month |
| Acute Toxicity[5] | % survival | C-24 | 1/Month |
| Chronic Toxicity[6] | TUc | C-24 | 2/Y |
| Copper, Total Recoverable | µg/L | C-24 | 1/Month |
| Cyanide, Total | µg/L | G | 1/Month |
| Dioxin-TEQ | µg/L | C-24 | 2/Year |

**Footnotes to Table E-3:**

Units:

| | | |
|---|---|---|
| MGD | = | million gallons per day |
| mg/L | = | milligrams per liter |
| s.u. | = | standard units |
| MPN/100 mL | = | Most probable number/100 mL |
| µg/L | = | micrograms per liter |
| C-24 | = | 24-hour composite |
| G | = | Grab |

(1) For effluent flows, the following information shall also be reported monthly:

Daily: Daily Average Flow (MG)
Monthly: Monthly average flow (MGD)
Monthly: Maximum daily flow (MGD)
Monthly: Minimum daily flow (MGD)

(2) Each oil and grease sample shall be conducted in accordance with Standard Methods 21st Edition.

(3) If pH is monitored continuously, the minimum and maximum pH values for each day shall be reported in monthly self-monitoring reports.

(4) Effluent chlorine concentrations shall be monitored continuously. Chlorine residual concentrations shall be monitored and reported for sampling points both before and after dechlorination. 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 Discharger may elect to use a continuous on-line monitoring system(s) for measuring flow, chlorine residual and sodium bisulfite (or other dechlorinating chemical) dosage (including a safety factor) and concentration to prove that chlorine residual exceedances are false positives. If convincing evidence is provided, Regional Water Board staff may conclude that these false positive chlorine residual exceedances are not violations of this permit limitation.

Alternatively, 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 the October 19, 2004, Regional Water Board letter re: *Chlorine Compliance Strategy for Dischargers Using Continuous Monitoring Devices.*

(5) Acute bioassay test shall be performed in accordance with section V.A of this MRP.

(6) Critical Life Stage Toxicity Test shall be performed and reported in accordance with the Chronic Toxicity Requirements specified in section V.B of this MRP.

## B. DSRSD – Monitoring Locations M-002F1 and M-002F2

The Discharger shall monitor effluent as follows:

### Table E-4. Plant Effluent Monitoring M-002F1 and M-002F2

| Parameter | Units | Sample Type | Minimum Sampling Frequency |
|---|---|---|---|
| The following parameters shall be monitored at M-002F1 | | | |
| Flow Rate(1) | MGD | Continuous | 1/Day |
| CBOD(2) | mg/L | C-24 | 2/Week |
| TSS(2) | mg/L | C-24 | 4/Week |
| The following parameters shall be monitored at M-002F2 | | | |

| Parameter | Units | Sample Type | Minimum Sampling Frequency |
|---|---|---|---|
| Flow Rate(1) | MGD | Continuous | 1/Day |
| pH(3) | s.u. | G | 2/Week |

**Footnotes to Table E-4:**

Units:

MGD = million gallons per day
mg/L = milligrams per liter
s.u. = standard units
C-24 = 24-hour composite
G = Grab

(1) For effluent flows, the following information shall also be reported monthly:
Daily: Daily Average Flow (MG)
Monthly: Monthly average flow (MGD)
Monthly: Maximum daily flow (MGD)
Monthly: Minimum daily flow (MGD)

(2) The percent removal for CBOD and TSS shall be reported for each calendar month.

(3) If pH is monitored continuously, the minimum and maximum pH values for each day shall be reported in monthly self-monitoring reports.

## V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

### A. Whole Effluent Acute Toxicity – Monitoring Location M-001

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

2. Test organisms shall be rainbow trout (*Oncorhynchus mykiss*).

3. All bioassays shall be performed using the most sensitive species based on the most recent screening test results and in accordance with the most up-to-date protocols in 40 CFR 136, currently in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms,* 5th Edition. The Discharger is authorized to adjust the effluent pH in order to suppress the level of un-ionized (free) ammonia.

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

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

6. The bioassay test shall be restarted as soon as practical with new fish and shall continue back to back to demonstrate compliance under the following circumstances:

   a. The fish survival rate in effluent is less than 70 percent,

b. The control fish survival rate is less than 90 percent, or

c. The Discharger is in violation of acute toxicity effluent limitations.

**B. Whole Effluent Chronic Toxicity – Monitoring Location M-001**

1. Chronic Toxicity Monitoring Requirements

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

b. *Test Species*. The test species shall be *Pimephales promelas*.

c. *Methodology.* Sample collection, handling, and preservation shall be in accordance with USEPA protocols. In addition, bioassays shall be conducted in compliance with the most recently promulgated test methods, as shown in Appendix E-1 and *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to 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 the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).

d. *Dilution Series*. The Discharger shall conduct tests at 50%, 25%, 10%, 5%, and 2.5%. The "%" represents percent effluent as discharged. The Discharger may use the biological buffer MOPS (3-(N-Morpholino) propanesulfonic Acid) to control pH drift and ammonia toxicity caused by increasing pH during the test.

e. *Definition of $TU_c$.* Chronic toxicity is measured in terms of $TU_c$. $TU_c = 100/NOEL$. The No Observable Effect Level (NOEL) shall equal to the $IC_{25}$ or $EC_{25}$ (see Attachment E, Appendix E-1). If the $IC_{25}$ or $EC_{25}$ cannot be statistically determined, the NOEL shall equal to the No Observable Effect Concentration (NOEC) derived using hypothesis testing. The NOEC is the maximum percent effluent concentration that causes no observable effect on test organisms based on a critical life stage toxicity test.

f. *Condition for Accelerated Monitoring.* The Discharger shall accelerate monitoring to monthly when either of the following conditions are exceeded:

(1) Three sample median value of 10 TUc; or

(2) Single sample maximum value of 20 TUc or greater

2. Chronic Toxicity Reporting Requirements

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

(1) Sample dates

(2) Test initiation date

(3) Test species

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

(5) NOEC values in percent effluent

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

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

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

(9) NOEC and LOEC values for reference toxicant tests

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

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

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

3. Chronic Toxicity Reduction Evaluation (TRE)

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

b. *Specific TRE Work Plan.* Within 30 days of exceeding either trigger for accelerated monitoring, the Discharger shall submit a specific TRE work plan to the Regional Water Board, which shall be the generic work plan revised as appropriate for the toxicity event after consideration of available discharge data.

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

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

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

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

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

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

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

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

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

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

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

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

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

## VI. RECEIVING WATER MONITORING REQUIREMENTS

The Discharger shall continue to participate in the Regional Monitoring Program (RMP), which involves collection of data on pollutants and toxicity in water, sediment, and biota of the San Francisco Bay. Receiving water monitoring is not required under this Order so long as the Discharger adequately supports the Regional Monitoring Program.

## VII. PRETREATMENT AND BIOSOLIDS REQUIREMENTS

The Discharger shall comply with the pretreatment requirements specified in Table E-5 for both influent (M-INF-F), effluent (at Monitoring Locations M-001, M-002F2), and biosolids (B-002F). The Discharger shall report summaries of analytical results in annual and semi-annual pretreatment reports in accordance with Attachment H. At its option, the Discharger may also report biosolids analytical results in its eSMR by manual entry, by EDF/CDF, or as an attached file.

**Table E-5. Pretreatment and Biosolids Monitoring Requirements**

| Constituents | Sample Locations and Frequencies[1] | | | | Sample Type | |
|---|---|---|---|---|---|---|
| | Influent M-INF-F | Effluent M-001 | Effluent M-002F2 | Biosolids B-002F | M-INF-F, M-001, & M-002F2[2] | Biosolids |
| Priority Pollutants except dioxin-TEQ and those listed below | 2/Year | 2/Year | 2/Year | 2/Year | Grab[2a] | Grabs[2b] |
| Metals[3] | 1/Month | 1/Month | 1/Month | 2/Year | 24-hour composite[2c] | Grabs[2b] |
| Mercury | 1/Month | 1/Month | 1/Month | 2/Year | Grab or 24-hour composite[2c],[2d] | Grabs[2b] |
| Cyanide | 1/Month | 1/Month | 1/Month | 2/Year | Grab[2a] | Grabs[2b] |

(1) The Discharger may elect to use the influent, and effluent monitoring conducted in accordance with Tables E-2, E-3, and E-4 and VI Provision C.2 to satisfy these pretreatment requirements.

(2) Sample types:

a. Grab samples for priority pollutants, mercury, and cyanide shall be collected during peak flows.

b. The biosolids sample shall be a composite of the biosolids to be disposed. Biosolids collection and monitoring shall comply with the requirements specified in Attachment H, Appendix H-C. The Discharger shall also comply with the biosolids monitoring requirements of 40 CFR 503.

c. If an automatic compositor is used, the Discharger shall obtain 24-hour composite samples through flow-proportioned composite sampling. Alternatively, 24-hour composite samples may consist of discrete grab samples combined (volumetrically flow-weighted) prior to analysis or mathematically flow-weighted.

d. The Discharger may use automatic compositors for mercury if either (1) the compositing equipment (hoses and containers) comply with ultraclean specifications to the greatest extent practicable, or (2) appropriate equipment blank samples demonstrate that the compositing equipment has not contaminated the sample.

(3) The metals are arsenic, cadmium, copper, lead, nickel, silver, zinc, selenium, and hexavalent chromium. The Discharger may elect to report total chromium instead of hexavalent chromium. If the Discharger chooses to sample for hexavalent chromium instead of total chromium, hexavalent chromium shall be a grab sample because it is chemically unstable.

## VIII. REPORTING REQUIREMENTS

### A. General Monitoring and Reporting Requirements

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

### B. Self-Monitoring Reports (SMRs)

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

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

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

   a. ***Annual SMR —*** Annual SMRs shall be due February 1 each year, covering the previous calendar year. The annual SMR shall contain the items described in section V.C.1.f of the Regional Standard Provisions (Attachment G), and those specified in the Provisions section of this Order.

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

**Table E-6. SMR Reporting for CIWQS**

| Parameter | Method of Reporting | |
|---|---|---|
| | **EDF/CDF data upload or manual entry** | **Attached File** |
| All parameters identified in influent, effluent, and receiving water monitoring tables (except Dissolved Oxygen and Temperature) | Required for All Results | |
| Dissolved Oxygen | Required for Monthly Maximum and Minimum Results Only (1) | Discharger may use this method for all results or keep records |
| Cyanide<br>Arsenic<br>Cadmium<br>Chromium<br>Copper<br>Lead<br>Mercury<br>Nickel<br>Selenium<br>Silver<br>Zinc<br>Dioxins and Furans (by U.S. EPA Method 1613) | Required for All Results (2) | |
| Antimony<br>Beryllium<br>Thallium<br>Pollutants by U.S. EPA Methods 601, 602, 608, 610, 614, 624, and 625 | Not Required (unless identified in influent, effluent, or receiving water monitoring tables), But Encouraged (1) | Discharger may use this method and submit results with application for permit reissuance, unless data submitted by CDF/EDF upload |
| Analytical Method | Not Required (Discharger may select "data unavailable") (1) | |

| Parameter | Method of Reporting | |
|---|---|---|
| | EDF/CDF data upload or manual entry | Attached File |
| Collection Time<br>Analysis Time | Not Required<br>(Discharger may select "0:00") (1) | |

Footnotes for Table E-6:

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

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

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

**Table E-7. Monitoring Periods and Reporting Schedule**

| Sampling Frequency | Monitoring Period Begins On… | Monitoring Period |
|---|---|---|
| Continuous | Day after permit effective date | All |
| 1/Day | Day after permit effective date | Midnight through 11:59 PM or any 24-hour period that reasonably represents a calendar day for purposes of sampling |
| 1/Week | Sunday following permit effective date or on permit effective date if on a Sunday | Sunday through Saturday |
| 1/Month | First day of calendar month following permit effective date or on permit effective date if that date is first day of the month | 1st day of calendar month through last day of calendar month |
| 1/Quarter | Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date | January 1 through March 31<br>April 1 through June 30<br>July 1 through September 30<br>October 1 through December 31 |
| 2/Year | Closest of May 1 or November 1 following (or on) permit effective date | Once during November 1 through April 30<br>Once during May 1 through October 31 |
| 1/Year | January 1 following (or on) permit effective date | January 1 through December 31 |
| Per Discharge Event | Anytime during the discharge event or as soon as possible after aware of the event | At a time when sampling can characterize the discharge event |

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

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

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

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

   For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± 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 is to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

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

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

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

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

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

## C. Discharge Monitoring Reports

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

| Standard Mail | FedEx/UPS/Other Private Carriers |
|---|---|
| State Water Resources Control Board<br>Division of Water Quality<br>c/o DMR Processing Center<br>PO Box 100<br>Sacramento, CA 95812-1000 | State Water Resources Control Board<br>Division of Water Quality<br>c/o DMR Processing Center<br>1001 I Street, 15th Floor<br>Sacramento, CA 95814 |

2. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated will not be accepted unless they follow the exact same format of EPA Form 3320-1.

## D. Modifications to Attachment G

**1. V.C.1.f. and V.C.1.g. are revised as follows, and V.C.1.h. (Reporting data in electronic format) is deleted.**

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 (This summary table is not required if the Discharger has submitted the year's monitoring results to CIWQS in electronic reporting format by EDF/CDF upload or manual entry);

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 (This item is not required if the Discharger has submitted the year's monitoring results to CIWQS in electronic reporting format by EDF/CDF upload or manual entry);

4) List of approved analyses, including the following:

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

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

(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 addressed as follows, unless the Discharger submits SMRs electronically to CIWQS:

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 – Deleted

**2. V.E.2.a. and V.E.2.c. are revised as follows, and subsection s V.E.2.b. (24-hour Certification) and V.E.2.d. (Communication Protocol) are deleted:**

**2. Unauthorized Discharges from Municipal Wastewater Treatment Plants**[1]

[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.

The following requirements apply to municipal wastewater treatment plants that experience an unauthorized discharge at their treatment facilities and supercede requirements imposed on the Discharger by the Executive Officer by letter of May 1, 2008.

a. Two (2)-Hour Notification

For any unauthorized discharges that enter 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 California Emergency Management Agency (CalEMA currently 800-852-7550), the local health officers or directors of environmental health with jurisdiction over the affected water bodies, and the Regional Water Board. Timely notification by the Discharger to CalEMA also satisfies notification to the Regional Water. Notification shall include the following:

2) Incident description and cause;

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

4) Date and time the unauthorized discharge started;

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

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

7) Identity of the person reporting the unauthorized discharge.

b. 24-hour Certification – Deleted

c. 5-day Written Report

Within five business days, the Discharger shall submit a written report 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 changes 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 changes of future unauthorized discharges; and

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

c. Communication Protocol – Deleted

# APPENDIX E-1

## CHRONIC TOXICITY
## DEFINITION OF TERMS AND SCREENING PHASE REQUIREMENTS

### I. Definition of Terms

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

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

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

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

### II. Chronic Toxicity Screening Phase Requirements

A. The Discharger shall perform screening phase monitoring:

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

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

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

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

2. Two stages:

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

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

3. Appropriate controls.

4. Concurrent reference toxicant tests.

5. Dilution series 100%, 50%, 25%, 10%, 5%, 0%, where "%" is percent effluent as discharged, or otherwise approved by the Executive Officer.

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

# APPENDIX E-2

## SUMMARY OF TOXICITY TEST SPECIES REQUIREMENTS

### Critical Life Stage Toxicity Tests for Estuarine Waters

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

**Toxicity Test References:**

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

### Critical Life Stage Toxicity Tests for Fresh Waters

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

**Toxicity Test Reference:**

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

**Toxicity Test Requirements for Stage One Screening Phase**

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

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

# ATTACHMENT F - FACT SHEET

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# ATTACHMENT F – FACT SHEET

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

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

## I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

**Table F-1. Facility Information**

| | |
|---|---|
| **WDID** | 2 019033001 |
| **Discharger** | Dublin San Ramon Services District (DSRSD)<br>Livermore-Amador Valley Water Management Agency (LAVWMA)<br>East Bay Dischargers Authority (EBDA) |
| **Name of Facility** | Dublin San Ramon Services District Wastewater Treatment Plant and its Collection System |
| **Facility Address** | 7399 Johnson Drive<br>Pleasanton, CA 94588<br>Alameda County |
| **Facility Contact, Title, Phone** | Daniel Gallagher, Operations Manager, (925) 846-4565 |
| **Authorized Person to Sign and Submit Reports** | Daniel Gallagher, Operations Manager, (925) 846-4565 |
| **Mailing Address** | Dublin San Ramon Services District<br>7051 Dublin Blvd.<br>Dublin, CA 94568 |
| **Billing Address** | Same as Mailing |
| **Type of Facility** | Publicly Owned Treatment Works (POTW) |
| **Major or Minor Facility** | Major |
| **Threat to Water Quality** | 1 |
| **Complexity** | A |
| **Pretreatment Program** | Yes (DSRSD) |
| **Reclamation Requirements** | Regulated under separate Waste Discharge Requirements (WDRs) |
| **Facility Permitted Flow** | 20.2 MGD (current average dry weather design capacity plus Zone 7 reject)<br>23.9 MGD (proposed average dry weather design capacity plus Zone 7 reject) |
| **Facility Design Flow** | 20.2 MGD (current average dry weather design capacity plus Zone 7 reject)<br>23.9 MGD (proposed average dry weather design capacity plus Zone 7 reject)<br>60 MGD (current wet weather design capacity)<br>74 MGD (proposed wet weather design capacity) |
| **Watershed** | San Francisco Bay |
| **Receiving Water** | Lower San Francisco Bay |
| **Receiving Water Type** | Enclosed Bay |

**A.** The Dublin San Ramon Services District is the owner and operator of the Dublin San Ramon Services Wastewater Treatment Plant (hereinafter Facility).

**B.** The Facility discharges wastewater through the EBDA Joint Outfall to Lower San Francisco Bay, a water of the United States, and is currently regulated by Order No. R2-2006-0054, which was adopted on August 9, 2006, and expired on September 30, 2011. The terms of the previous permit automatically continued in effect until this Order becomes effective. The discharge is also currently regulated under Regional Water Board Order No. R2-2007-0077 (NPDES Permit CA0038849) as amended by Order No. R2-2011-0012, which supersedes all requirements on mercury and PCBs from wastewater discharges in the region. This Order does not affect the mercury and PCBs permit

**C.** DSRSD filed a Report of Waste Discharge and submitted an application for reissuance of its waste discharge requirements (WDRs) and NPDES permits on March 16, 2011.

