



# California Regional Water Quality Control Board

## San Francisco Bay Region



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Arnold Schwarzenegger  
Governor

**ORDER NO. R2-2007-008**  
**NPDES NO. CA0037648**

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

**Table 1. Discharger Information**

Discharger	Central Contra Costa Sanitary District
Name of Facility	Central Contra Costa Sanitary District Collection System and Wastewater Treatment Plant
Facility Address	5019 Imhoff Place
	Martinez, CA 94553
	Contra Costa County

The discharge by the Operator from the discharge point identified below is subject to waste discharge requirements as set forth in this Order.

**Table 2. Discharge Location**

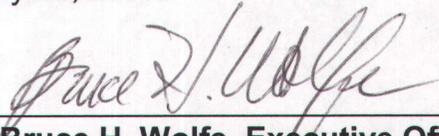
Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	POTW Effluent	38°, 2', 44" N	122°, 5', 55" W	Suisun Bay

**Table 3. Administrative Information**

This Order was adopted by the Regional Water Quality Control Board on:	January 23, 2007
This Order shall become effective on:	April 1, 2007
This Order shall expire on:	March 31, 2012
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, not later than 180 days in advance of the Order expiration date as application for issuance of new waste discharge requirements.	

IT IS HEREBY ORDERED, that this Order supersedes Order No. 01-068 except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

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 January 23, 2007.

  
Bruce H. Wolfe, Executive Officer

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The following documents are part of this Permit, but are not physically attached to

volume. They are available on the internet site at

[www.waterboards.ca.gov/sanfranciscobay](http://www.waterboards.ca.gov/sanfranciscobay)

- Self-Monitoring Program, Part A, adopted August 1993
- Standard Provisions and Reporting Requirements, August 1993
- August 6, 2001 Staff Letter: Requirement for Priority Pollutant Monitoring in Receiving Water and Wastewater Discharges
- Regional Water Board Resolution 74-10

Attachment H – Pretreatment Requirements..... H-1

**I. FACILITY INFORMATION**

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

**Table 4. Facility Information**

<b>Discharger</b>	Central Contra Costa Sanitary District
<b>Name of Facility</b>	Central Contra Costa Sanitary District WWTP and its collection system
<b>Facility Address</b>	5019 Imhoff Place
	Martinez, CA 94553
	Contra Costa County
<b>Facility Contact, Title, and Phone</b>	Douglas J. Craig, Director of Operations, 925-229-7284
<b>Mailing Address</b>	SAME
<b>Type of Facility</b>	Publicly Owned Treatment Works
<b>Facility Design Flow</b>	53.8 million gallons per day (MGD), designed average dry weather flow 42.2 MGD measured average dry weather flow 56.9 MGD measured peak dry weather flow 260 MGD measured peak wet weather flow

## II. FINDINGS

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

- A. Background.** The Central Contra Costa Sanitary District (hereinafter the Discharger) is currently discharging pursuant to the previous permit and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0037648. The Discharger submitted a Report of Waste Discharge, dated November 30, 2005, and applied for renewal of its NPDES permit to discharge up to 53.8 mgd of treated wastewater from the Central Contra Costa Sanitary District's wastewater treatment plant (WWTP). The application was deemed complete on November 30, 2005.
- B. Facility Description.** The Discharger owns and operates a municipal wastewater collection system and treatment plant. The Discharger collects, treats, recycles and disposes waste water from 445,000 residents of Contra Costa County. The collection area covers 141 square miles and includes approximately 1500 miles of sewer pipes that range in size from 6 inches and 102 inches in diameter. There are 19 sewage pumping stations that deliver the waste water to the treatment plant. The treatment plant consists of the following stages: screening, pre-aeration and grit removal, primary sedimentation, anaerobic selector, biological activated-sludge secondary treatment, secondary clarification, and ultraviolet disinfection. Wastewater is discharged from Discharge Point 001 (see table on cover page) to the Suisun Bay, a water of the State and the United States, within San Francisco Bay. Attachment B provides a map of the area around the facility. Attachment C provides a flow schematic of the facility.
- C. Legal Authorities.** This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the USEPA and chapter 5.5, Division 7 of the California Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4, Division 7 of the Water Code (commencing with section 13260).
- D. Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for requirements of the Order, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through H are also incorporated into this Order.
- E. California Environmental Quality Act (CEQA).** Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA.
- F. Technology-Based Effluent Limitations.** NPDES regulations at 40 CFR 122.44 (a) require that permits include applicable technology-based limitations and standards. This Order includes technology-based effluent limitations based on Secondary Treatment Standards at 40 CFR Part 133. A detailed discussion of development of the technology-based effluent limitations is included in the Fact Sheet.