## II. FACILITY DESCRIPTION

### A. Description of Wastewater and Biosolids Treatment

1. **DSRSD Wastewater Treatment Plant.** DSRSD owns and operates the wastewater treatment plant, which serves approximately 131,900 people from the City of Dublin, City of Pleasanton, and City of San Ramon. The City of Pleasanton owns and operates its own sewage collection and pumping system but delivers its wastewater to DSRSD's Wastewater Treatment Plant for treatment. The current permitted average dry weather flow design capacity is 17 MGD from the DSRSD Wastewater Treatment Plant plus 3.2 MGD of Zone 7 groundwater reverse osmosis reject flow as described below. The average dry weather flow design capacity may be increased to 20.7 MGD, plus 3.2 MGD of Zone 7 reject flow provided the Discharger completes studies demonstrating reliability and compliance with applicable standards.

   DSRSD provides secondary treatment consisting of screening, grit removal, primary clarification, activated sludge, secondary clarification, and disinfection using sodium hypochlorite. The Facility also has four concrete lined holding basins with a total capacity of 22 million gallons with 2 feet of freeboard for flow equalization. Sludge is thickened by dissolved air floatation, anaerobically digested, conditioned in onsite facultative sludge lagoons for approximately four years, and then injected into the soil at an onsite DSRSD-owned disposal area. The DSRSD transports the treated effluent together with Zone 7 reject water to the LAVWMA export pump station where it combines with Livermore's treated effluent and is pumped via LAVWMA's pipeline to the EBDA Common Outfall.

2. **Zone 7 Demineralization and Brine Disposal Project.** Alameda County Flood Control and Water Conservation District (Zone 7 Water Agency, or Zone 7) serves as the overall water quality management agency for the Alameda Creek watershed north of the Niles area of Fremont and has the primary responsibility for managing the Livermore-Amador Valley's surface and groundwater resources. Zone 7 developed a Salt Management Plan (plan) in 1998 to address the issues of salt accumulation and to identify potential salt management strategies to protect groundwater quality. The plan was developed in part in accordance with Regional Water Board Master Recycling Permit Order No. 93-159, as a condition for allowing increased use of recycled water without adversely impacting the main groundwater basin. The plan was approved by the Regional Water Board Executive Officer on September 24, 2004. A major

component of the approved plan was construction of groundwater demineralization facilities to offset a projected 6,000 tons/year of net salt loading to the main basin and accommodate increased use of recycled water.

In order to address salt loading and delivered water hardness goals, Zone 7 removes salts from approximately 15 MGD of groundwater through reverse osmosis. The reverse osmosis facilities produce a maximum of up to 3.2 MGD of reverse osmosis reject water that is discharged to the DSRSD Export Pipeline. The reverse osmosis reject water combines with the DSRSD effluent and is transported through LAVWMA and EBDA facilities to become part of the combined flow discharged to San Francisco Bay.

The reverse osmosis reject water is introduced into DSRSD's wastewater treatment works through a dedicated sewer prior to the final DSRSD monitoring station, but following DSRSD's treatment and disinfection of municipal waste and diversion for reclamation. Though it is more common for sources in the pretreatment program to be introduced upstream of treatment, DSRSD's plan is consistent with the federal Part 403 pretreatment regulations. Total Dissolved Solids (TDS) in the RO reject have the potential to negatively affect the treatment of municipal waste and opportunities of treated wastewater for reclamation and recycling. This would compromise the purposes of the pretreatment program, which include avoiding interference with the treatment process and improving opportunities to recycle and reclaim wastewaters and biosolids, 40 CFR 403.2(a)-(c). Additionally, DSRSD's approved pretreatment ordinance contains a definition of "treatment works" that tracks the definition of the Clean Water Act section 212 (33 USC § 1292(A) and (B)) and is broader than that definition, which authorizes DSRSD to cover Zone 7's discharge under its pretreatment program. In part, "Treatment Works" as defined by DSRSD's ordinance includes "any other method or system for…disposing of municipal waste." Therefore, the RO reject will be combined with DSRSD's municipal wastewater after treatment. DSRSD will authorize relief from individual local limits (e.g., TDS), as allowed under its approved pretreatment program, to permit the discharge of Zone 7 RO reject to its system, but such relief will not compromise DSRSD's ability to comply with the requirements of its NPDES permit. DSRSD's approved pretreatment program contains adequate authority to allow it to enforce this pretreatment permit. The Regional Water Board also retains the authority under 33 USC § 1319 and 1342 to enforce the pretreatment permit.

DSRSD's acceptance of this RO reject water from Zone 7 is pursuant to agreement(s) between EBDA, LAVWMA, and Zone 7, which ensures compliance with all effluent limitations.

3. **LAVWMA.** LAVWMA is a joint powers agency created in 1974 for wastewater management planning for the service areas of the City of Livermore, the City of Pleasanton, and DSRSD. Additionally, LAVWMA receives Zone 7 reverse osmosis reject water, which is combined with treated wastewater from the DSRSD Wastewater Treatment Plant in the DSRSD Export Pipeline after DSRSD wastewater has been treated. By contractual agreement, DSRSD is responsible for operating and maintaining LAVWMA's export pump station and pipeline facilities and for performing and submitting the self-monitoring requirements for the LAVWMA facilities. DSRSD's and Livermore's treated wastewaters combine and flow to flow-equalization basins before being pumped via LAVWMA's pipeline to the EBDA system for final dechlorination and discharge to the EBDA Common Outfall. EBDA is responsible for the combined transport, dechlorination, and discharge of LAVWMA's treated wastewater by contractual agreement.

4. **JEPA.** The Joint Exercise of Power Agency (JEPA) delegates the authority and responsibility to EBDA to assure compliance with all effluent discharge requirements. It is the intent of the JEPA to allow determination of compliance with waste discharge requirements by considering EBDA as a total system, to permit the most effective operation of all EBDA and member agency treatment facilities. The JEPA, therefore, empowers EBDA to monitor each agency's discharge and the combined discharge and prescribes that the Joint Authority may, if necessary, undertake modifications to any member agency's treatment facilities to ensure compliance with effluent discharge requirements.

   Since LAVWMA and its member agencies are not signatories to the JEPA, the EBDA/LAVWMA agreement empowers EBDA to monitor discharges by LAVWMA member agencies into the EBDA system and requires LAVWMA, as a condition of continuing service, to comply with all requirements prescribed by the Regional Water Board, except residual chlorine, for which EBDA will be responsible.

5. **Common Outfall.** As used herein, "Common Outfall" means the EBDA Common Outfall; "Combined Discharge" refers to the waste stream at any point where all wastes tributary to that outfall are present; and "Individual Treatment Plant" means a treatment facility operated by a member agency of either EBDA or LAVWMA

6. **Compliance.** For purposes of this Order, compliance with technology-based effluent limitations for CBOD, CBOD percent removal, TSS, TSS percent removal and pH shall be determined at the discharge point for the DSRSD Wastewater Treatment Plant (M-002F1 and M-002F2), before comingling with treated wastewater from other facilities in the EBDA system. Compliance with all other effluent limitations shall be determined at the Common Outfall with compliance measured at Monitoring Location M-001.

   Regional Water Board enforcement actions for violations of effluent limitations for which compliance is determined at the Common Outfall will be applied to EBDA, and EBDA will be responsible for responding to enforcement actions in conjunction with its JEPA and the EBDA/LAVWMA agreement. In addition, section 20 of the EBDA JEPA provides the following legal authority:

   *"<u>Section 20. Failure to Meet Discharge Requirements</u>*

   *The Authority shall cause the combined effluent of all Agencies as well as the receiving water of the combined discharge to be monitored to determine whether or not Federal and/or State discharge requirements are being met. In addition, the Authority shall cause the effluent of each Agency to be monitored. If the combined effluent of all Agencies at the point of ultimate discharge into the receiving water fails to meet discharge requirements, the Agency or Agencies responsible for the violations shall be solely responsible for any fines levied or criminal sanctions imposed. In this regard, the Agency or Agencies responsible for the violations shall hold harmless the Authority and the other non-violating Agencies from all liability and/or damages incurred by said Authority and/or Agencies as a result of a cease and desist order or court injunction from any State or federal agency restricting construction within the jurisdictional limits of said Authority or Agency. In the event two or more Agencies are responsible for failure of the combined effluent, to meet discharge requirements as above provided, the Agencies responsible for the violation shall be jointly*

*and severally responsible for the Authority and to the other non-violating Agencies. Upon notification of such violation, the Agency or Agencies shall take prompt, corrective actions as necessary to meet said discharge requirements.*

*If any Agency fails to take such action, the Authority by unanimous vote of the Commission (excluding those members of the Commission who are representatives of the Agency or Agencies who are in violation of the discharge requirements) may elect to do either one or both of the following:*

*(a) Have undertaken at the cost and expense of the violating Agency or Agencies the operation of existing facilities or construction and operation of additional treatment facilities as necessary to meet said discharge requirements.*

*(b) Impose a prohibition of additional connections to the collection system of the Agency or Agencies in violation.*

*Nothing in this Section shall preclude one or more Agencies from providing additional levels of treatment to insure meeting waste discharge requirements for the combined effluent. In the event that one or more Agencies are obligated to provide additional levels of treatment to meet waste discharge requirements for the combined effluent, all Agencies requiring the additional levels of treatment shall participate in the costs of such treatment based on their relative contribution of waste characteristics to be treated and the costs of providing such treatment."*

## B. Storm Water

The State Water Board adopted a statewide NPDES permit for storm water discharges associated with industrial activities (NPDES General Permit CAS000001). The Discharger is not required to be covered under the General Permit because all of the storm water captured within the wastewater treatment plant storm drain systems is directed to the headworks and treated to the standards contained in the Discharger's Order.

## C. Discharge Points and Receiving Waters

Table F-2, below, identifies the locations of the discharge point and receiving water for the EBDA Common Outfall.

**Table F-2. Outfall Locations**

| Discharge Point | Effluent Description | Discharge Point Latitude | Discharge Point Longitude | Receiving Water |
|---|---|---|---|---|
| 001 | Secondary Treated Municipal Wastewater and Zone 7 reverse osmosis reject water | 37º 41' 40" N | 122º 17' 42" W | Lower San Francisco Bay |

## D. Summary of Existing Requirements and Self-Monitoring Report Data

1. **Conventional and Non-Conventional Pollutants at the EBDA Common Outfall.** Effluent limitations contained in Order No. R2-2006-0053 (EBDA Common Outfall) and representative

monitoring data from the term of that Order, collected from May 2007 to January 2011, are presented in Table F-3, below.

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

| Parameter | Monitoring Location | Units | Effluent Limitations | | | Monitoring Data (From May 2007-March 2011) | | |
|---|---|---|---|---|---|---|---|---|
| | | | Monthly Average | Weekly Average | Daily Maximum | Highest Monthly Average | Highest Weekly Average | Highest Daily Discharge |
| Carbonaceous Biochemical Oxygen Demand (5-day @ 20 Deg. C) (CBOD) | M-002F1 | mg/L | 25 | 40 | --- | 11.7 | 17.1 | --- |
| Total Suspended Solids (TSS) | M-002F1 | mg/L | 30 | 45 | --- | 20.9 | 33.2 | --- |
| pH | M-002F2 | s.u. | 6.0 – 9.0 | | | 6.9– 8.0 | | |
| Oil and Grease | M-002F1 | mg/L | 10 | --- | 20 | 3.5(J) | --- | 3.5(J) |
| Total Residual Chlorine | M-001 | mg/L | --- | --- | 0.0(1) | --- | --- | 0.0 |
| Fecal Coliform Bacteria | M-001 | MPN/100 mL | (2) | | | (3) | | |

**Footnotes to Table F-3:**

mg/L = milligrams per liter
s.u. = Standard Units
MPN/100 mL = Most probable number/100 mL

(1) Established as an instantaneous maximum effluent limitation.

(2) The treated wastewater shall meet the following limits of bacteriological quality:

(i) the 5-day geometric mean fecal coliform density shall not exceed 500 MPN/100 mL; and

(ii) the 90th percentile value shall not exceed 1,100 MPN/100 mL.

(3) The Facility (M-001) discharged treated wastewater with the following fecal coliform density:

(i) the 5-day geometric mean fecal coliform density was 196 MPN/100 mL; and

(ii) the 90th percent value was 500 MPN/100 mL.

2. **Toxic Pollutants at the EBDA Common Outfall.** Effluent limitations contained in Order Nos. R2-2006-0053 (EBDA Common Outfall), with compliance measured at the EBDA Common Outfall at Monitoring Location M-001, and representative monitoring data from the term of that Order, collected from May 2007 to January 2011, are presented in Tables F-4, below.

**Table F-4. Previous Effluent Limitations and Monitoring Data for Toxic Pollutants from Discharge Point No. 001**

| Parameter | Units | Final Limits | | Interim Limits | | Monitoring Data (From May 2006 – August 2010) |
|---|---|---|---|---|---|---|
| | | Monthly Average | Daily Maximum | Monthly Average | Daily Maximum | Highest Daily Concentration |
| Copper, Total Recoverable(1) | µg/L | 53 | 78 | --- | --- | 13 |
| Nickel, Total Recoverable | µg/L | 79 | 160 | --- | --- | 11 |
| Zinc, Total Recoverable | µg/L | --- | 580 | --- | --- | 130 |
| Cyanide(2) | µg/L | 21 | 42 | --- | 21(3) | 8.8 |
| Heptachlor | µg/L | 0.00021 | 0.00042 | 0.01 | --- | ND |

ND = Not Detected

**Footnotes to Table F-4:**

(1) Site specific objectives were established for copper on June 13, 2006. The effluent limitations for copper presented in this table superseded the original effluent limitations of 71 µg/L (AMEL) and 100 µg/L (MDEL), as described in the previous Order.

(2) Site specific objectives were established for cyanide on December 13, 2006. The effluent limitations for cyanide presented in this table superseded the original effluent limitations of 3.1 µg/L (AMEL) and 6.4 µg/L (MDEL), as described in the previous Order.

(3) Interim effluent limitations for cyanide were effective until December 13, 2006.

### D. Compliance Summary

The Discharger did not violate numeric effluent limitations during the term of the previous permit.

### E. Planned Changes

The June 2006 EBDA antidegradation analysis showed that an increase in total EBDA flow to 119.1 MGD, including increasing DSRSD's flow to 23.9 MGD, will have no discernible effect on the receiving water or adverse impacts on beneficial uses of the receiving water. DSRSD will construct and improve the necessary facilities to increase its capacity by an additional 3.7 MGD, but these capital improvements are not expected to occur within this permit term.

## III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

### A. Legal Authorities

This Order is issued pursuant to Clean Water Act (CWA) section 402 and implementing regulations adopted by the United States Environmental Protection Agency and CWC Chapter 5.5, Division 7 (commencing with section 13370). It serves as an NPDES permit for point source discharges from the Facility to surface waters. This Order also serves as WDRs pursuant to CWC Article 4, Chapter 4, Division 7 (commencing with section 13260).

### B. California Environmental Quality Act (CEQA)

Under CWC section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA.

### C. State and Federal Regulations, Policies, and Plans

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

   The Basin Plan implements State Water Board Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially

suitable for municipal or domestic supply MUN. Because of marine influence in Lower San Francisco Bay, total dissolved solids levels in Lower San Francisco Bay exceed 3,000 milligrams per liter (mg/L) and thereby meet an exception to State Water Board Resolution No. 88-63. The MUN designation is, therefore, not applicable to Lower San Francisco Bay.

Table F-5, below, lists the beneficial uses of Lower San Francisco Bay as specifically identified in the Basin Plan.

**Table F-5. Basin Plan Beneficial Uses of Lower San Francisco Bay**

| Discharge Point | Receiving Water Name | Beneficial Uses |
|---|---|---|
| 001 | Lower San Francisco Bay | Existing<br>Industrial Service Supply (IND)<br>Ocean Commercial and Sport Fishing (COMM)<br>Shellfish Harvesting (SHELL)<br>Estuarine Habitat (EST)<br>Fish Migration (MIGR)<br>Preservation of Rare and Endangered Species (RARE)<br>Wildlife Habitat (WILD)<br>Water Contact Recreation (REC1)<br>Non-contact water Recreation (REC2)<br>Navigation (NAV) |

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

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

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

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

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

   The permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution 68-16. This Order continues the status quo with respect to the level of discharge authorized in the previous permit and thus there will be no change in water quality beyond the level that was authorized in the last permit. The final limitations in this Order comply with antidegradation requirements and meet the requirements of the SIP because these limits hold the Discharger to performance levels that will neither cause nor contribute to water quality impairment, nor further water quality degradation.

   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 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 limitations and requirements of this Order are consistent with anti-backsliding requirements of the CWA and NPDES Regulations.

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

On November 12, 2010, the USEPA approved a revised list of impaired water bodies prepared by the State [the 303(d) list], pursuant to CWA section 303(d), which requires identification of water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. The Lower San Francisco Bay appears on the list due to chlordane, DDT, dieldrin, dioxin compounds, furan compounds, invasive species, mercury, polychlorinated biphenyls (PCBs), dioxin-like PCBs, and trash.

The SIP requires final effluent limitations for all 303(d)-listed pollutants to be consistent with total maximum daily loads (TMDLs) and associated waste load allocations. The Regional Water Board plans to adopt TMDLs for pollutants on the 303(d) list. On February 12, 2008, USEPA

approved a TMDL for mercury in San Francisco Bay. On March 29, 2010, USEPA approved a TMDL for PCBs in San Francisco Bay. Regional Water Board Order No. R2-2007-0077, as amended, implements these TMDLs.

## IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into waters of the United States. Control of pollutants is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the NPDES regulations: 40 CFR 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 122.44(d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality objectives (WQOs) to protect receiving water beneficial uses.

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

### A. Discharge Prohibitions

1. **Discharge Prohibition III.A** (Discharge of treated wastewater at a location or in a manner different from that described in this Order is prohibited): This prohibition is similar to the previous permit and is based on 40 CFR 122.21(a), duty to apply, and CWC Section 13260, which requires filing a Report of Waste Discharge before discharges can occur. Discharges not described in the Report of Waste Discharge, and subsequently in this Order, are prohibited.