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

**H. Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan for the San Francisco Bay Basin*, (the Basin Plan, revised 2005) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Because of the marine influence on receiving waters of the San Francisco Bay, total dissolved solids levels in the Bay commonly (and often significantly) exceed 3,000 mg/L and thereby meet an exception to State Water Board Resolution No. 88-63. Therefore, the municipal or domestic supply designation is not applicable to Suisun Bay. Beneficial uses applicable to Suisun Bay are as follows.

**Table 5. Basin Plan Beneficial Uses**

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Suisun Bay	Ocean, Commercial, and Sport Fishing (COMM) Estuarine Habitat (EST) Industrial Service Supply (IND) Fish Migration (MIGR) Navigation (NAV) Preservation or Rare, Threatened or Endangered Species (RARE) Non-Contact (REC-2) Water Recreation Wildlife Habitat (WILD) Fish Spawning (SPWN).

Requirements of this Order implement the Basin Plan.

**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 forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR, which established new water quality criteria for toxics in California and incorporated the previously adopted NTR criteria that were applicable in the State. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority, toxic pollutants.

- J. State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
- K. Compliance Schedules and Interim Requirements.** Section 2.1 of the SIP provides that, based on a Discharger's request and demonstration that it is infeasible for an existing Discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order does include compliance schedules and interim effluent limitations. A detailed discussion of the basis for the compliance schedule(s) and interim effluent limitation(s) is included in the Fact Sheet.
- L. Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes. [40 C.F.R. 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.
- M. Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and WQBELs. The technology-based effluent limitations consist of restrictions on CBOD, TSS, oil and grease, and pH. Restrictions on these constituents are specified in federal regulations as discussed in attachment F the Fact Sheet, and the permit's technology-based pollutant restrictions are no more stringent than required by the CWA. WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that WQBELs for toxic pollutants were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the

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

- N. Antidegradation Policy.** NPDES regulations at 40 CFR 131.12 require that the State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. As discussed in detail in the Fact Sheet, the permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16.
- O. Anti-Backsliding Requirements.** CWA sections 402 (o) (2) and 303 (d) (4) and NPDES regulations at 40 CFR 122.44 (l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. As discussed in detail in the Fact Sheet, the effluent limitations and requirements of this Order are consistent with anti-backsliding requirements of the CWA and NPDES regulations.
- P. Monitoring and Reporting.** NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program, provided as Attachment E to this Order, establishes monitoring and reporting requirements to implement federal and State requirements.
- Q. Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42. The Regional Water Board has also included special provisions in this Order as Attachment G. A rationale for the provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).
- R. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections IV.B, IV.C, and V.B of this Order are included to implement State law only. These provisions/requirements are not required or authorized under the federal CWA;

consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

- S. Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.
- T. Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

### III. DISCHARGE PROHIBITIONS

- A. Discharge of treated wastewater into Suisun Bay and at any point where it does not receive an initial dilution of at least 10:1, is prohibited.
- B. The bypass of untreated or partially treated wastewater to waters of the United States, either at the treatment plant or from the collection system or pump stations tributary to the treatment plant, is prohibited, except as provided for bypasses under the conditions stated in 40 CFR 122.41 (m) (4) and (n), and in A.13 of the Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993 (Attachment G).
- C. The average, dry weather rate of discharge shall not exceed 53.8 million gallons per day. Average dry weather flow shall be determined over periods of three consecutive dry weather months.
- D. The discharge of treated wastewater at a location or in a manner different from that described in this Order is prohibited.
- E. Any sanitary sewer system overflow that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited.

#### IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

##### A. Effluent Limitations – Discharge Point 001

1. The discharge at Discharge Point 001 shall not exceed the following limitations
  - a. The discharge of effluent at Discharge Point 001 shall not exceed the following limitations.

**Table 6. Effluent Limitations – Conventional Pollutants**

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Carbonaceous Biochemical Oxygen Demand, 5-day at 5 C (CBOD <sub>5</sub> )	mg/L	25	40	50	---	---
Total Suspended Solids (TSS)	mg/L	30	45	60	---	---
pH	s.u.	---	---	---	6.0	9.0
Oil and Grease	mg/L	10	---	20	---	---

- b. **CBOD<sub>5</sub> and TSS 85% Percent Removal:** The average monthly percent removal of CBOD<sub>5</sub> and TSS shall not be less than 85 percent.
- c. **Enterococci Bacteria:** The monthly geometric mean shall not exceed 35 colonies per 100 ml of effluent sample.
- d. **Toxic Pollutants.** The discharge of effluent at Discharge Point 001 shall not exceed the following limitations.

**Table 7. Effluent Limitations – Toxic Pollutants** <sup>[1, 2]</sup>

Parameter	Units	Final Effluent Limitations		Interim Effluent Limitations	
		Daily Maximum	Monthly Average	Daily Maximum	Monthly Average
Copper	µg/L	20	14	---	---
Lead	µg/L	8.2	3.5	---	---
Mercury	µg/L	0.046	0.018	1.0 <sup>[3, 4]</sup>	0.087 <sup>[3]</sup>
Cyanide <sup>[4, 5]</sup>	µg/L	6.4	2.8	20 <sup>[3]</sup>	---
Acrylonitrile	µg/L	13	6.3	---	---
Dioxin-TEQ <sup>[6]</sup>	µg/L	0.028 x 10 <sup>-6</sup>	0.014 x 10 <sup>-6</sup>	<sup>[6]</sup>	<sup>[6]</sup>

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

<sup>[2]</sup> A daily maximum or monthly average value for a given constituent shall be considered noncompliant with the effluent limitations only if it exceeds the effluent limitation and the Minimum Level as shown in Table 8 of this Order or SIP Appendix 4.

**Table 8. Minimum Levels for Toxic Pollutants with Effluent Limitations**

Parameter	Minimum Level	Units
Copper	5	µg/L
Lead	5	µg/L
Mercury	0.0005	µg/L
Cyanide	5	µg/L
Acrylonitrile	2.0	µg/L
Dioxin-TEQ	½ the USEPA specified MLs <sup>[7]</sup> for Method 1613	µg/L

<sup>[3]</sup> Interim limitations for mercury and cyanide shall remain effective through April 28, 2010. Final effluent limitations shall become effective after that date. Alternate effluent limits for mercury: When the mercury TMDL becomes legally effective, the TMDL shall supercede the final effluent mercury limits.

<sup>[4]</sup> Alternate Effluent Limits for Cyanide

(a) If a cyanide SSO for the receiving water becomes legally effective, resulting in adjusted saltwater criteria CCC of 2.9 µg/l (based on the assumptions in *Draft Staff Report on Proposed Site-Specific Water Quality Objectives and Effluent Limit Policy for Cyanide for San Francisco Bay*, dated November 10, 2005), upon its effective date, the following limitations shall supersede those cyanide limitations listed in Table 7.

MDEL of 45 µg/L, and AMEL of 20 µg/L.

(b) If a different cyanide SSO for the receiving water is adopted, the alternate WQBELs based on the SSO will be determined after the SSO effective date.

<sup>[5]</sup> Compliance may be demonstrated by measurement of weak acid dissociable cyanide.

<sup>[6]</sup> Interim mass-based limitations are expressed for mercury and dioxin-TEQ, and are described in IV. A. 1. g and h, below. The interim limitation for mercury shall remain in effect until May 18, 2010. The interim limitation for dioxin-TEQ shall remain in effect until June 30, 2011. Final effluent limitations for each pollutant shall become effective after their respective date.

<sup>[7]</sup>

Isomer Group	Minimum Level	Unit
2,3,7,8-TetraCDD	5	pg/L
1,2,3,7,8-PentaCDD	25	pg/L
1,2,3,4,7,8-HexaCDD	25	pg/L
1,2,3,6,7,8-HexaCDD	25	pg/L
1,2,3,7,8,9-HexaCDD	25	pg/L
1,2,3,4,6,7,8-HeptaCDD	25	pg/L
OctaCDD	50	pg/L
2,3,7,8-TetraCDF	5	pg/L
1,2,3,7,8-PentaCDF	25	pg/L
2,3,4,7,8-PentaCDF	25	pg/L
1,2,3,4,7,8-HexaCDF	25	pg/L

Isomer Group	Minimum Level	Unit
1,2,3,6,7,8-HexaCDF	25	pg/L
1,2,3,7,8,9-HexaCDF	25	pg/L
2,3,4,6,7,8-HexaCDF	25	pg/L
1,2,3,4,6,7,8-HeptaCDF	25	pg/L
1,2,3,4,7,8,9-HeptaCDF	25	pg/L
OctaCDF	50	pg/L

**e. Acute Toxicity:**

- (1) Representative samples of the effluent shall meet the following limits for acute toxicity. Bioassays shall be conducted in compliance with Section V.A of the Monitoring and Reporting Program (MRP, Attachment E).