2. **Discharge Prohibition III.B** (Minimum initial dilution of 79:1): This Order allows a dilution credit of 79:1 to calculate WQBELs for ammonia, based on information of dilution achieved by the Discharger's current outfall. Thus, this prohibition is necessary to ensure that the assumptions used to derive the dilution credit remain substantially the same so that the limitations are protective of water quality.

3. **Discharge Prohibition III.C** (No bypass or overflow of untreated or partially treated wastewaters): This prohibition is based on 40 CFR 122.41(m).

4. **Discharge Prohibition III.D** (ADWF not to exceed dry weather discharge capacity): This prohibition is based on the historic and tested reliable treatment capacity of the treatment plant. Exceedance of the average dry weather flow design capacity, as described in Table F-1 of this Fact Sheet, may result in lowering the reliability of achieving compliance with water quality requirements.

   The Discharger submitted an antidegradation study for plant improvements which affirms that an increase in the effluent discharge flow rate of 20.7 MGD, plus 3.2 MGD of Zone 7 reject water, for a total of 23.9 MGD, conforms to federal and state Antidegradation Policy requirements. If the Discharger satisfactorily completes planned new treatment plant facilities and stress testing to show that the newly constructed facilities are operating according to design, the Executive Officer may increase the average dry weather flow limit

of 17.0 MGD from the Facility's treatment units to 20.7 MGD. This increase in permitted design capacity is not expected to occur within the term of this permit.

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

## B. Technology-Based Effluent Limitations

### 1. Scope and Authority

CWA Section 301(b) requires USEPA to develop secondary treatment standards for publicly-owned treatment works at a level of effluent quality attainable through applying secondary or equivalent treatment. USEPA promulgated such technology-based effluent guidelines at 40 CFR 133. These secondary treatment regulations include the following minimum requirements. In addition, the 30-day average percent removal for CBOD and TSS, by concentration, is not to be less than 85 percent.

**Table F-6. Secondary Treatment Requirements**

| Parameter | Units | 30-Day Average | 7-Day Average |
|---|---|---|---|
| CBOD[(1)] | mg/L | 25 | 40 |
| TSS | mg/L | 30 | 45 |
| pH | Standard units | 6.0 – 9.0 | |

**Footnotes to Table F-6:**

(1) The CBOD requirements in this table may be substituted in lieu of the requirements for BOD. This is consistent with secondary treatment standards in 40 CFR 133.

### 2. Applicable Technology-Based Effluent Limitations at DSRSD

This Order is retaining technology-based limits for CBOD, TSS, and pH, applicable at monitoring locations M-002F1 and M-002F2, from the previous permit (Order No. R2-2006-0054). Compliance with technology-based limit for oil and grease will be at the combined discharge at Monitoring Locations M-001 to avoid wasteful compliance monitoring and in recognition of the fact that a properly operated secondary treatment plant that is in compliance with its solids limits is unlikely to exceed the technology-based oil and grease limits.

a. **CBOD and TSS.** Secondary treatment standards from 40 CFR 133 for CBOD and TSS, including the 85 percent removal requirement, are technologically feasible for advanced wastewater treatment technologies. 40 CFR 122.45(d) specifies that discharge limitations for POTWs are to be stated as average weekly limitations and average monthly limitations, unless impracticable. CBOD and TSS effluent limitations are representative of the level of treatment DSRSD can meet. Therefore, the average monthly percent

removal of CBOD and TSS shall not be less than 85 percent. These technology-based limitations are based on the previous permit and comply with anti-backsliding and antidegradation requirements, as discussed in section IV.D of this Fact Sheet.

b. **pH.** The effluent limitations for pH are based on Basin Plan Table 4-2 for deep water dischargers. These technology-based limitations are consistent with the previous permit and comply with anti-backsliding and antidegradation requirements, as discussed in section IV.D of this Fact Sheet.

### 3. Applicable Technology-Based Effluent Limitations at Common Outfall

After commingling, EBDA transports treated wastewater from its member agencies to a dechlorination facility and then to its deepwater outfall in Lower San Francisco Bay. Therefore, the technology-based effluent limitations for chlorine residual are applied at Discharge Point No. 001, with compliance measured at Monitoring Location M-001.

a. **Total Residual Chlorine.** Section 4.5.5.1 and Table 4-2 of the Basin Plan specify effluent limitations for conventional pollutants, including residual chlorine. The Discharger shall not exceed an instantaneous maximum effluent limitation of 0.0 mg/L at the EBDA Common Outfall, Discharge Point No. 001, with compliance measured at M-001. This requirement is defined as below the limit of detection in standard test methods defined in the latest edition of *Standard Methods for the Examination of Water and Wastewater*. This technology-based limitation is consistent with the previous permit and complies with anti-backsliding and antidegradation requirements, as discussed in section IV.D of this Fact Sheet.

b. **Oil and Grease.** The effluent limitations established for oil and grease are required by Basin Plan Section 4.5.5.1 and Table 4-2 for all discharges to inland surface waters and enclosed bays and estuaries of the San Francisco Bay Region.

## C. Water Quality-Based Effluent Limitations

While technology based limits are to ensure that each treatment plant operator implements best practicable treatment and control at its water pollution control plant, WQBELs are necessary to ensure that discharges do not adversely affect beneficial uses. Therefore, consistent with the previous permit, it is appropriate to continue to apply WQBELs at the combined discharge from the EBDA system. This will ensure that the discharge does not cause or contribute to exceedances of WQOs that protect beneficial uses. Both the beneficial uses and the WQOs have been approved pursuant to federal law. USEPA also approved the SIP procedures for calculating individual WQBELs prior to May 1, 2001. USEPA approved the Basin Plan provisions for calculating WQBELs on May 29, 2000. Most beneficial uses and Basin Plan WQOs were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any WQOs and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the [Clean Water] Act" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than those required to implement water quality standards for CWA purposes.

1. **Scope and Authority**

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

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

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

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

2. **Applicable Beneficial Uses and Water Quality Objectives**

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

   **a. Basin Plan.** The Basin Plan specifies numeric WQOs for 10 priority toxic pollutants, as well as narrative WQOs for toxicity and bioaccumulation in order to protect beneficial uses. The pollutants for which the Basin Plan specifies numeric objectives are arsenic, cadmium, chromium (VI), copper in marine and freshwater, lead, mercury, nickel, silver, zinc, and cyanide. The narrative toxicity objective states, in part, "All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms." The bioaccumulation objective states, in part, "Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered." Effluent limitations and provisions contained in this Order are based on available information designed to implement these WQOs.

   **b. CTR.** The CTR specifies numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 57 priority toxic pollutants. These criteria apply to all inland surface waters and enclosed bays and estuaries of the San Francisco Bay Region, although Basin Plan Tables 3-3 and 3-4 include numeric WQOs for certain of these

priority toxic pollutants that supersede the CTR criteria. Human health criteria are further identified as for consumption of "water and organisms" and "organisms only." Because the receiving waters are not designated for the MUN beneficial use, the CTR criteria applicable to "organisms only" are used for this RPA.

c. **NTR.** The NTR establishes numeric aquatic life criteria for selenium, numeric aquatic life and human health criteria for cyanide, and numeric human health criteria for 34 other toxic organic pollutants for waters of San Francisco Bay upstream to, and including, Suisun Bay and the Sacramento River-San Joaquin River Delta. This includes the receiving water for this Discharger.

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

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

   The receiving water for Discharge Point No. 001, Lower San Francisco Bay, is an estuarine environment based on salinity data generated through the Regional Monitoring Program (RMP) at the Yerba Buena Island (BC10) sampling station between 1993 and 2008. In that period, the receiving water's minimum salinity was 12 ppt, its maximum salinity was 32 ppt, and its average salinity was 26 ppt. Because the salinity was greater than 10 ppt in 100 percent of receiving water samples, the saltwater objectives from the Basin Plan, NTR, and CTR apply to this discharge and were used for the reasonable potential analysis.

f. **Site-Specific Metal Translators.** 40 CFR 122.45(c) requires effluent limitations for metals to be expressed as total recoverable metal. Since WQOs for metals are typically expressed in the dissolved form, factors or translators must be used to convert metals concentrations from dissolved to total recoverable and vice versa. In the CTR, USEPA establishes default translators that may be used in NPDES permits. However, site-specific conditions, such as water temperature, pH, suspended solids, and organic carbon, greatly impact the form of metal (dissolved, filterable, or otherwise) present in the water and therefore available to cause toxicity. In general, the dissolved form is most available and

most toxic to aquatic life than filterable forms. Site-specific translators can be developed to account for site-specific conditions, thereby preventing exceedingly stringent or under protective WQOs.

For deep water discharges to San Francisco Bay, a site-specific translator study for copper and nickel was conducted by the Clean Area Partnership (*North of Dumbarton Bridge Copper and Nickel Development and Selection of Final Translators* (2005). In addition to the copper and nickel translators, site-specific translators for zinc were established in the previous permit and were calculated using the RMP data collected during 1993 through 2003 at the Alameda RMP Station (BB70) and two other Central Bay stations under the randomized sampling program, near the Discharger's outfall. In determining the need for and calculating WQBELs for all other metals, the Regional Water Board staff used default translators established by USEPA in the CTR at 40 CFR 131.38(b)(2), Table 2.

This Order retains the site-specific translators from the previous permit for zinc and uses site-specific metal translators for copper and nickel from Basin Plan Table 7.2-2, as shown in Table F-7, below.

**Table F-7. Site-Specific Metal Translators**

| Constituent | AMEL Translator | MDEL Translator |
|---|---|---|
| Copper | 0.73 | 0.87 |
| Nickel | 0.65 | 0.85 |
| Zinc | 0.30 | 0.46 |

### 3. Determining the Need for WQBELs

Assessing whether a pollutant has Reasonable Potential is the fundamental step in determining whether or not a WQBEL is required. Using the methods prescribed in SIP Section 1.3, the effluent data from Discharge Point No. 001 at Monitoring Location M-001 were analyzed to determine if the discharge demonstrates Reasonable Potential. The Reasonable Potential Analysis compared the effluent data with numeric and narrative WQOs in the Basin Plan, NTR, and CTR.

**a. Reasonable Potential Analysis (RPA).** The RPA identifies the observed maximum effluent concentration (MEC) in the effluent for each pollutant based on effluent concentration data. There are three triggers in determining Reasonable Potential according to SIP Section 1.3.

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

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

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

**b. Effluent Data**. The Discharger monitors for priority pollutants using analytical methods that provide the best detection limits reasonably feasible. The effluent data and the nature of the discharge were analyzed to determine if the discharge has Reasonable Potential. The RPA was based on the effluent monitoring data collected from May 2007 through January 2011 at Monitoring Location M-001.

**c. Ambient Background Data.** Ambient background values are used in the RPA and in the calculation of effluent limitations. For the RPA, ambient background concentrations are the observed maximum detected water column concentrations. The SIP states that for calculating WQBELs, ambient background concentrations are either the observed maximum ambient water column concentrations or, for objectives intended to protect human health from carcinogenic effects, the arithmetic mean of observed ambient water concentrations. The RMP station at Yerba Buena Island, located in the Central Bay, has been monitored for most of the inorganic (CTR constituent numbers 1–15) and some of the organic (CTR constituent numbers 16–126) toxic pollutants, and these data were used as background data in performing this RPA.

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

**d. Reasonable Potential Determination.** The MECs, most stringent applicable WQOs, and background concentrations used in the RPA are presented in Table F-8 below, along with the RPA result (yes or no) for each pollutant analyzed. Reasonable Potential was not determined for all pollutants because WQOs do not exist for all pollutants and monitoring data was not available for others. The RPA determined that copper, cyanide, dioxin-TEQ, and ammonia demonstrate Reasonable Potential.

**Table F-8. Summary of RPA Results**

| CTR # | Priority Pollutants | MEC or Minimum DL (1),(2) (µg/L) | Governing WQO/WQC (µg/L) | Maximum Background or Minimum DL (1),(2) (µg/L) | RPA Results (3) |
|---|---|---|---|---|---|
| 1 | Antimony | J 0.49 | 4,300 | 1.8 | No |
| 2 | Arsenic | 1.90 | 36 | 2.5 | No |
| 3 | Beryllium | <0.03 | No Criteria | 0.22 | Ud |
| 4 | Cadmium | J 0.094 | 9.36 | 0.13 | No |

| CTR # | Priority Pollutants | MEC or Minimum DL (1),(2) (µg/L) | Governing WQO/WQC (µg/L) | Maximum Background or Minimum DL (1),(2) (µg/L) | RPA Results (3) |
|---|---|---|---|---|---|
| 5a | Chromium (III) | 3.8 | No Criteria | Not Available | Ud |
| 5b | Chromium (VI) | 8.2 | 50 | 4.4 | No |
| **6** | **Copper** | **13** | **8.2** | **2.6** | **Yes** |
| 7 | Lead | 0.78 | 8.5 | 0.8 | No |
| 8 | Mercury (303d listed) (4) | --- | --- | --- | --- |
| 9 | Nickel | 11 | 12.6 | 3.7 | No |
| 10 | Selenium | 1.2 | 5.0 | 0.39 | No |
| 11 | Silver | 0.62 | 2.2 | 0.052 | No |
| 12 | Thallium | <0.20 | 6.3 | 0.21 | No |
| 13 | Zinc | 130 | 196 | 5.1 | No |
| **14** | **Cyanide** | **8.8** | **2.9** | **<0.4** | **Yes** |
| 15 | Asbestos | Not Available | No Criteria | Not Available | Ud |
| 16 | 2,3,7,8-TCDD (303d listed) | $<2.1E^{-10}$ | $1.4E10^{-8}$ | $8.2E^{-09}$ | No |
| | **Dioxin TEQ (303d listed)** | $\mathbf{1.8E^{-14}}$ | $\mathbf{1.4E10^{-8}}$ | $\mathbf{5.3E^{-08}}$ | **Yes** |
| 17 | Acrolein | <2.1 | 780 | <0.50 | No |
| 18 | Acrylonitrile | <1.0 | 0.66 | 0.03 | No |
| 19 | Benzene | <0.11 | 71 | <0.05 | No |
| 20 | Bromoform | <0.27 | 360 | <0.5 | No |
| 21 | Carbon Tetrachloride | <0.19 | 4.4 | 0.06 | No |
| 22 | Chlorobenzene | <0.21 | 21,000 | <0.5 | No |
| 23 | Chlorodibromomethane | <0.16 | 34 | <0.05 | No |
| 24 | Chloroethane | <0.51 | No Criteria | <0.5 | Ud |
| 25 | 2-Chloroethylvinyl ether | <0.28 | No Criteria | <0.5 | Ud |
| 26 | Chloroform | J 1.4 | No Criteria | <0.5 | Ud |
| 27 | Dichlorobromomethane | J 0.21 | 46 | <0.05 | No |
| 28 | 1,1-Dichloroethane | <0.23 | No Criteria | <0.05 | Ud |
| 29 | 1,2-Dichloroethane | J 0.19 | 99 | 0.04 | No |
| 30 | 1,1-Dichloroethylene | <0.010 | 3.2 | <0.5 | No |
| 31 | 1,2-Dichloropropane | <0.19 | 39 | <0.05 | No |
| 32 | 1,3-Dichloropropylene | Not Available | 1,700 | <0.5 | Cannot Determine |
| 33 | Ethylbenzene | <0.30 | 29,000 | <0.5 | No |
| 34 | Methyl Bromide | <0.25 | 4,000 | <0.5 | No |
| 35 | Methyl Chloride | <0.50 | No Criteria | <0.5 | Ud |
| 36 | Methylene Chloride | J 0.21 | 1,600 | 22 | No |
| 37 | 1,1,2,2-Tetrachloroethane | <0.36 | 11 | <0.05 | No |
| 38 | Tetrachloroethylene | <0.09 | 8.85 | <0.05 | No |
| 39 | Toluene | J 1.0 | 200,000 | <0.3 | No |
| 40 | 1,2-Trans-Dichloroethylene | <0.11 | 140,000 | <0.5 | No |
| 41 | 1,1,1-Trichloroethane | <0.14 | No Criteria | <0.5 | Ud |
| 42 | 1,1,2-Trichloroethane | <0.16 | 42 | <0.05 | No |
| 43 | Trichloroethylene | <0.16 | 81 | <0.5 | No |
| 44 | Vinyl Chloride | <0.42 | 525 | <0.5 | No |
| 45 | 2-Chlorophenol | <0.2 | 400 | <1.2 | No |
| 46 | 2,4-Dichlorophenol | <0.17 | 790 | <1.3 | No |
| 47 | 2,4-Dimethylphenol | <0.13 | 2,300 | <1.3 | No |
| 48 | 2-Methyl- 4,6-Dinitrophenol | <0.94 | 765 | <1.2 | No |
| 49 | 2,4-Dinitrophenol | <0.94 | 14,000 | <0.7 | No |
| 50 | 2-Nitrophenol | <0.16 | No Criteria | <1.3 | Ud |
| 51 | 4-Nitrophenol | <0.28 | No Criteria | <1.6 | Ud |
| 52 | 3-Methyl 4-Chlorophenol | <0.16 | No Criteria | <1.1 | Ud |

| CTR # | Priority Pollutants | MEC or Minimum DL (1),(2) (µg/L) | Governing WQO/WQC (µg/L) | Maximum Background or Minimum DL (1),(2) (µg/L) | RPA Results (3) |
|---|---|---|---|---|---|
| 53 | Pentachlorophenol | <0.14 | 7.9 | <1 | No |
| 54 | Phenol | J 0.52 | 4,600,000 | <1.3 | No |
| 55 | 2,4,6-Trichlorophenol | <0.15 | 6.5 | <1.3 | No |
| 56 | Acenaphthene | <0.068 | 2,700 | 0.0019 | No |
| 57 | Acenaphthylene | <0.031 | No Criteria | 0.0013 | Ud |
| 58 | Anthracene | <0.012 | 110,000 | 0.00059 | No |
| 59 | Benzidine | <0.94 | 0.00054 | <0.0015 | No |
| 60 | Benzo(a)Anthracene | <0.012 | 0.049 | 0.0053 | No |
| 61 | Benzo(a)Pyrene | <0.012 | 0.049 | 0.0033 | No |
| 62 | Benzo(b)Fluoranthene | <0.029 | 0.049 | 0.0046 | No |
| 63 | Benzo(ghi)Perylene | <0.043 | No Criteria | 0.0045 | Ud |
| 64 | Benzo(k)Fluoranthene | <0.02 | 0.049 | 0.0018 | No |
| 65 | Bis(2-Chloroethoxy)Methane | <0.13 | No Criteria | <0.3 | Ud |
| 66 | Bis(2-Chloroethyl)Ether | <0.15 | 1.4 | <0.3 | No |
| 67 | Bis(2-Chloroisopropyl)Ether | <0.16 | 170,000 | Not Available | Cannot Determine |
| 68 | Bis(2-Ethylhexyl)Phthalate | J 1.2 | 5.9 | <0.00015 | No |
| 69 | 4-Bromophenyl Phenyl Ether | <0.1 | No Criteria | <0.23 | Ud |
| 70 | Butylbenzyl Phthalate | J 1.2 | 5,200 | 0.0056 | No |
| 71 | 2-Chloronaphthalene | <0.16 | 4,300 | <0.3 | No |
| 72 | 4-Chlorophenyl Phenyl Ether | <0.15 | No Criteria | <0.3 | Ud |
| 73 | Chrysene | <0.024 | 0.049 | 0.0028 | No |
| 74 | Dibenzo(a,h)Anthracene | <0.032 | 0.049 | 0.00064 | No |
| 75 | 1,2-Dichlorobenzene | <0.16 | 17,000 | <0.3 | No |
| 76 | 1,3-Dichlorobenzene | <0.19 | 2,600 | <0.3 | No |
| 77 | 1,4-Dichlorobenzene | 0.21 | 2,600 | <0.3 | No |
| 78 | 3,3 Dichlorobenzidine | <0.17 | 0.077 | <0.001 | No |
| 79 | Diethyl Phthalate | J 0.69 | 120,000 | <0.21 | No |
| 80 | Dimethyl Phthalate | <0.042 | 2,900,000 | <0.21 | No |
| 81 | Di-n-Butyl Phthalate | <0.34 | 12,000 | 0.016 | No |
| 82 | 2,4-Dinitrotoluene | <0.074 | 9.1 | <0.27 | No |
| 83 | 2,6-Dinitrotoluene | J 0.65 | No Criteria | <0.29 | Ud |
| 84 | Di-n-Octyl Phthalate | <0.14 | No Criteria | <0.38 | Ud |
| 85 | 1,2-Diphenylhydrazine | Not Available | 0.54 | 0.0037 | No |
| 86 | Fluoranthene | <0.033 | 370 | 0.011 | No |
| 87 | Fluorene | <0.028 | 14,000 | 0.0021 | No |
| 88 | Hexachlorobenzene | <0.088 | 0.00077 | 0.000022 | No |
| 89 | Hexachlorobutadiene | <0.017 | 50 | <0.3 | No |
| 90 | Hexachlorocyclopentadiene | <0.059 | 17,000 | <0.3 | No |
| 91 | Hexachloroethane | <0.15 | 8.9 | <0.2 | No |
| 92 | Indeno(1,2,3-cd)Pyrene | <0.031 | 0.049 | 0.0040 | No |
| 93 | Isophorone | <0.14 | 600 | <0.3 | No |
| 94 | Naphthalene | J 1.1 | No Criteria | 0.013 | Ud |
| 95 | Nitrobenzene | <0.16 | 1,900 | <0.25 | No |
| 96 | N-Nitrosodimethylamine | <0.17 | 8.1 | <0.3 | No |
| 97 | N-Nitrosodi-n-Propylamine | <0.16 | 1.4 | <0.001 | No |
| 98 | N-Nitrosodiphenylamine | <0.14 | 16 | <0.001 | No |
| 99 | Phenanthrene | <0.025 | No Criteria | 0.0095 | Ud |

| CTR # | Priority Pollutants | MEC or Minimum DL (1),(2) (µg/L) | Governing WQO/WQC (µg/L) | Maximum Background or Minimum DL (1),(2) (µg/L) | RPA Results (3) |
|---|---|---|---|---|---|
| 100 | Pyrene | <0.018 | 11,000 | 0.019 | No |
| 101 | 1,2,4-Trichlorobenzene | <0.16 | No Criteria | <0.3 | Ud |
| 102 | Aldrin | <0.0014 | 0.00014 | 2.8E-06 | No |
| 103 | Alpha-BHC | <0.0018 | 0.013 | 0.00050 | No |
| 104 | beta-BHC | <0.0032 | 0.046 | 0.00041 | No |
| 105 | gamma-BHC | <0.0023 | 0.063 | 0.00070 | No |
| 106 | delta-BHC | <0.0024 | No Criteria | 0.000053 | Ud |
| 107 | Chlordane (303d listed) | <0.014 | 0.00059 | 0.00018 | No |
| 108 | 4,4'-DDT (303d listed) | <0.0028 | 0.00059 | 0.00017 | No |
| 109 | 4,4'-DDE (linked to DDT) | <0.0018 | 0.00059 | 0.00069 | No |
| 110 | 4,4'-DDD | <0.0022 | 0.00084 | 0.00031 | No |
| 111 | Dieldrin (303d listed) | <0.0021 | 0.00014 | 0.00026 | No |
| 112 | Alpha-Endosulfan | <0.0024 | 0.0087 | 0.000031 | No |
| 113 | beta-Endolsulfan | <0.0022 | 0.0087 | 0.000069 | No |
| 114 | Endosulfan Sulfate | <0.0029 | 240 | 0.000082 | No |
| 115 | Endrin | <0.0021 | 0.0023 | 0.000040 | No |
| 116 | Endrin Aldehyde | <0.0030 | 0.81 | Not Available | Cannot Determine |
| 117 | Heptachlor | <0.0018 | 0.00021 | 0.000019 | No |
| 118 | Heptachlor Epoxide | <0.0020 | 0.00011 | 0.000094 | No |
| 119-125 | PCBs sum (303d listed)(4) | --- | --- | --- | --- |
| 126 | Toxaphene | <0.070 | 0.0002 | Not Available | Cannot Determine |
| | Tributyltin | Not Available | 0.0074 | 0.0022 | Cannot Determine |
| | Total PAHs | Not Available | 15 | 0.0841 | Cannot Determine |
| | **Total Ammonia (mg/L)** | **40.6** | **1.27** | **0.43** | **Yes** |

**Footnotes to Table F-8:**

(1) The MEC or maximum background concentration is the actual detected concentration unless there is a "<" sign before it, in which case the value shown is the minimum detection level. A "J" before a value indicates an estimated (detected not quantified (DNQ)) value.

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

(3) RPA Results =Yes, if MEC => WQO/WQC, or B > WQO/WQC and MEC is detected;

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

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

= Cannot Determine, if there are insufficient data.

(4) SIP section 1.3 excludes from its RPA procedure priority pollutants for which a TMDL has been developed. TMDLs have been developed for mercury and PCBs in San Francisco Bay. Mercury and PCBs from wastewater discharges are regulated by NPDES Permit No. CA0038849 (currently Regional Water Board Order No. R2-2007-0077, as amended by Order No. R2-2011-0012), which implements the San Francisco Bay Mercury and PCB TMDLs.

(1) **Constituents with limited data.** In some cases, Reasonable Potential cannot be determined because effluent data are limited, or ambient background concentrations are unavailable. Provision VI.C.2.a of this Order requires the Discharger to continue to monitor for these constituents in the effluent using analytical methods that provide the best feasible detection limits. When additional data become available, further RPA will be conducted to determine whether to add numeric effluent limitations to this permit or to continue monitoring.

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

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

**4. WQBEL Calculations**

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

**b. Dilution Credit.** The SIP provides the basis for the dilution credit granted. Based on two-dimensional modeling, the discharge generally achieves much greater than 10:1 dilution. Tracer simulation results summarized in the Discharger's 2006 Antidegradation Analysis indicate a current minimum hourly average dilution of 95:1 immediately above the outfall. Under proposed future flow increases, this may be reduced to a minimum dilution of 79:1.

Based on RMP monitoring data for local and Central Bay Stations, there is variability in the receiving water, and the hydrology of the receiving water is very complex. Therefore, there is uncertainty associated with the representative nature of the appropriate ambient background data for effluent limitation calculations. Pursuant to Section 1.4.2.1 of the SIP, "dilution credit may be limited or denied on a pollutant-by-pollutant basis…" Therefore, the Regional Water Board finds that a conservative 10:1 dilution credit for non-bioaccumulative priority pollutants, and a zero dilution credit for bioaccumulative priority pollutants are necessary for protection of beneficial uses. The detailed basis for each are explained below.

**(1) Bioaccumulative Pollutants**. For certain bioaccumulative pollutants, dilution credit is strictly restricted or denied. This determination is based on available data on the concentration of these pollutants in aquatic organisms, sediment, and the water column. Specifically, these pollutants include chlordane, DDT, dieldrin, dioxin compounds, furan compounds, mercury, polychlorinated biphenyls (PCBs), and dioxin-like PCBs, which all appear on the CWA section 303(d) list for the Lower San Francisco Bay because they impair San Francisco Bay beneficial uses. The following factors suggest insufficient assimilative capacity in San Francisco Bay for these pollutants.

Tissue samples taken from fish in San Francisco Bay show the presence of these pollutants at concentrations greater than screening levels (*Contaminant Concentrations in Fish from San Francisco Bay,* May 1997). The results of a 1994 San Francisco Bay pilot study, presented in *Contaminated Levels in Fish Tissue from San Francisco Bay* (Regional Water Board, 1994) also showed elevated levels of chemical contaminants in fish tissues. The Office of Environmental Health and Hazard Assessment completed a preliminary review of the data in the 1994 report and in December 1994 issued an interim consumption advisory covering certain fish species in San Francisco Bay due to the levels of some of these pollutants, including dioxins and pesticides (e.g. DDT). This advisory is still in effect. Therefore, dilution credits are denied for bioaccumulative pollutants on the 303(d) list for which there is lack of data on sources and significant uncertainty about how different sources of these pollutants contribute to bioaccumulation.

**(2) Non-Bioaccumulative Pollutants**. For non-bioaccumulative pollutants, except ammonia, a conservative dilution allowance of 10:1 (D = 9) has been assigned. The 10:1 dilution allowance is consistent with the previous permit and is based, in part, on Basin Plan Prohibition 1 (Table 4-1), which prohibits discharges with less than 10:1 dilution. SIP Section 1.4.2 allows for limiting the dilution credit:

**(a)** A far-field background station is appropriate because San Francisco Bay is a very complex estuarine system with highly variable and seasonal upstream freshwater inflows and diurnal tidal saltwater inputs. SIP Section 1.4.3 allows background conditions to be determined on a discharge-by-discharge or water body-by-water body basis. A water body-by-water body basis approach is taken here due to inherent uncertainties in characterizing ambient background conditions in a complex estuarine system on a discharge-by-discharge basis. The Yerba Buena Island RMP monitoring station, relative to other RMP stations, fits SIP guidance criteria for establishing background conditions. The SIP requires that background water quality data be representative of the ambient receiving water that will mix with the discharge. Water quality data from the Yerba Buena Island monitoring station is representative of the water that will mix with the discharge.

**(b)** Because of the complex hydrology of San Francisco Bay, a mixing zone has not been established. There are uncertainties in accurately determining an appropriate mixing zone. The models used to predict dilution have not considered the three dimensional nature of San Francisco Bay currents resulting from the interaction of tidal flushes and seasonal fresh water outflows. Being heavier and colder than

fresh water, ocean sat water enters San Francisco Bay on a twice-daily tidal cycle, generally beneath the warmer fresh water that flows seaward. When these waters mix and interact, complex circulation patterns occur due to varying densities of the fresh and ocean waters. The complex patterns occur throughout San Francisco Bay, but are most prevalent in the San Pablo, Carquinez Straight, and Suisun Bay areas. The locations of this mixing and interaction change, depending on the strength of each tide. Additionally, sediment loads from the Central Valley change on a long-term basis, affecting the depth of different parts of San Francisco Bay, resulting in alteration of flow patterns, mixing, and dilution at the outfall.

**(c)** For cyanide, a non-persistent pollutant that quickly disperses and degrades, a dilution ratio of 10:1 (D = 9) was used to calculate the WQBELs. Whereas the actual initial dilution of 79:1 was granted for ammonia, less dilution is granted for cyanide because SIP Section 1.4.2.2 dictates that mixing zones shall be as small as practicable. Limiting dilution is equivalent to decreasing the size of the allowed mixing zone. The different approach for cyanide (versus ammonia) reflects the fact that cyanide has been regulated in permits for decades in this region. As a result of past conservative policies and changes in policies and standards, the process for deriving effluent limits for cyanide are more stringent than those for ammonia to comply with antidegradation. In other words, because past policies have resulted in very stringent limits, to backslide from these limits, CWA 303(d)(4) provides that there must be compliance with antidegradation policies. The background documentation for the proposed cyanide site-specific objectives included an antidegradation analysis, which concluded that certain effluent limitations resulting from implementation of the site-specific objectives (assuming 10:1 dilution) would not degrade water quality. Therefore, the dilution credit used here is the dilution credit that results in effluent limits no greater than those identified in the site-specific objectives documents for this Discharger. This resultant dilution credit for cyanide is also in compliance with the SIP, which requires the mixing zone be as small as practicable. Additionally, consistent with the site-specific objective conclusion on antidegradation, to further ensure that water quality is not degraded, this Order requires a cyanide action plan.

**(d)** For ammonia, a non-persistent pollutant, a conservative estimate of actual initial dilution was used to calculate the effluent limitations for Discharge Point 001. This is justified because ammonia quickly disperses and degrades to a non-toxic state, and cumulative toxicity effects are unlikely. As described above, in its 2006 antidegradation analysis, the Discharger estimated an initial dilution of 79:1 under conservative conditions. Therefore, this Order uses a dilution of 79:1 to calculate WQBELs for ammonia.

### c. Calculation of Pollutant-Specific WQBELs

#### (1) Copper

**(a) WQOs.** Water quality criteria designed to protect aquatic organisms are generally two types: the Criteria Continuous Concentration (CCC) and the Criteria Maximum Concentration (CMC). The current CMC and CCC for copper are 3.9 µg/L and 2.5 µg/L, respectively. Utilizing a water effects ratio (WER) of 2.4 to calculate copper criteria, based on USEPA guidance as documented in *North of Dumbarton Bridge Copper and Nickel Site-Specific Objective (SSO) Derivation* (Clean Estuary Partnership, December 2004), the Basin Plan site-specific chronic and acute marine WQOs are 6.0 µg/L and 9.4 µg/L, respectively, expressed as dissolved metal. Regional Water Board staff converted these WQOs to total recoverable metal using site-specific translators of 0.73 (chronic) and 0.87 (acute). This results in a chronic water quality criterion of 8.2 µg/L and an acute water quality criterion of 11 µg/L.

**(b) RPA Results.** This Order establishes effluent limitations for copper because the MEC of 13 µg/L exceeds the most stringent applicable WQO for this pollutant, demonstrating Reasonable Potential by Trigger 1.

**(c) WQBELs.** WQBELs for copper calculated using SIP procedures as guidance, with a CV of 0.18 and a dilution credit of 10:1 (D = 9), are an AMEL of 56 µg/L and an MDEL of 72 µg/L. The previous permit contained an AMEL of 53 µg/L and an MDEL of 78 µg/L. As a pair, the limits in the previous permit are more stringent than those calculated for this permit resissuance. This is because the pair of limits under the previous permit would hold the Discharger to a long-term average of 42.4 µg/L compared with 48 µg/L for the newly calculated limits. Therefore, this Order retains the limits from the previous permit (AMEL of 53 µg/L and MDEL of 78 µg/L).

**(d) Anti-backsliding.** Anti-backsliding requirements are satisfied because this Order retains the copper WQBELs established in the previous permit.

#### (2) Cyanide

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

**(b) RPA Results.** This Order establishes effluent limitations for cyanide because the MEC of 8.8 µg/L exceeds the most stringent applicable WQO for this pollutant, demonstrating Reasonable Potential by Trigger 1.

**(c) WQBELs.** WQBELs for cyanide calculated using SIP procedures as guidance, with a CV of 0.62 and a dilution credit of 10:1 (D = 9), are an AMEL of 21 µg/L and an MDEL of 42 µg/L. The previous permit also contained an AMEL of 21 µg/L and an MDEL of 42 µg/L.

**(d) Anti-backsliding.** Anti-backsliding requirements are satisfied because this Order retains the cyanide WQBELs established in the previous permit.

**(3) Dioxin-TEQ**

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

> *"Many pollutants can accumulate on particulates, in sediments, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered"*

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

The CTR establishes a numeric WQO for 2,3,7,8-tetrachlorinated dibenzo-p-dioxin (2,3,7,8-TCDD) of $1.4 \times 10^{-8}$ µg/L to protect human health when aquatic organisms are consumed. When the CTR was promulgated, USEPA stated its support of the regulation of other dioxin and dioxin-like compounds through the use of toxicity equivalencies (TEQs) in NPDES permits. USEPA stated specifically, "For California waters, if the discharge of dioxin or dioxin-like compounds has reasonable potential to cause or contribute to a violation of a narrative criterion, numeric WQBELs for dioxin or dioxin-like compounds should be included in NPDES permits and should be expressed using a TEQ scheme." [65 Fed. Reg. 31682, 31695 (2000)].

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

To determine if the discharge of dioxin or dioxin-like compounds has Reasonable Potential to cause or contribute to a violation of the Basin Plan's narrative bioaccumulation WQO, TEFs and BEFs were used to express the measured concentrations of 16 dioxin congeners in effluent and background samples as 2,3,7,8-TCDD. These "equivalent" concentrations were then compared to the

CTR numeric criterion for 2,3,7,8-TCDD (1.4 x $10^{-8}$ µg/L). Although the 1998 WHO scheme includes TEFs for dioxin-like PCBs, they are not included in this Order's TEQ scheme. The CTR has established a specific water quality standard for PCBs, and dioxin-like PCBs are included in the analysis of total PCBs.

**(b) RPA Results.** This Order establishes effluent limitations for dioxin-TEQ because the background concentration (5.3 x $10^{-8}$ µg/L) exceeds the most stringent applicable WQO (1.4 x $10^{-8}$ µg/L) for this pollutant, and the pollutant is detected in the effluent, demonstrating Reasonable Potential by Trigger 2.

**(c) WQBELs.** WQBELs for dioxin-TEQ calculated using SIP procedures as guidance, with a default CV of 0.60 and no dilution, are an AMEL of 1.4 x $10^{-8}$ µg/L and an MDEL of 2.8 x $10^{-8}$ µg/L.