The survival of organisms in undiluted combined effluent shall be an eleven (11) sample median value of not less than 90 percent survival, and an eleven (11) sample 90 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 most sensitive species as specified in writing by the Executive Officer based on the most recent screening test results. Bioassays shall be conducted in compliance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms," currently 5th Edition (EPA-821-R-02-012), with exceptions granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP) upon the Discharger's request with justification.
- (4) If the Discharger can demonstrate to the satisfaction of the Executive Officer that toxicity exceeding the levels cited above is caused by ammonia and that the ammonia in the discharge is not adversely impacting receiving water quality or beneficial uses, then such toxicity does not constitute a violation of this effluent limitation.

**f. Chronic Toxicity**

- (1) Compliance with the Basin Plan narrative chronic toxicity objective shall be demonstrated according to the following tiered requirements based on results from representative samples of the treated final effluent meeting test acceptability criteria and Section V.B of the MRP (Attachment E). Failure to conduct the required toxicity tests or a TRE within a designated period shall result in the establishment of effluent limitations for chronic toxicity.
  - (a) Conduct routine monitoring.
  - (b) Accelerate monitoring after exceeding a three sample median value of 10 chronic toxicity units (TUc) or a single sample maximum of 20 TUc or greater. Accelerated monitoring shall consist of monthly monitoring.
  - (c) Return to routine monitoring if accelerated monitoring does not exceed either "trigger" in (b), above.
  - (d) If accelerated monitoring confirms consistent toxicity above either "trigger" in (2), above, initiate toxicity identification evaluation/toxicity reduction evaluation (TIE/TRE) in accordance with a workplan submitted in accordance with Section V.B of the MRP (Attachment E), and that incorporates any and all comments from the Executive Officer;
  - (e) Return to routine monitoring after appropriate elements of TRE workplan are implemented and either the toxicity drops below "trigger" levels in (2), above, or, based on the results of the TRE, the Executive Officer authorizes a return to routine monitoring.

**(2) Test Species and Methods**

The Discharger shall conduct routine monitoring using test species and protocols specified in Section V.B of the MRP (Attachment E). The Discharger shall also perform Chronic Toxicity Screening Phase monitoring as described in the Appendix E-1 of the MRP (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 Appendices E-1 and E-2 of the MRP (Attachment E).

**g. Mercury (Interim) Mass Emission Limitation**

Until final effluent limitations for mercury become effective, or until TMDL and Waste Load Allocation (WLA) efforts for mercury provide enough information to establish different WQBELs, the Discharger shall demonstrate that the total mercury mass loading from the discharge to Suisun Bay has not increased by complying with the following:

- (1) Mass Emission Limit: The mass emission limit for mercury is 0.98 pounds per month (lbs/month). The total mercury mass load shall not exceed this limit.
- (2) Compliance with this limit shall be evaluated using running annual average mass load. Running annual averages shall be calculated by taking the arithmetic average of the current monthly mass loading value (see sample calculation below) and the previous 11-month's values. Sample calculation:

Flow (mgd) = Average of monthly plant effluent flows in mgd.

Mass Loading (lbs/month) = Flow (MGD) x Mercury concentration  $\mu\text{g/l}$  x 0.2536

#### h. Dioxin-TEQ (Interim) Mass Emission Limitation

Until TMDL and Waste Load Allocation (WLA) efforts for dioxin-TEQ provide enough information to establish a different WQBEL, the Discharger shall demonstrate that the dioxin-TEQ mass loading from the discharge to Suisun Bay has not increased by complying with the following.

- (1) Mass Emission Limit: The mass emission limit is 0.836 milligrams per month (mg/month) as TEQ. The total mass load shall not exceed this limit.
- (2) Compliance with this limit shall be evaluated using running annual average mass load. Running annual averages shall be calculated by taking the arithmetic average of the current monthly mass loading value (see sample calculation below) and the previous 11-month's values. Sample calculation:

Flow (mgd) = Average of monthly plant effluent flows in mgd.

TEQ Concentration (pg/L) = Average of monthly effluent concentration measurements in pg/L as TEQ as determined in accordance with the SIP.

Mass Loading (mg/month) = Flow (MGD) x Dioxin TEQ, pg/l x 0.1151 x 0.000001.