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

**(4) Ammonia**

**(a) WQOs.** The Basin Plan contains WQOs for un-ionized ammonia of 0.025 mg/L as an annual median and 0.4 mg/L as a maximum for Lower San Francisco Bay. Regional Water Board staff translated these WQOs from un-ionized ammonia concentrations to equivalent total ammonia concentrations (as nitrogen) since (1) sampling and laboratory methods are not available to analyze for un-ionized ammonia; and (2) the fraction of total ammonia that exists in the toxic un-ionized form depends on the pH, salinity, and temperature of the receiving water. To translate the Basin Plan un-ionized ammonia objective, Regional Water Board staff used pH, salinity, and temperature data from 1993 through 2008 from the nearest RMP station to the outfall, the Yerba Buena Island RMP Station (BC10). Regional Water Board staff used the following equations to determine the fraction of total ammonia that would exist in the toxic un-ionized form in the estuarine receiving water where the various measurements were taken from 1993-2001 (USEPA, 1989, Ambient Water Quality Criteria for Ammonia (Saltwater)–1989, EPA Publication 440/5-88-004):

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

Where:

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

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

S = Salinity (parts per thousand)

T = Temperature in degrees Kelvin

P = Pressure (one atmosphere)

Regional Water Board staff then used the 90th percentile and median un-ionized ammonia fractions from 1993 to 2008 to express the acute and chronic un-ionized ammonia WQOs as total ammonia concentrations. This approach is consistent with USEPA guidance on translating dissolved metal WQOs to total recoverable metal WQOs (USEPA, 1996, *The Metals Translator: Guidance for Calculating a Total Recoverable Limit from a Dissolved Criterion,* EPA Publication 823-B-96-007).

The equivalent total ammonia acute and chronic WQOs are 12 mg/L and 1.3 mg/L, respectively.

**(b) RPA Results.** Basin Plan Section 4.5.5.2 indicates that WQBELs shall be calculated according to the SIP. This Order establishes effluent limitations for total ammonia because the MEC of 41 mg/L exceeds the most stringent applicable translated WQO for this pollutant, demonstrating Reasonable Potential by Trigger 1.

**(c) WQBELs**. The most stringent total ammonia WQBELs calculated according to SIP procedures using a CV of 0.2 and a dilution of 79:1 (D = 78) are an AMEL of 93 mg/L and an MDEL of 130 mg/L. Regional Water Board staff made statistical adjustments to the WQBEL calculations because:

- the Basin Plan's chronic WQO for un-ionized ammonia is based on an annual median instead of the typical 4-day average;
- the SIP assumes a 4-day average concentration and monthly sampling frequency of 4 days per month to calculate effluent limitations based on chronic criteria, whereas a 365-day average and a monitoring frequency of 30 days per month, reflecting the actual basis of the WQO and actual sampling frequency, were used here.

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

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

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

### d. Effluent Limitation Calculations – Discharge Point No. 001

The following table shows the WQBEL calculations for copper, cyanide, dioxin-TEQ and ammonia at Discharge Point No. 001, with compliance measured at Monitoring Location M-001.

**Table F-9. WQBEL Calculations**

| PRIORITY POLLUTANTS | Copper | Cyanide | Dioxin-TEQ | Total Ammonia (acute) | Total Ammonia (Chronic) |
|---|---|---|---|---|---|
| **Units** | **µg/L** | **µg/L** | **µg/L** | **mg/L** | **mg/L** |
| Basis and Criteria type | Basin Plan SW Aquatic Life | Basin Plan SSO | CTR HH | Basin Plan Aquatic Life | Basin Plan Aquatic Life |
| Criteria -Acute | ----- | ----- | ----- | 12.3 | ----- |
| Criteria -Chronic | ----- | ----- | ----- | ----- | 1.27 |
| SSO Criteria -Acute | 3.9 | 9.4 | ----- | ----- | ----- |
| SSO Criteria -Chronic | 2.5 | 2.9 | ----- | ----- | ----- |
| Water Effects ratio (WER) | 2.4 | 1 | 1 | 1 | 1 |
| Lowest WQO | 2.5 | 2.9 | 1.4E-08 | 12.3 | 1.27 |
| Site Specific Translator - MDEL | 0.87 | ----- | ----- | ----- | ----- |
| Site Specific Translator - AMEL | 0.73 | ----- | ----- | ----- | ----- |
| Dilution Factor (D) (if applicable) | 9 | 9 | 0 | 78 | 78 |
| No. of samples per month | 4 | 4 | 4 | 4 | 30 |
| Aquatic life criteria analysis required? (Y/N) | Y | Y | N | Y | Y |
| HH criteria analysis required? (Y/N) | N | Y | Y | N | N |
| | | | | | |
| Applicable Acute WQO | 11 | 9.4 | ----- | 12.3 | ----- |
| Applicable Chronic WQO | 8.2 | 2.9 | ----- | ----- | 1.27 |
| HH criteria | ----- | 220,000 | 1.4E-08 | ----- | ----- |
| Background (Maximum Conc for Aquatic Life calc) | 2.5 | 0.4 | ----- | 0.43 | 0.13 |
| Background (Average Conc for Human Health calc) | ----- | 0.4 | 5.3E-08 | ----- | ----- |
| Is the pollutant on the 303d list and/or bioaccumulative (Y/N)? | N | N | Y | N | N |
| | | | | | |
| ECA acute | 85 | 90.4 | ----- | 941 | ----- |
| ECA chronic | 59 | 25.4 | ----- | ----- | 90 |
| ECA HH | ----- | 2,200,000 | 1.40E-08 | ----- | ----- |
| | | | | | |
| No. of data points <10 or at least 80 percent of data reported non detect? (Y/N) | N | N | Y | N | N |
| Avg of effluent data points | 8.2 | 2.1 | N/A | 26 | 26 |
| Std Dev of effluent data points | 1.5 | 1.3 | N/A | 4.6 | 4.6 |
| CV calculated | 0.18 | 0.62 | N/A | 0.2 | 0.2 |
| CV (Selected) - Final | 0.18 | 0.62 | 0.60 | 0.2 | 0.2 |

| PRIORITY POLLUTANTS | Copper | Cyanide | Dioxin-TEQ | Total Ammonia (acute) | Total Ammonia (Chronic) |
|---|---|---|---|---|---|
| **Units** | **µg/L** | **µg/L** | **µg/L** | **mg/L** | **mg/L** |
| | | | | | |
| ECA acute mult99 | 0.67 | 0.31 | ----- | 0.68 | ----- |
| ECA chronic mult99 | 0.82 | 0.52 | ----- | ----- | 0.98 |
| LTA acute | 57 | 28 | ----- | 636 | |
| LTA chronic | 48 | 13 | ----- | ----- | 88 |
| minimum of LTAs | 48 | 13 | ----- | 636 | 88 |
| | | | | | |
| AMEL mult95 | 1.2 | 1.6 | 1.6 | 1.2 | 1.1 |
| MDEL mult99 | 1.5 | 3.2 | 3.1 | 1.5 | 1.5 |
| AMEL (aq life) | 56 | 21 | ----- | 730 | 93 |
| MDEL(aq life) | 72 | 42 | ----- | 940 | 130 |
| | | | | | |
| MDEL/AMEL Multiplier | 1.3 | 2.0 | 2.0 | 1.3 | 1.4 |
| AMEL (human hlth) | ----- | 2,200,000 | 1.4E-08 | ----- | ----- |
| MDEL (human hlth) | ----- | 4,487,287 | 2.8E-08 | ----- | ----- |
| | | | | | |
| minimum of AMEL for Aq. life vs HH | 56 | 21 | 1.4E-08 | 730 | 93 |
| minimum of MDEL for Aq. Life vs HH | 72 | 42 | 2.8E-08 | 940 | 130 |
| Current limit in permit (30-day average) | 53 | 21 | ----- | ----- | ----- |
| Current limit in permit (daily) | 78 | 42 | ----- | ----- | ----- |
| | | | | | |
| Final limit - AMEL | 53 | 21 | 1.4E-08 | 730 | 93 |
| Final limit - MDEL | 78 | 42 | 2.8E-08 | 940 | 130 |
| Max Effl Conc (MEC) | 13 | 8.8 | 1.8E-14 | 40.6 | 40.6 |

## 5. Bacteria – Discharge Point No. 001

**a. Fecal Coliform Bacteria.** The Basin Plan requires that effluent limitations for total coliform for deep water discharges to inland surface waters and estuaries (Basin Plan Table 4-2A) with designated SHELL beneficial uses. However, footnote c of Table 4-2A states that fecal coliform effluent limitations may be substituted for total coliform effluent limitations provided that it can be conclusively demonstrated through a program approved by the Regional Water Board that such substitution will not result in unacceptable adverse impacts on the beneficial uses of the receiving water.

From July 1994 through June 1995, the Discharger studied the effect of reduced chlorine residual on fecal coliform numbers in the effluent and receiving waters. This study was conducted not only because chlorine is an expensive chemical in the treatment process, but also because it produces toxic byproducts in the environment. Receiving water monitoring data showed that the fecal coliform density in the receiving water was generally less than 2.0 MPN/100 mL when the effluent was discharged with a fecal

coliform density of 500 MPN/100 mL. These results indicate that the fecal coliform densities in the effluent, if they remain below the current effluent limitation specified in the Order, are protective of beneficial uses in the vicinity of the outfall.

To verify that alternate fecal coliform limits do not adversely impact beneficial uses in San Francisco Bay, the Discharger conducted another study from January 18, 2011, through February 14, 2011. A report entitled: *Study to Verify Protectiveness of Alternative Fecal Coliform Limits, Final Report*, dated February 22, 2011, explains that bacteria were sampled in the receiving waters at four locations around Discharge Point No. 001 and compared to the bacterial objectives for water contact recreation and shellfish harvesting. The single event maximum total coliform density was 22 MPN/100 mL and the maximum median concentration total coliform density was 11 MPN/100 mL, well below the water quality objectives for total coliform for the protection of MUN and SHELL beneficial uses. Additionally, the maximum median concentration fecal coliform density was 2 MPN/100 mL and the maximum mean for five events at any one station was 3 MPN/100 mL, well below the WQOs for fecal coliform for the protection of MUN and SHELL beneficial uses.

Therefore, consistent with the Basin Plan and the previous permit, this Order retains the effluent limitations for fecal coliform at Discharge Point No. 001 since these effluent limitations are protective of beneficial uses.

**b. Enterococci Bacteria.** The enterococcus effluent limitation is based on the Basin Plan Table 4-2A for all sanitary wastewater discharges to waters with REC1 beneficial uses, which cites the 30-day geometric mean enterococcus bacteria limit based on USEPA criteria established at 40 CFR 131.41. These water quality criteria became effective on December 16, 2004 [69 Fed. Register 67218 (November 16, 2006)]. It is also consistent with the Basin Plan amendment establishing bacteria objectives for waters designated for contact recreation in marine and estuarine waters (Resolution No. R2-2010-0066). The Regional Water Board adopted this amendment on April 14, 2010, the State Water Board approved it on April 5, 2011, the Office of Administrative Law approved it in July 2011, and finally USEPA approved it on August 16, 2011.

Consistent with the Basin Plan, the Regional Water Board grants in this Order a conservative initial dilution of 10:1 in the calculation of WQBELs for enterococcus. In the Discharger's February 22, 2011, *Study to Verify Protectiveness of Alternative Fecal Coliform Limits, Final Report*, the monitoring data showed that existing treatment is protective of beneficial uses. The maximum concentration of enterococcus found in the Study, at the start point of the diffuser, was 20 MPN/100 mL, which is below the water quality objectives (i.e., no sample greater than 104 MPN/100 mL and geometric mean not greater than 35 MPN/100 mL) set to protect water contact recreation.

Chapter 4 of the Basin Plan states that effluent limitations in Table 4-2A may be adjusted to account for dilution in a manner consistent with procedures in the SIP. The enterococcus effluent limitations were calculated, as specified in SIP Section 1.4, using the equation ECA = C + D (C – B), where C is the WQO of 35 MPN/100 mL, D is the 10:1 dilution (D = 9), and B is the background concentration set equal to 12 MPN/100 mL (the maximum geometric mean identified in EBDA's February 22,

2011, Study). This results in a five-sample geometric mean limitation for enterococcus of 242 MPN/100 mL.

**6. Whole Effluent Acute Toxicity – Discharge Point No. 001**

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

**b. Ammonia Toxicity.** Ammonia WQBELs are based on the protection of aquatic life. Therefore, if the Discharger can demonstrate to the satisfaction of the Executive Officer that toxicity exceeding limitations in this Order is caused by ammonia, and that the ammonia in the discharge complies with effluent limitations, then such toxicity does not constitute a violation of the effluent limitations for whole effluent toxicity. This is based on Basin Plan Section 3.3.20. If ammonia toxicity is verified by a Toxicity Identification Evaluation (TIE), the Discharger may use an adjusted protocol approved by the Executive Officer for routine bioassay testing.

**7. Whole Effluent Chronic Toxicity – Discharge Point No. 001**

**a. Permit Requirements.** The Order includes requirements for chronic toxicity monitoring that are unchanged from the previous permit, and are based on the Basin Plan narrative toxicity objective in Section 4.5.5.3.2. This Order includes the Basin Plan narrative toxicity objective as the applicable effluent limit, implemented via monitoring with numeric values as "triggers" to initiate accelerated monitoring and to initiate a chronic toxicity reduction evaluation (TRE) as necessary. The permit requirements for chronic toxicity are also consistent with CTR and SIP requirements.

**b. Screening Phase Study.** The Discharger initiated a two phase chronic toxicity screening study to identify the indicator organism most sensitive to the final effluent. Results showed that a different test organism was identified as the most sensitive with each of the three bioassay episodes. Phase I bioassay testing were evaluated to screen species selected for Phase II confirmation testing and indicated the *Pimephales promelas* was the most sensitive; Phase II, Episode 1 indicated the *Ceriodaphnia dubia* was the most sensitive; and Phase II, Episode 2 indicated the *Americamysis bahia* was the most sensitive species tested. Based on the benefit provided by the wealth of existing *Pimephales promelas* quarterly toxicity data, and because the species exhibited the greatest response observed during the study, the Monitoring and Reporting Program (MRP) specifies *Pimephales promelas* (fathead minnow) as the chronic toxicity test species to be used during chronic toxicity testing. The Discharger is required to conduct another chronic toxicity screening study as described in MRP Appendix E-1 (Attachment E) during the term of this Order to determine if the most sensitive species has changed.

**c. Chronic Toxicity Triggers.** This Order includes a trigger for chronic toxicity if the three sample median exceeds 10 TUc or if the single sample maximum exceeds 20 TUc based on Table 4-5 for dischargers to deepwater environments monitoring quarterly.

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

## D. Anti-backsliding and Antidegradation

1. **Effluent Limitations Retained from Previous Permit.** Limitations for the following parameters are retained and are unchanged from the previous permit:

   a. **Discharge Point No. 001**

   - Copper
   - Cyanide
   - Total Residual Chlorine
   - Oil and Grease
   - Fecal Coliform

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

   b. **Monitoring Location M-002F1 and M-002F2**

   - CBOD
   - TSS
   - pH

   Consistent with the previous permit, this Order establishes technology based-effluent limitations for CBOD, TSS, and pH at DSRSD treatment plant before treated wastewater commingles in the EBDA Common Outfall.

2. **New Final Effluent Limitations.** This Order establishes the following new effluent limitations.

   a. **Discharge Point No. 001**

   - Dioxin-TEQ
   - Enterococcus
   - Total Ammonia

3. **Effluent Limitations not Retained.** This Order does not retain the following limitations at Discharge Point No. 001 from the previous permit.

   - Mercury
   - Nickel

- Zinc
- Heptachlor

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

Because the RPA showed that the Facility discharge no longer demonstrates Reasonable Potential to cause or contribute to exceedances of heptachlor, nickel, and zinc water quality criteria, this Order does not retain the limitations from the previous permit. This is consistent with the anti-backsliding provisions of State Water Board Order WQ 2001-16. This is also consistent with antidegradation requirements of 40 CFR 131.12 because degradation is not expected since the Discharger will maintain its current level of treatment during the permit term.

**4. EBDA Flow increase from 100.7 MGD to 119.1 MGD.**

As documented in Order No. R2-2006-0053, the Discharger submitted a report entitled "Anti-Degradation Analysis for Proposed Wastewater Treatment Plant Discharge Modification" in June 2006 that affirmed that an increase in the effluent discharge flow rate to 119.1 MGD conforms to federal and State Antidegradation Policy requirements.

The antidegradation analysis addressed a combined flow increase of 22 MGD from Order No. 00-087 from all discharges (97.1 MGD to 119.1 MGD) to the EBDA Common Outfall. This included a flow increase of 3.7 MGD from DSRSD. At this time, DSRSD does not plan to complete, within the next five years, capital improvements to increase its flow capacity, even though DSRSD has already satisfied federal and State Antidegradation Policy requirements for this flow increase.

## V. RATIONALE FOR SURFACE RECEIVING WATER LIMITATIONS

Receiving water limitations V.A and V.B are based on the narrative and numeric WQOs in Basin Plan Chapter 3. This Order does not retain the un-ionized receiving water limitation since ammonia showed reasonable potential and this Order establishes a WQBEL for ammonia which is protective of beneficial uses.

Receiving water limitation V.C requires compliance with federal and State water quality standards and is similar to other POTWs discharging secondary treated wastewater in the San Francisco Bay Region.

## VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

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

- document compliance with waste discharge requirements and prohibitions established by the Regional Water Board;

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

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

**A. Influent Monitoring Requirements**

Influent monitoring is necessary for the prevention and abatement of potential pollution arising in the treatment plant influent. Influent monitoring requirements for CBOD and TSS and continuous monitoring of the influent flow are unchanged from the previous permit to allow determination of compliance with this Order's 85 percent removal requirement. Monitoring frequencies for TSS and CBOD are consistent with similar secondary level POTWs in the Region. Cyanide influent monitoring is retained and is required by the Basin Plan with implementation of the cyanide site-specific objectives.

**B. Effluent Monitoring Requirements**

**1. EBDA Common Outfall – Monitoring Location M-001**

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

- Monthly monitoring for mercury is no longer required because mercury discharges are now regulated under Regional Water Board Order No. R2-2007-0077.
- This Order requires semi-annual monitoring for dioxin-TEQ in order to determine compliance with newly established effluent limitations.
- Monitoring requirements for heptachlor have not been retained because heptachlor no longer demonstrates reasonable potential and this Order does not establish effluent limitations for it. Heptachlor shall be monitored annually with all other priority pollutants.
- Monitoring requirements for nickel and zinc have not been retained in this Order because they do not demonstrate reasonable potential. Nickel and zinc shall be monitored semi-annual with all other priority pollutants.

- Consistent with monitoring requirements for fecal coliform, monitoring requirements for enterococcus bacteria have been established in this Order to determine compliance with effluent limitations.

**2. DSRSD Effluent Monitoring – Monitoring Locations M-002F1 and M-002F2**

The MRP retains most effluent monitoring requirements at DSRSD from the previous permit. Effluent monitoring requirements at monitoring location M-002F1 and M-002F2 are summarized as follows.

- Monitoring has been retained from the previous permit for CBOD, TSS, and pH to determine compliance with technology-based effluent limitations.

- Effluent monitoring requirements for nickel, zinc, and heptachlor have not been retained because these pollutants no longer exhibit reasonable potential to cause or contribute to downstream impairment. These pollutants shall now be monitored in accordance with other metals and existing priority pollutant monitoring, as described in section IV.B of the MRP.

- Monthly monitoring for mercury is no longer required because mercury discharges are now regulated under Regional Water Board Order No. R2-2007-0077.

## C. Whole Effluent Toxicity Testing Requirements

**1. Whole Effluent Acute Toxicity**

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

**2. Whole Effluent Chronic Toxicity**

This Order requires the Discharger to conduct quarterly chronic toxicity testing. The Discharger conducted an effluent toxicity screening study during the previous permit term that indicated that the fathead minnow, *Pimephales promelas*, is the most sensitive species for chronic toxicity testing. The Discharger is to repeat the chronic toxicity screening prior to permit expiration, as described in Appendix E-1 of the MRP (Attachment E).

## D. Regional Monitoring Program (RMP).

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

### E. Pretreatment and Biosolids Requirements.

The pretreatment monitoring requirements for influent, effluent, and biosolids are the same as the previous permit and are required to assess compliance with the Discharger's USEPA-approved pretreatment program. Biosolids monitoring is required pursuant to 40 CFR 503.

## VII. RATIONALE FOR PROVISIONS

### A. Standard Provisions (Provision VI.A)

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

### B. MRP Requirements (Provision VI.B)

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

### C. Special Provisions (Provision VI.C)

#### 1. Reopener Provisions

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

#### 2. Special Studies and Additional Monitoring Requirements

a. **Effluent Characterization Study.** This Order does not include effluent limitations for priority pollutants that do not demonstrate Reasonable Potential, but this provision requires the Discharger to continue monitoring for these pollutants as described in the Regional Standard Provisions (Attachment G) and as specified in the MRP (Attachment E). If concentrations of these constituents increase significantly, the Discharger is required to investigate the source of the increases and establish remedial measures if the increases result in Reasonable Potential to cause or contribute to an excursion above the applicable WQOs for pollutants not already subject to effluent limitations. This provision is based on the SIP.

b. **Ambient Background Receiving Water Study.** This provision is based on the Basin Plan, the SIP, and the Regional Standard Provisions (Attachment G). As indicated in this

Order, this requirement may be met by participating in the collaborative BACWA study. This provision is necessary to provide data for future RPAs.

c. **Permitted Treatment Plant Flows.** The permitted average dry weather flow capacity of the treatment plant identified in Prohibition III.D of this Order may be increased to 20.7 MGD by written approval from the Executive Officer, in accordance with the conditions outlined. This information requirement is authorized by CWC section 13267 and 13383 to ensure that after construction the treatment plant is functioning as designed to meet applicable treatment standards and effluent limits. Such studies are common practice and are reasonable and affordable for the relative size of the Discharger.

**3. Best Management Practices and Pollution Minimization Program**

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

**4. Special Provisions for Municipal Facilities (POTWs Only)**

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

b. **Biosolids Management Practices Requirements.** This provision is based on Chapter 4 of the Basin Plan and 40 CFR 257 and 503.

c. **Sanitary Sewer Overflows and Sewer System Management Plan.** This provision is to explain the Order's requirements as they relate to the Discharger's collection system, and to promote consistency with the State Water Resources Control Board's Statewide General Waste Discharge Requirements for Sanitary Sewer Overflow and related Monitoring and Reporting Program (Order No. 2006-0003-DWQ).

The General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans and report all sanitary sewer overflows, among other requirements and prohibitions. Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. Inasmuch that the Discharger's collection system is part of the system that is subject to this Order, certain standard provisions apply as specified in Provisions, section VII.C.4. The Discharger must comply with both the General Order and this Order. The Discharger and public agencies that are discharging wastewater into the Facility were required to enroll under the General Order by December 1, 2006.

The State Water Board amended the General Order on February 20, 2008, in Order No. WQ 2008-0002-EXEC, to strengthen the notification and reporting requirements for sanitary sewer overflows. The Regional Water Board issued a 13267 letter on May 1, 2008, requiring dischargers to comply with the new notification requirements. The Regional Standard Provisions (Attachment G) contains the same notification and reporting requirements for spills from wastewater treatment facilities.

d. **FOG Management Program.** This provision is to ensure that the Discharger has adequate protocols in place to manage hauled wastes, including, fats, oil, grease, and food waste into its treatment works.

**5. Copper Action Plan**

This provision is based on Basin Plan Section 7.2.1.2. It is necessary to ensure that use of copper site-specific objectives is consistent with antidegradation policies.

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

**6. Cyanide Action Plan**

This provision is based on Basin Plan Section 4.7.2.2. It is necessary to ensure that use of cyanide site-specific objectives is consistent with antidegradation policies.

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

## VIII. PUBLIC PARTICIPATION

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

### A. Notification of Interested Parties

The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided them with an opportunity to submit written comments and recommendations. Notification was provided through the following: the Oakland Tribune, for one day prior to October 28, 2011.

### B. Written Comments

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

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

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on November 28, 2011.

## C. Public Hearing

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

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

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

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

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

## D. Waste Discharge Requirements Petitions

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

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

## E. Information and Copying

The Report of Waste Discharge, related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., except from noon to 1:00 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling 510-622-2300.

## F. Register of Interested Persons

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

## G. Additional Information

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

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

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

For

NPDES WASTEWATER DISCHARGE PERMITS

March 2010

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**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD**
**SAN FRANCISCO BAY REGION**

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

**FOR**

**NPDES WASTEWATER DISCHARGE PERMITS**

## APPLICABILITY

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

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

## I. STANDARD PROVISIONS - PERMIT COMPLIANCE

### A. Duty to Comply

Not Supplemented

### B. Need to Halt or Reduce Activity Not a Defense

Not Supplemented

### C. Duty to Mitigate

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

#### 1. Contingency Plan

The Discharger shall maintain a Contingency Plan as originally required by Regional Water Board Resolution 74-10 and as prudent in accordance with current municipal facility emergency planning. The Contingency Plan shall describe procedures to ensure that existing facilities remain in, or are rapidly returned to, operation in the event of a process failure or emergency incident, such as employee strike, strike by suppliers of chemicals or maintenance

services, power outage, vandalism, earthquake, or fire. The Discharger may combine the Contingency Plan and Spill Prevention Plan into one document. Discharge in violation of the permit where the Discharger has failed to develop and implement a Contingency Plan as described below will be the basis for considering the discharge a willful and negligent violation of the permit pursuant to California Water Code Section 13387. The Contingency Plan shall, at a minimum, contain the provisions of a. through g. below.

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

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

c. Provisions of emergency standby power.

d. Protection against vandalism.

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

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

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

**2. Spill Prevention Plan**

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

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

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

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

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

**D. Proper Operation & Maintenance**

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

1. **Operation and Maintenance (O&M) Manual**

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

2. **Wastewater Facilities Status Report**

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

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

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

**E. Property Rights**

Not Supplemented

**F. Inspection and Entry**

Not Supplemented

**G. Bypass**

Not Supplemented

**H. Upset**

Not Supplemented

**I. Other**

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

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

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

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

## J. Storm Water

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

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

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

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

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

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

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

### 2. Source Identification

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

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

b. A site map showing the following:

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

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

(3) Paved areas and buildings;

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

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

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

(7) Vehicle service areas.

c. A narrative description of the following:

(1) Wastewater treatment process activity areas;

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

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

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

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

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

**3. Storm Water Management Controls**

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

a. Storm water pollution prevention personnel

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

b. Good housekeeping

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

c. Spill prevention and response

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

d. Source control

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

e. Storm water management practices

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

f. Sediment and erosion control

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

g. Employee training

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

h. Inspections

All inspections shall be done by trained personnel. Material handling areas shall be inspected for evidence of, or the potential for, pollutants entering storm water discharges. A tracking or follow up procedure shall be used to ensure appropriate response has been

taken in response to an inspection. Inspections and maintenance activities shall be documented and recorded. Inspection records shall be retained for five years.

i. Records

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

**4. Annual Verification of SWPP Plan**

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

**K. Biosolids Management**

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

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

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

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

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

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

## II. STANDARD PROVISIONS – PERMIT ACTION

Not Supplemented

## III. STANDARD PROVISIONS – MONITORING

## A. Sampling and Analyses

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

### 1. Use of Certified Laboratories

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

### 2. Use of Appropriate Minimum Levels

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

For priority pollutant monitoring, when there is more than one ML value for a given substance, the Discharger may select any one of the analytical methods cited in Table C for compliance determination, or any other method described in 40 CFR part 136 or approved by USEPA (such as the 1600 series) if authorized by the Regional Water Board. However, the ML must be below the effluent limitation and water quality objective. If no ML value is below the effluent limitation and water quality objective, then the method must achieve an ML no greater than the lowest ML value indicated in Table C. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

### 3. Frequency of Monitoring

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

a. Timing of Sample Collection

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

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

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

(4) Effluent sampling for conventional pollutants shall occur on at least one day of any multiple-day bioassay test the MRP requires. During the course of the test, on at least one day, the Discharger shall collect and retain samples of the discharge. In the event a bioassay test does not comply with permit limits, the Discharger shall analyze these

retained samples for pollutants that could be toxic to aquatic life and for which it has effluent limitations.

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

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

b. Conditions Triggering Accelerated Monitoring

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

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

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

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

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

(6) Unless otherwise stipulated by the MRP, when a bypass approved pursuant to Attachment D, Standard Provisions, Sections I.G.2 or I.G.4, occurs, the Discharger shall monitor flows and, using appropriate procedures as specified in the MRP, collect and retain samples for affected discharge points on a daily basis for the

duration of the bypass. The Discharger shall analyze for total suspended solids (TSS) using 24-hour composites (or more frequent increments) and for bacteria indicators with effluent limitations using grab samples. If TSS exceeds 45 mg/L in any composite sample, the Discharger shall also analyze the retained samples for that discharge for all other constituents that have effluent limitations, except oil and grease, mercury, dioxin-TEQ, and acute and chronic toxicity. Additionally, at least once each year, the Discharger shall analyze the retained samples for one approved bypass discharge event for all other constituents that have effluent limitations, except oil and grease, mercury, dioxin-TEQ, and acute and chronic toxicity. This monitoring shall be in addition to the minimum monitoring specified in the MRP.

c. Storm Water Monitoring

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

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

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

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

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

(4) Samples shall be collected from all locations where storm water is discharged. Samples shall represent the quality and quantity of storm water discharged from the facility. If a facility discharges storm water at multiple locations, the Discharger may sample a reduced number of locations if it establishes and documents through the

monitoring program that storm water discharges from different locations are substantially identical.

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

d. Receiving Water Monitoring

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

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

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

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

## B. Biosolids Monitoring

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

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

### 1. Biosolids Monitoring Frequency

Biosolids disposal must be monitored at the following frequency:

| Metric tons biosolids/365 days | Frequency |
|---|---|
| 0-290 | Once per year |
| 290-1500 | Quarterly |
| 1500-15,000 | Six times per year |
| Over 15,000 | Once per month |
| (Metric tons are on a dry weight basis) | |

### 2. Biosolids Pollutants to Monitor

Biosolids shall be monitored for the following constituents:

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

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

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

## C. Standard Observations

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

### 1. Receiving Water Observations

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

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

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

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

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

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

f. Weather conditions:

(1) Air temperature; and

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

### 2. Wastewater Effluent Observations

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

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

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

### 3. Beach and Shoreline Observations

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

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

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

**4. Land Retention or Disposal Area Observations**

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

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

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

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

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

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

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

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

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

## IV. STANDARD PROVISIONS – RECORDS

### A. Records to be Maintained

This supplements IV.A of Standard Provisions (Attachment D)

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

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

**A. Records of monitoring information shall include**

This supplements IV.B of Standard Provision (Attachment D)

**1. Analytical Information**

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

**2. Flow Monitoring Data**

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

a. Total volume for each day; and

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

**3. Wastewater Treatment Process Solids**

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

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

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

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

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

(2) Solids content of the dewatered biosolids; and

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

**4. Disinfection Process**

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

a. For bacteriological analyses:

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

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

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

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

(2) Chlorine dosage (kg/day); and

(3) Dechlorination chemical dosage (kg/day).

**5. Treatment Process Bypasses**

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

a. Identification of the treatment process bypassed;

b. Dates and times of bypass beginning and end;

c. Total bypass duration;

d. Estimated total bypass volume; and

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

**6. Treatment Facility Overflows**

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

### C. Claims of Confidentiality

Not Supplemented

## V. STANDARD PROVISIONS – REPORTING

### A. Duty to Provide Information

Not Supplemented

### B. Signatory and Certification Requirements

Not Supplemented

## C. Monitoring Reports

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

### 1. Self Monitoring Reports

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

a. Transmittal letter

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

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

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

(3) Causes of violations;

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

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

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

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

b. Compliance evaluation summary

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

c. Results of analyses and observations

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

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

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

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

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

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

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

where: $C_x$ = measured or estimated concentration of congener $x$

$TEF_x$ = toxicity equivalency factor for congener x
BEFx = bioaccumulation equivalency factor for congener *x*

## Table A

Minimum Levels, Toxicity Equivalency Factors,
and Bioaccumulation Equivalency Factors

| Dioxin or Furan Congener | Minimum Level (pg/L) | 1998 Toxicity Equivalency Factor (TEF) | Bioaccumulation Equivalency Factor (BEF) |
|---|---|---|---|
| 2,3,7,8-TCDD | 10 | 1.0 | 1.0 |
| 1,2,3,7,8-PeCDD | 50 | 1.0 | 0.9 |
| 1,2,3,4,7,8-HxCDD | 50 | 0.1 | 0.3 |
| 1,2,3,6,7,8-HxCDD | 50 | 0.1 | 0.1 |
| 1,2,3,7,8,9-HxCDD | 50 | 0.1 | 0.1 |
| 1,2,3,4,6,7,8-HpCDD | 50 | 0.01 | 0.05 |
| OCDD | 100 | 0.0001 | 0.01 |
| 2,3,7,8-TCDF | 10 | 0.1 | 0.8 |
| 1,2,3,7,8-PeCDF | 50 | 0.05 | 0.2 |
| 2,3,4,7,8-PeCDF | 50 | 0.5 | 1.6 |
| 1,2,3,4,7,8-HxCDF | 50 | 0.1 | 0.08 |
| 1,2,3,6,7,8-HxCDF | 50 | 0.1 | 0.2 |
| 1,2,3,7,8,9-HxCDF | 50 | 0.1 | 0.6 |
| 2,3,4,6,7,8-HxCDF | 50 | 0.1 | 0.7 |
| 1,2,3,4,6,7,8-HpCDF | 50 | 0.01 | 0.01 |
| 1,2,3,4,7,8,9-HpCDF | 50 | 0.01 | 0.4 |
| OCDF | 100 | 0.0001 | 0.02 |

d. Data reporting for results not yet available

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

e. Flow data

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

f. Annual self monitoring report requirements

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

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

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

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

(4) List of approved analyses, including the following:

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

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

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

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

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

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

g. Report submittal

The Discharger shall submit SMRs to:

California Regional Water Quality Control Board
San Francisco Bay Region

1515 Clay Street, Suite 1400
Oakland, CA 94612
Attn: NPDES Wastewater Division

h. Reporting data in electronic format

The Discharger has the option to submit all monitoring results in an electronic reporting format approved by the Executive Officer. If the Discharger chooses to submit SMRs electronically, the following shall apply:

(1) Reporting Method: The Discharger shall submit SMRs electronically via a process approved by the Executive Officer (see, for example, the letter dated December 17, 1999, "Official Implementation of Electronic Reporting System [ERS]" and the progress report letter dated December 17, 2000).

(2) Monthly or Quarterly Reporting Requirements: For each reporting period (monthly or quarterly as specified in the MRP), the Discharger shall submit an electronic SMR to the Regional Water Board in accordance with the provisions of Section V.C.1.a-e, except for requirements under Section V.C.1.c(1) where ERS does not have fields for dischargers to input certain information (e.g., sample time). However, until USEPA approves the electronic signature or other signature technologies, dischargers that use ERS shall submit a hard copy of the original transmittal letter, an ERS printout of the data sheet, and a violation report (a receipt of the electronic transmittal shall be retained by the Discharger). This electronic SMR submittal suffices for the signed tabulations specified under Section V.C.1.c(1).

(3) Annual Reporting Requirements: Dischargers who have submitted data using the ERS for at least one calendar year are exempt from submitting the portion of the annual report required under Section V.C.1.f(1) and (3).

## D. Compliance Schedules

Not supplemented

## E. Twenty-Four Hour Reporting

This section supplements V.E of Standard Provision (Attachment D)

### 1. Spill of Oil or Other Hazardous Material Reports

a. Within 24 hours of becoming aware of a spill of oil or other hazardous material that is not contained onsite and completely cleaned up, the Discharger shall report by telephone to the Regional Water Board at (510) 622-2369.

b. The Discharger shall also report such spills to the State Office of Emergency Services [telephone (800) 852-7550] only when the spills are in accordance with applicable reporting quantities for hazardous materials.

c. The Discharger shall submit a written report to the Regional Water Board within five working days following telephone notification unless directed otherwise by the Regional Water Board. A report submitted electronically is acceptable. The written report shall include the following:

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

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

(3) Nature of material spilled;

(4) Quantity of material involved;

(5) Receiving water body affected, if any;

(6) Cause of spill;

(7) Estimated size of affected area;

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

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

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

(11) Persons or agencies notified.

**2. Unauthorized Discharges from Municipal Wastewater Treatment Plants[1]**

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

a. Two (2)-Hour Notification

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

(1) Incident description and cause;

[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) 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.

# Table B

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

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

## F. Planned Changes

Not supplemented

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[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.

### 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

## VIII. DEFINITIONS

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

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

1. Arithmetic Calculations

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

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

   or

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

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

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

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

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

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

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

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 |
| | Chromium total[3] | SM 3500 | | | | | 50 | 2 | 10 | 0.5 | 1 | | | 1000 |
| 6. | Copper | 200.9 | | | | | 25 | 5 | 10 | 0.5 | 2 | | | 1000 |
| 7. | Lead | 200.9 | | | | | 20 | 5 | 5 | 0.5 | 2 | | | 10,000 |
| 8. | Mercury | 1631 (note)[4] | | | | | | | | | | | | |
| 9. | Nickel | 249.2 | | | | | 50 | 5 | 20 | 1 | 5 | | | 1000 |
| 10. | Selenium | 200.8 or SM 3114B or C | | | | | | 5 | 10 | 2 | 5 | 1 | | 1000 |
| 11. | Silver | 272.2 | | | | | 10 | 1 | 10 | 0.25 | 2 | | | 1000 |
| 12. | Thallium | 279.2 | | | | | 10 | 2 | 10 | 1 | 5 | | | 1000 |
| 13. | Zinc | 200 or 289 | | | | | 20 | | 20 | 1 | 10 | | | |
| 14. | Cyanide | SM 4500 $CN^-$ C or I | | | | 5 | | | | | | | | |
| 15. | Asbestos (only required for dischargers to MUN waters)[5] | 0100.2 [6] | | | | | | | | | | | | |
| 16. | 2,3,7,8-TCDD and 17 congeners (Dioxin) | 1613 | | | | | | | | | | | | |
| 17. | Acrolein | 603 | 2.0 | 5 | | | | | | | | | | |
| 18. | Acrylonitrile | 603 | 2.0 | 2 | | | | | | | | | | |
| 19. | Benzene | 602 | 0.5 | 2 | | | | | | | | | | |
| 33. | Ethylbenzene | 602 | 0.5 | 2 | | | | | | | | | | |
| 39. | Toluene | 602 | 0.5 | 2 | | | | | | | | | | |
| 20. | Bromoform | 601 | 0.5 | 2 | | | | | | | | | | |
| 21. | Carbon Tetrachloride | 601 | 0.5 | 2 | | | | | | | | | | |
| 22. | Chlorobenzene | 601 | 0.5 | 2 | | | | | | | | | | |
| 23. | Chlorodibromomethane | 601 | 0.5 | 2 | | | | | | | | | | |
| 24. | Chloroethane | 601 | 0.5 | 2 | | | | | | | | | | |
| 25. | 2-Chloroethylvinyl Ether | 601 | 1 | 1 | | | | | | | | | | |
| 26. | Chloroform | 601 | 0.5 | 2 | | | | | | | | | | |
| 75. | 1,2-Dichlorobenzene | 601 | 0.5 | 2 | | | | | | | | | | |
| 76. | 1,3-Dichlorobenzene | 601 | 0.5 | 2 | | | | | | | | | | |
| 77. | 1,4-Dichlorobenzene | 601 | 0.5 | 2 | | | | | | | | | | |
| 27. | Dichlorobromomethane | 601 | 0.5 | 2 | | | | | | | | | | |
| 28. | 1,1-Dichloroethane | 601 | 0.5 | 1 | | | | | | | | | | |
| 29. | 1,2-Dichloroethane | 601 | 0.5 | 2 | | | | | | | | | | |
| 30. | 1,1-Dichloroethylene or 1,1-Dichloroethene | 601 | 0.5 | 2 | | | | | | | | | | |
| 31. | 1,2-Dichloropropane | 601 | 0.5 | 1 | | | | | | | | | | |
| 32. | 1,3-Dichloropropylene or 1,3-Dichloropropene | 601 | 0.5 | 2 | | | | | | | | | | |
| 34. | Methyl Bromide or Bromomethane | 601 | 1.0 | 2 | | | | | | | | | | |

| 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 |
| 35. | Methyl Chloride or Chloromethane | 601 | 0.5 | 2 | | | | | | | | | | |
| 36. | Methylene Chloride or Dichlorormethane | 601 | 0.5 | 2 | | | | | | | | | | |
| 37. | 1,1,2,2-Tetrachloroethane | 601 | 0.5 | 1 | | | | | | | | | | |
| 38. | Tetrachloroethylene | 601 | 0.5 | 2 | | | | | | | | | | |
| 40. | 1,2-Trans-Dichloroethylene | 601 | 0.5 | 1 | | | | | | | | | | |
| 41. | 1,1,1-Trichloroethane | 601 | 0.5 | 2 | | | | | | | | | | |
| 42. | 1,1,2-Trichloroethane | 601 | 0.5 | 2 | | | | | | | | | | |
| 43. | Trichloroethene | 601 | 0.5 | 2 | | | | | | | | | | |
| 44. | Vinyl Chloride | 601 | 0.5 | 2 | | | | | | | | | | |
| 45. | 2-Chlorophenol | 604 | 2 | 5 | | | | | | | | | | |
| 46. | 2,4-Dichlorophenol | 604 | 1 | 5 | | | | | | | | | | |
| 47. | 2,4-Dimethylphenol | 604 | 1 | 2 | | | | | | | | | | |
| 48. | 2-Methyl-4,6-Dinitrophenol or Dinitro-2-methylphenol | 604 | 10 | 5 | | | | | | | | | | |
| 49. | 2,4-Dinitrophenol | 604 | 5 | 5 | | | | | | | | | | |
| 50. | 2-Nitrophenol | 604 | | 10 | | | | | | | | | | |
| 51. | 4-Nitrophenol | 604 | 5 | 10 | | | | | | | | | | |
| 52. | 3-Methyl-4-Chlorophenol | 604 | 5 | 1 | | | | | | | | | | |
| 53. | Pentachlorophenol | 604 | 1 | 5 | | | | | | | | | | |
| 54. | Phenol | 604 | 1 | 1 | | 50 | | | | | | | | |
| 55. | 2,4,6-Trichlorophenol | 604 | 10 | 10 | | | | | | | | | | |
| 56. | Acenaphthene | 610 HPLC | 1 | 1 | 0.5 | | | | | | | | | |
| 57. | Acenaphthylene | 610 HPLC | | 10 | 0.2 | | | | | | | | | |
| 58. | Anthracene | 610 HPLC | | 10 | 2 | | | | | | | | | |
| 60. | Benzo(a)Anthracene or 1,2 Benzanthracene | 610 HPLC | 10 | 5 | | | | | | | | | | |
| 61. | Benzo(a)Pyrene | 610 HPLC | | 10 | 2 | | | | | | | | | |
| 62. | Benzo(b)Fluoranthene or 3,4 Benzofluoranthene | 610 HPLC | | 10 | 10 | | | | | | | | | |
| 63. | Benzo(ghi)Perylene | 610 HPLC | | 5 | 0.1 | | | | | | | | | |
| 64. | Benzo(k)Fluoranthene | 610 HPLC | | 10 | 2 | | | | | | | | | |
| 74. | Dibenzo(a,h)Anthracene | 610 HPLC | | 10 | 0.1 | | | | | | | | | |
| 86. | Fluoranthene | 610 HPLC | 10 | 1 | 0.05 | | | | | | | | | |
| 87. | Fluorene | 610 HPLC | | 10 | 0.1 | | | | | | | | | |
| 92. | Indeno(1,2,3-cd) Pyrene | 610 HPLC | | 10 | 0.05 | | | | | | | | | |
| 100. | Pyrene | 610 HPLC | | 10 | 0.05 | | | | | | | | | |
| 68. | Bis(2-Ethylhexyl)Phthalate | 606 or 625 | 10 | 5 | | | | | | | | | | |
| 70. | Butylbenzyl Phthalate | 606 or 625 | 10 | 10 | | | | | | | | | | |
| 79. | Diethyl Phthalate | 606 or 625 | 10 | 2 | | | | | | | | | | |
| 80. | Dimethyl Phthalate | 606 or 625 | 10 | 2 | | | | | | | | | | |
| 81. | Di-n-Butyl Phthalate | 606 or 625 | | 10 | | | | | | | | | | |
| 84. | Di-n-Octyl Phthalate | 606 or 625 | | 10 | | | | | | | | | | |
| 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 | | | | | | | | | | |

| 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 |
| 73. | Chrysene | 625 | | 10 | 5 | | | | | | | | | |
| 78. | 3,3'-Dichlorobenzidine | 625 | | 5 | | | | | | | | | | |
| 82. | 2,4-Dinitrotoluene | 625 | 10 | 5 | | | | | | | | | | |
| 83. | 2,6-Dinitrotoluene | 625 | | 5 | | | | | | | | | | |
| 85. | 1,2-Diphenylhydrazine (note)[7] | 625 | | 1 | | | | | | | | | | |
| 88. | Hexachlorobenzene | 625 | 5 | 1 | | | | | | | | | | |
| 89. | Hexachlorobutadiene | 625 | 5 | 1 | | | | | | | | | | |
| 90. | Hexachlorocyclopentadiene | 625 | 5 | 5 | | | | | | | | | | |
| 91. | Hexachloroethane | 625 | 5 | 1 | | | | | | | | | | |
| 93. | Isophorone | 625 | 10 | 1 | | | | | | | | | | |
| 94. | Naphthalene | 625 | 10 | 1 | 0.2 | | | | | | | | | |
| 95. | Nitrobenzene | 625 | 10 | 1 | | | | | | | | | | |
| 96. | N-Nitrosodimethylamine | 625 | 10 | 5 | | | | | | | | | | |
| 97. | N-Nitrosodi-n-Propylamine | 625 | 10 | 5 | | | | | | | | | | |
| 98. | N-Nitrosodiphenylamine | 625 | 10 | 1 | | | | | | | | | | |
| 99. | Phenanthrene | 625 | | 5 | 0.05 | | | | | | | | | |
| 101. | 1,2,4-Trichlorobenzene | 625 | 1 | 5 | | | | | | | | | | |
| 102. | Aldrin | 608 | 0.005 | | | | | | | | | | | |
| 103. | α-BHC | 608 | 0.01 | | | | | | | | | | | |
| 104. | β-BHC | 608 | 0.005 | | | | | | | | | | | |
| 105. | γ-BHC (Lindane) | 608 | 0.02 | | | | | | | | | | | |
| 106. | δ-BHC | 608 | 0.005 | | | | | | | | | | | |
| 107. | Chlordane | 608 | 0.1 | | | | | | | | | | | |
| 108. | 4,4'-DDT | 608 | 0.01 | | | | | | | | | | | |
| 109. | 4,4'-DDE | 608 | 0.05 | | | | | | | | | | | |
| 110. | 4,4'-DDD | 608 | 0.05 | | | | | | | | | | | |
| 111. | Dieldrin | 608 | 0.01 | | | | | | | | | | | |
| 112. | Endosulfan (alpha) | 608 | 0.02 | | | | | | | | | | | |
| 113. | Endosulfan (beta) | 608 | 0.01 | | | | | | | | | | | |
| 114. | Endosulfan Sulfate | 608 | 0.05 | | | | | | | | | | | |
| 115. | Endrin | 608 | 0.01 | | | | | | | | | | | |
| 116. | Endrin Aldehyde | 608 | 0.01 | | | | | | | | | | | |
| 117. | Heptachlor | 608 | 0.01 | | | | | | | | | | | |
| 118. | Heptachlor Epoxide | 608 | 0.01 | | | | | | | | | | | |
| 119-125 | PCBs: Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260 | 608 | 0.5 | | | | | | | | | | | |
| 126. | Toxaphene | 608 | 0.5 | | | | | | | | | | | |

## Footnotes to Table C:

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

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

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

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

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

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

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

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

# ATTACHMENT H
PRETREATMENT PROGRAM PROVISIONS

For

NPDES POTW WASTEWATER DISCHARGE PERMITS

March 2011

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## Attachment H: Pretreatment Program Provisions

**A.** The Discharger shall be responsible and liable for the performance of all Control Authority pretreatment requirements contained in 40 CFR 403, including any regulatory revisions to Part 403. Where a Part 403 revision is promulgated after the effective date of the Discharger's permit and places mandatory actions upon the Discharger as Control Authority but does not specify a timetable for completion of the actions, the Discharger shall complete the required actions within six months from the issuance date of this permit or six months from the effective date of the Part 403 revisions, whichever comes later.

(If the Discharger cannot complete the required actions within the above six-month period due to the need to process local adoption of sewer use ordinance modifications or other substantial pretreatment program modifications, the Discharger shall notify the Executive Officer in writing at least 60 days prior to the six-month deadline. The written notification shall include a summary of completed required actions, an explanation for why the six-month deadline cannot be met, and a proposed timeframe to complete the rest of the required actions as soon as practical but not later than within twelve months of the issuance date of this permit or twelve months of the effective date of the Part 403 revisions, whichever comes later. The Executive Officer will notify the Discharger in writing within 30 days of receiving the request if the extension is not approved.)

The United States Environmental Protection Agency (USEPA), the State and/or other appropriate parties may initiate enforcement action against a nondomestic user for noncompliance with applicable standards and requirements as provided in the Clean Water Act (Act).

**B.** The Discharger shall enforce the requirements promulgated under Sections 307(b), 307(c), 307(d) and 402(b) of the Act with timely, appropriate and effective enforcement actions. The Discharger shall cause nondomestic users subject to Federal Categorical Standards to achieve compliance no later than the date specified in those requirements or, in the case of a new nondomestic user, upon commencement of the discharge.

**C.** The Discharger shall perform the pretreatment functions as required in 40 CFR 403 and amendments or modifications thereto including, but not limited to:

**1.** Implement the necessary legal authorities to fully implement the pretreatment regulations as provided in 40 CFR 403.8(f)(1);

**2.** Implement the programmatic functions as provided in 40 CFR 403.8(f)(2);

**3.** Publish an annual list of nondomestic users in significant noncompliance as provided per 40 CFR 403.8(f)(2)(viii);

4. Provide for the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR 403.8(f)(3); and

5. Enforce the national pretreatment standards for prohibited discharges and categorical standards as provided in 40 CFR 403.5 and 403.6, respectively.

**D.** The Discharger shall submit annually a report to USEPA Region 9, the State Water Board and the Regional Water Board describing its pretreatment program activities over the previous calendar year. In the event that the Discharger is not in compliance with any conditions or requirements of the Pretreatment Program, the Discharger shall also include the reasons for noncompliance and a plan and schedule for achieving compliance. The report shall contain, but is not limited to, the information specified in Appendix H-1 entitled, "Requirements for Pretreatment Annual Reports." The annual report is due each year on February 28th.

**E.** The Discharger shall submit a pretreatment semiannual report to USEPA Region 9, the State Water Board and the Regional Water Board describing the status of its significant industrial users (SIUs). The report shall contain, but is not limited to, information specified in Appendix H-2 entitled, "Requirements for Pretreatment Semiannual Reports." The semiannual report is due July 31st for the period January through June. The information for the period July through December of each year shall be included in the Annual Report identified in Appendix H-1. The Executive Officer may exempt a Discharger from the semiannual reporting requirements on a case by case basis subject to State Water Board and USEPA's comment and approval.

**F.** The Discharger shall conduct the monitoring of its treatment plant's influent, effluent, and sludge (biosolids) as described in Appendix H-4 entitled, "Requirements for Influent, Effluent and Sludge (Biosolids) Monitoring." (The term "biosolids," as used in this Attachment, shall have the same meaning as wastewater treatment plant "sludge" and will be used from this point forward.) The Discharger shall evaluate the results of the sampling and analysis during the preparation of the semiannual and annual reports to identify any trends. Signing the certification statement used to transmit the reports shall be deemed to certify the Discharger has completed this data evaluation. A tabulation of the data shall be included in the pretreatment annual report as specified in Appendix H-4. The Executive Officer may require more or less frequent monitoring on a case by case basis.

# APPENDIX H-1

## REQUIREMENTS FOR PRETREATMENT ANNUAL REPORTS

The Pretreatment Annual Report is due each year on February 28 and shall contain activities conducted during the previous calendar year. The purpose of the Annual Report is to:

1. Describe the status of the Discharger's pretreatment program; and

2. Report on the effectiveness of the program, as determined by comparing the results of the preceding year's program implementation.

The report shall contain, at a minimum, the following information:

### A. Cover Sheet

The cover sheet shall include:

1. All the names and National Pollutant Discharge Elimination Discharge System (NPDES) permit numbers of all the Dischargers that are part of the Pretreatment Program;

2. The name, address and telephone number of a pretreatment contact person;

3. The period covered in the report;

4. A statement of truthfulness; and

5. The dated signature of a principal executive officer, ranking elected official, or other duly authorized employee who is responsible for overall operation of the Publicly Owned Treatment Works (POTW) (40 CFR 403.12(m)).

### B. Introduction

This section shall include:

1. Any pertinent background information related to the Discharger and/or the nondomestic user base of the area;

2. List of applicable interagency agreements used to implement the Discharger's pretreatment program (e.g., Memoranda of Understanding (MOU) with satellite sanitary sewer collection systems); and

3. A status summary of the tasks required by a Pretreatment Compliance Inspection (PCI), Pretreatment Compliance Audit (PCA), Cleanup and Abatement Order (CAO), or other pretreatment-related enforcement actions required by the Regional Water Board or the

USEPA. A more detailed discussion can be referenced and included in the section entitled, "Program Changes," if needed.

**C. Definitions**

This section shall include a list of key terms and their definitions that the Discharger uses to describe or characterize elements of its pretreatment program or the Discharger may provide a reference to its website if the applicable definitions are available on-line.

**D. Discussion of Upset, Interference and Pass Through**

This section shall include a discussion of Upset, Interference or Pass Through incidents, if any, at the Discharger's treatment plant(s) that the Discharger knows of or suspects were caused by nondomestic user discharges. Each incident shall be described, at a minimum, consisting of the following information:

**1.** A description of what occurred;

**2.** A description of what was done to identify the source;

**3.** The name and address of the nondomestic user responsible;

**4.** The reason(s) why the incident occurred;

**5.** A description of the corrective actions taken; and

**6.** An examination of the local and federal discharge limits and requirements for the purposes of determining whether any additional limits or changes to existing requirements may be necessary to prevent other Upset, Interference or Pass Through incidents.

**E. Influent, Effluent and Biosolids Monitoring Results**

The Discharger shall evaluate the influent, effluent and biosolids monitoring results as specified in Appendix H-4 in preparation of this report. The Discharger shall retain the analytical laboratory reports with the Quality Assurance and Quality Control (QA/QC) data validation and make these reports available upon request.

This section shall include:

**1.** Description of the sampling procedures and an analysis of the results (see Appendix H-4 for specific requirements);

**2.** Tabular summary of the compounds detected (compounds measured above the detection limit for the analytical method used) for the monitoring data generated during the reporting year as specified in Appendix H-4;

3. Discussion of the investigation findings into any contributing sources of the compounds that exceed NPDES limits; and

4. Graphical representation of the influent and effluent metal monitoring data for the past five years with a discussion of any trends.

**F. Inspection, Sampling and Enforcement Programs**

This section shall include at a minimum the following information:

1. Inspections: Summary of the inspection program (e.g., criteria for determining the frequency of inspections and inspection procedures);

2. Sampling Events: Summary of the sampling program (e.g., criteria for determining the frequency of sampling and chain of custody procedures); and

3. Enforcement: Summary of Enforcement Response Plan (ERP) implementation including dates for adoption, last revision and submission to the Regional Water Board.

**G. Updated List of Regulated SIUs**

This section shall contain a list of all of the federal categories that apply to SIUs regulated by the Discharger. The specific categories shall be listed including the applicable 40 CFR subpart and section, and pretreatment standards (both maximum and average limits). Local limits developed by the Discharger shall be presented in a table including the applicability of the local limits to SIUs. If local limits do not apply uniformly to SIUs, specify the applicability in the tables listing the categorical industrial users (CIUs) and non-categorical SIUs. Tables developed in Sections 7A and 7B can be used to present or reference this information.

1. CIUs - Include a table that alphabetically lists the CIUs regulated by the Discharger as of the end of the reporting period. This list shall include:

   a. Name;

   b. Address;

   c. Applicable federal category(ies);

   d. Reference to the location where the applicable federal categorical standards are presented in the report;

   e. Identify all deletions and additions keyed to the list submitted in the previous annual report. All deletions shall be briefly explained (e.g., closure, name change, ownership change, reclassification, declassification); and

   f. Information, calculations and data used to determine the limits for those CIUs for which a combined waste stream formula is applied.

**2.** Non-categorical SIUs - Include a table that alphabetically lists the SIUs not subject to any federal categorical standards that were regulated by the Discharger as of the end of the reporting period. This list shall include:

**a.** Name;

**b.** Address;

**c.** A brief description of the type of business;

**d.** Identify all deletions and additions keyed to the list submitted in the previous annual report. All deletions shall be briefly explained (e.g., closure, name change, ownership change, reclassification, declassification); and

**e.** Indicate the applicable discharge limits (e.g., different from local limits) to which the SIUs are subject and reference to the location where the applicable limits (e.g., local discharge limits) are presented in the report.

**H. SIU (categorical and non-categorical) Compliance Activities**

The information required in this section may be combined in the table developed in Section 7 above.

**1. Inspection and Sampling Summary:** This section shall contain a summary of all the SIU inspections and sampling activities conducted by the Discharger and sampling activities conducted by the SIU over the reporting year to gather information and data regarding SIU compliance. The summary shall include:

**a.** The number of inspections and sampling events conducted for each SIU by the Discharger;

**b.** The number of sampling events conducted by the SIU. Identify SIUs that are operating under an approved Total Toxic Organic (TTO) Management Plan;

**c.** The quarters in which the above activities were conducted; and

**d.** The compliance status of each SIU, delineated by quarter, and characterized using all applicable descriptions as given below:

(1) Consistent compliance;

(2) Inconsistent compliance;

(3) Significant noncompliance;

(4) On a compliance schedule to achieve compliance, (include the date final compliance is required);

(5) Not in compliance and not on a compliance schedule; and

(6) Compliance status unknown, and why not.

2. **Enforcement Summary:** This section shall contain a summary of SIU compliance and enforcement activities during the reporting year. The summary may be included in the summary table developed in section 8A and shall include the names and addresses of all SIUs affected by the actions identified below. For each notice specified in enforcement action "i" through "iv," indicate whether it was for an infraction of a federal or local standard/limit or requirement.

   **a.** Warning letters or notices of violations regarding SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements;

   **b.** Administrative Orders regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements;

   **c.** Civil actions regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements;

   **d.** Criminal actions regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements;

   **e.** Assessment of monetary penalties. Identify the amount of penalty in each case and reason for assessing the penalty;

   **f.** Order to restrict/suspend discharge to the Discharger; and

   **g.** Order to disconnect the discharge from entering the Discharger.

3. **July-December Semiannual Data:** For SIU violations/noncompliance during the semiannual reporting period from July 1 through December 31, provide the following information:

   **a.** Name and facility address of the SIU;

   **b.** Indicate if the SIU is subject to Federal categorical standards; if so, specify the category including the subpart that applies;

   **c.** For SIUs subject to Federal Categorical Standards, indicate if the violation is of a categorical or local standard; and

**d.** Indicate the compliance status of the SIU for the two quarters of the reporting period.

**e.** For violations/noncompliance identified in the reporting period, provide:

(1) The date(s) of violation(s);

(2) The parameters and corresponding concentrations exceeding the limits and the discharge limits for these parameters; and

(3) A brief summary of the noncompliant event(s) and the steps that are being taken to achieve compliance.

## I. Baseline Monitoring Report Update

This section shall provide a list of CIUs added to the pretreatment program since the last annual report. This list of new CIUs shall summarize the status of the respective Baseline Monitoring Reports (BMR). The BMR must contain the information specified in 40 CFR 403.12(b). For each new CIU, the summary shall indicate when the BMR was due; when the CIU was notified by the Discharger of this requirement; when the CIU submitted the report; and/or when the report is due.

## J. Pretreatment Program Changes

This section shall contain a description of any significant changes in the Pretreatment Program during the past year including, but not limited to:

**1.** Legal authority;

**2.** Local limits;

**3.** Monitoring/ inspection program and frequency;

**4.** Enforcement protocol;

**5.** Program's administrative structure;

**6.** Staffing level;

**7.** Resource requirements;

**8.** Funding mechanism;

**9.** If the manager of the Discharger's pretreatment program changed, a revised organizational chart shall be included; and

**10.** If any element(s) of the program is in the process of being modified, this intention shall also be indicated.

## K. Pretreatment Program Budget

This section shall present the budget spent on the Pretreatment Program. The budget, either by the calendar or fiscal year, shall show the total expenses required to implement the pretreatment program. A brief discussion of the source(s) of funding shall be provided. In addition, the Discharger shall make available upon request specific details on its pretreatment program expense amounts such as for personnel, equipment, and chemical analyses.

**L. Public Participation Summary**

This section shall include a copy of the public notice as required in 40 CFR 403.8(f)(2)(viii). If a notice was not published, the reason shall be stated.

**M. Biosolids Storage and Disposal Practice**

This section shall describe how treated biosolids are stored and ultimately disposed. If a biosolids storage area is used, it shall be described in detail including its location, containment features and biosolids handling procedures.

**N. Other Pollutant Reduction Activities**

This section shall include a brief description of any programs the Discharger implements to reduce pollutants from nondomestic users that are not classified as SIUs. If the Discharger submits any of this program information in an Annual Pollution Prevention Report, reference to this other report shall satisfy this reporting requirement.

**O. Other Subjects**

Other information related to the Pretreatment Program that does not fit into any of the above categories should be included in this section.

**P. Permit Compliance System (PCS) Data Entry Form**

The annual report shall include the PCS Data Entry Form. This form shall summarize the enforcement actions taken against SIUs in the past year. This form shall include the following information:

**1.** Discharger's name,

**2.** NPDES Permit number,

**3.** Period covered by the report,

**4.** Number of SIUs in significant noncompliance (SNC) that are on a pretreatment compliance schedule,

**5.** Number of notices of violation and administrative orders issued against SIUs,

**6.** Number of civil and criminal judicial actions against SIUs,

7. Number of SIUs that have been published as a result of being in SNC, and

8. Number of SIUs from which penalties have been collected.

## APPENDIX H-2

## REQUIREMENTS FOR JANUARY-JUNE PRETREATMENT SEMIANNUAL REPORT

The pretreatment semiannual report is due on July 31st for pretreatment program activities conducted from January through June unless an exception has been granted by the Regional Water Board's Executive Officer (e.g., pretreatment programs without any SIUs may qualify for an exception to the pretreatment semiannual report). Pretreatment activities conducted from July through December of each year shall be included in the Pretreatment Annual Report as specified in Appendix H-1. The pretreatment semiannual report shall contain, at a minimum the following information:

### A. Influent, Effluent and Biosolids Monitoring

The influent, effluent and biosolids monitoring results shall be evaluated in preparation of this report. The Discharger shall retain analytical laboratory reports with the QA/QC data validation and make these reports available upon request. The Discharger shall also make available upon request a description of its influent, effluent and biosolids sampling procedures. Violations of any parameter that exceed NPDES limits shall be identified and reported. The contributing source(s) of the parameters that exceed NPDES limits shall be investigated and discussed.

### B. Significant Industrial User Compliance Status

This section shall contain a list of all Significant Industrial Users (SIUs) that were not in consistent compliance with all pretreatment standards/limits or requirements for the reporting period. For the reported SIUs, the compliance status for the previous semiannual reporting period shall be included. Once the SIU has determined to be out of compliance, the SIU shall be included in subsequent reports until consistent compliance has been achieved. A brief description detailing the actions that the SIU undertook to come back into compliance shall be provided.

For each SIU on the list, the following information shall be provided:

1. Name and facility address of the SIU

2. Indicate if the SIU is subject to Federal categorical standards; if so, specify the category including the subpart that applies.

3. For SIUs subject to Federal Categorical Standards, indicate if the violation is of a categorical or local standard.

4. Indicate the compliance status of the SIU for the two quarters of the reporting period.

5. For violations/noncompliance identified in the reporting period, provide:

   a. The date(s) of violation(s);

   b. The parameters and corresponding concentrations exceeding the limits and the discharge limits for these parameters; and

   c. A brief summary of the noncompliant event(s) and the steps that are being taken to achieve compliance.

**C. Discharger's Compliance with Pretreatment Program Requirements**

This section shall contain a discussion of the Discharger's compliance status with the Pretreatment Program Requirements as indicated in the latest Pretreatment Compliance Audit (PCA) Report or Pretreatment Compliance Inspection (PCI) Report. It shall contain a summary of the following information:

1. Date of latest PCA or PCI report;

2. Date of the Discharger's response;

3. List of unresolved issues; and

4. Plan(s) and schedule for resolving the remaining issues.

# APPENDIX H-3

## SIGNATURE REQUIREMENTS FOR PRETREATMENT ANNUAL AND SEMIANNUAL REPORTS

The pretreatment annual and semiannual reports shall be signed by a principal executive officer, ranking elected official, or other duly authorized employee who is responsible for the overall operation of the Discharger [POTW - 40 CFR 403.12(m)]. Signed copies of the reports shall be submitted to the Regional Administrator at USEPA, the State Water Board, and the Regional Water Board at the following addresses unless the Discharger is instructed by any of these agencies to submit electronic copies of the required reports:

Pretreatment Program Reports

Clean Water Act Compliance Office (WTR-7)

Water Division

Pacific Southwest Region

U.S. Environmental Protection Agency

75 Hawthorne Street

San Francisco, CA 94105-3901

Submit electronic copies only to State and Regional Water Boards:

Pretreatment Program Manager

Regulatory Unit

State Water Resources Control Board

Division of Water Quality-15th Floor

1001 I Street
Sacramento, CA 95814

DMR@waterboards.ca.gov
NPDES_Wastewater@waterboards.ca.gov

Pretreatment Coordinator

NPDES Wastewater Division

SF Bay Regional Water Quality Control Board

1515 Clay Street, Suite 1400

Oakland, CA 94612

(Submit the report as a single Portable Document Format (PDF) file to the Pretreatment Coordinator's folder in the Regional Water Board's File Transfer Protocol (FTP) site. The instructions for using the FTP site can be found at the following internet address: http://www.waterboards.ca.gov/sanfranciscobay/publications_forms/documents/FTP_Discharger_Guide-12-2010.pdf.)

# APPENDIX H-4

## REQUIREMENTS FOR INFLUENT, EFFLUENT AND BIOSOLIDS MONITORING

The Discharger shall conduct sampling of its treatment plant's influent, effluent and biosolids at the frequency shown in **the pretreatment requirements table** of the Monitoring and Reporting Program (MRP, Attachment E). When sampling periods coincide, one set of test results, reported separately, may be used for those parameters that are required to be monitored by both the influent and effluent monitoring requirements of the MRP and the Pretreatment Program. The Pretreatment Program monitoring reports as required in Appendices H-1 and H-2 shall be transmitted to the Pretreatment Program Coordinator.

### A. Reduction of Monitoring Frequency

The minimum frequency of Pretreatment Program influent, effluent, and biosolids monitoring shall be dependant on the number of significant industrial users (SIUs) identified in the Discharger's Pretreatment Program as indicated in Table H-1.

| **T Table H-1: Minimum Frequency of Pretreatment Program Monitoring** | |
|---|---|
| N Number of SIUs | Mi Minimum Frequency |
| ≤ ≤ 5 | O Once every five years |
| > > 5 and < 50 | O Once every year |
| ≥ ≥ 50 | T Twice per year |

If the Discharger's required monitoring frequency is greater than the minimum specified in Table H-1, the Discharger may request reduced monitoring frequency for that constituent(s)as part of its application for permit reissuance if it meets the following criteria:

The monitoring data for the constituent(s) consistently show non-detect (ND) levels for the effluent monitoring and very low (i.e., near ND) levels for influent and biosolids monitoring for a minimum of eight previous years' worth of data.

The Discharger's request shall include tabular summaries of the data and a description of the trends in the industrial, commercial, and residential customers in the Discharger's service area that demonstrate control over the sources of the constituent(s). The Regional Water Board may grant a reduced monitoring frequency in the reissued permit after considering the information provided by the Discharger and any other relevant information.

### B. Influent and Effluent Monitoring

The Discharger shall monitor for the parameters using the required sampling and test methods listed in **the pretreatment table** of the MRP. Any test method substitutions must have received prior written Executive Officer approval. Influent and Effluent sampling locations shall be the same as those sites specified in the MRP.

The influent and effluent samples should be taken at staggered times to account for treatment plant detention time. Appropriately staggered sampling is considered consistent with the requirement for collection of effluent samples coincident with influent samples in Section III.A.3.a(2) of Attachment D. All samples must be representative of daily operations. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto. For effluent monitoring, the reporting limits for the individual parameters shall be at or below the minimum levels (MLs) as stated in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (2000) [also known as the State Implementation Policy (SIP)]; any revisions to the MLs shall be adhered to. If a parameter does not have a stated minimum level, then the Discharger shall conduct the analysis using the lowest commercially available and reasonably achievable detection levels.

The following report elements should be used to submit the influent and effluent monitoring results. A similarly structured format may be used but will be subject to Regional Water Board approval. The monitoring reports shall be submitted with the Pretreatment Annual Report identified in Appendix H-1.

**1.** Sampling Procedures, Sample Dechlorination, Sample Compositing, and Data Validation (applicable quality assurance/quality control) shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto. The Discharger shall make available upon request its sampling procedures including methods of dechlorination, compositing, and data validation.

**2.** A tabulation of the test results for the detected parameters shall be provided.

**3.** Discussion of Results – The report shall include a complete discussion of the test results for the detected parameters. If any pollutants are detected in sufficient concentration to upset, interfere or pass through plant operations, the type of pollutant(s) and potential source(s) shall be noted, along with a plan of action to control, eliminate, and/or monitor the pollutant(s). Any apparent generation and/or destruction of pollutants attributable to chlorination/dechlorination sampling and analysis practices shall be noted.

## C. Biosolids Monitoring

Biosolids should be sampled in a manner that will be representative of the biosolids generated from the influent and effluent monitoring events except as noted in (C) below. The same parameters required for influent and effluent analysis shall be included in the biosolids analysis. The biosolids analyzed shall be a composite sample of the biosolids for final disposal consisting of:

**1.** Biosolids lagoons – 20 grab samples collected at representative equidistant intervals (grid pattern) and composited as a single grab, or

**2.** Dried stockpile – 20 grab samples collected at various representative locations and depths and composited as a single grab, or

3. Dewatered biosolids- daily composite of 4 representative grab samples each day for 5 days taken at equal intervals during the daily operating shift taken from a) the dewatering units or b) from each truckload, and shall be combined into a single 5-day composite.

The USEPA manual, POTW Sludge Sampling and Analysis Guidance Document, August 1989, containing detailed sampling protocols specific to biosolids is recommended as a guidance for sampling procedures. The USEPA manual Analytical Methods of the National Sewage Sludge Survey, September 1990, containing detailed analytical protocols specific to biosolids, is recommended as a guidance for analytical methods.

In determining if the biosolids is a hazardous waste, the Discharger shall adhere to Article 2, "Criteria for Identifying the Characteristics of Hazardous Waste," and Article 3, "Characteristics of Hazardous Waste," of Title 22, California Code of Regulations, Sections 66261.10 to 66261.24 and all amendments thereto.

The following report elements should be used to submit the biosolids monitoring results. A similarly structured form may be used but will be subject to Regional Water Board approval. The results shall be submitted with the Pretreatment Annual Report identified in Appendix H-1.

1. Sampling Procedures and Data Validation (applicable quality assurance/quality control) shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto. The Discharger shall make available upon request its biosolids sampling procedures and data validation methods.

2. Test Results – Tabulate the test results for the detected parameters and include the percent solids.

3. Discussion of Results –Include a complete discussion of test results for the detected parameters. If the detected pollutant(s) is reasonably deemed to have an adverse effect on biosolids disposal, a plan of action to control, eliminate, and/or monitor the pollutant(s) and the known or potential source(s) shall be included. Any apparent generation and/or destruction of pollutants attributable to chlorination/dechlorination sampling and analysis practices shall be noted.

The Discharger shall also provide a summary table presenting any influent, effluent or biosolids monitoring data for non-priority pollutants that the Discharger believes may be causing or contributing to interference, pass through or adversely impacting biosolids quality.