#### B. Land Discharge Specifications

N/A

#### C. Reclamation Specifications

The Discharger shall comply with all applicable provisions of Order No. 96-011, *General Water Reuse Requirements for Municipal Wastewater and Water Agencies*.

## V. RECEIVING WATER LIMITATIONS

### A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in Suisun Bay.

1. The discharge shall not cause the following conditions to exist in waters of the State at any place:
  - a. Floating, suspended, or deposited macroscopic particulate matter or foams;
  - b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;
  - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
  - d. Visible, floating, suspended, or deposited oil and other products of petroleum origin; and
  - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or which render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.
  
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State within one foot of the water surface:
  - a. Dissolved Oxygen                      7.0 mg/L, minimum  
  
The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, then the discharge shall not cause further reduction in ambient dissolved oxygen concentrations.
  
  - b. Dissolved Sulfide                      Natural background levels
  
  - c. pH                                              Within 6.5 and 8.5
  
  - d. Un-ionized Ammonia                      0.025 mg/L as N, annual median  
0.4 mg/L as N, max.

### B. Groundwater Limitations

N/A

## VI. PROVISIONS

### A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.
2. **Regional Water Board Standard Provisions.** The Discharger shall comply with all applicable items of the Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993 (Standard Provisions, Attachment G). Where provisions or reporting requirements specified in this Order are different from equivalent or related provisions or reporting requirements given in the Standard Provisions, the specifications of this Order shall apply. Duplicative requirements in the federal Standard Provisions in VI.A.1.2, above (Attachment D) and the regional Standard Provisions (Attachment G) are not separate requirements. A violation of a duplicative requirement does not constitute two separate violations."

### B. Monitoring and Reporting Program Requirements

The Discharger shall comply with the Monitoring and Reporting Program (MRP), and future revisions thereto, in Attachment E. The Discharger shall also comply with the requirements contained in Self-Monitoring Program, Part A, August 1993 (Attachment G).

### 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 discharge(s) governed by this Order will or have a reasonable potential to cause or contribute to, or will cease to, have adverse impacts on water quality and/or beneficial uses of the receiving waters.
- b. If new or revised WQOs, or TMDLs come into effect for the San Francisco Bay estuary and contiguous water bodies (whether statewide, regional, or site-specific). In such cases, effluent limitations in this Order will be modified as necessary to reflect updated WQOs and waste load allocations in TMDLs. Adoption of effluent limitations contained in this Order is not intended to restrict in any way future modifications based on legally adopted WQOs, TMDLs, or as otherwise permitted under Federal regulations governing NPDES permit modifications.
- c. If translator or other water quality studies provide a basis for determining that a permit condition(s) should be modified.
- d. If administrative or judicial decision on a separate NPDES permit or WDR that addresses requirements similar to this discharge.

- e. Or as otherwise authorized by law.

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

- f. The San Francisco Bay RWQCB is proposing a Municipal Regional Permit to control pollutant source in storm water using strategies that involve redirecting discharges that currently go to the storm drain system to the sanitary sewer system. In some cases, the discharges could contain pollutants such as copper, dioxin, and mercury that, if discharged in large quantities to CCCSD's collections system, could create problems with meeting the final effluent limits for these pollutants. While CCCSD is available to receive these types of redirected wastewater sources with appropriate controls, adjustments to the overly restrictive final effluent limits should be available through a reopener provision of the permit.

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

- a. Effluent Characterization for Selected Constituents

The Discharger shall continue to monitor and evaluate the discharge from Discharge Point 001 for the constituents listed in Enclosure A of the Regional Water Board's August 6, 2001 Letter, according to the sampling frequency specified in the attached MRP (Attachment E). Compliance with this requirement shall be achieved in accordance with the specifications stated in the Regional Water Board's August 6, 2001 Letter under Effluent Monitoring for Major Discharger.

The Discharger shall evaluate on an annual basis if concentrations of any constituent increase over past performance. The Discharger shall investigate the cause of the increase. The investigation may include, but need not be limited to, an increase in the effluent monitoring frequency, monitoring of internal process streams, and monitoring of influent sources. This may be satisfied through identification of these constituents as "Pollutants of Concern" in the Discharger's Pollutant Minimization Program described in Provision C.3.b, below. A summary of the annual evaluation of data and source investigation activities shall also be reported in the annual self-monitoring report.

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

- b. Regional Monitoring Program

On April 15, 1992, the Regional Water Board adopted Resolution No. 92-043 directing the Executive Officer to implement the Regional Monitoring Program (RMP) for the San Francisco Bay. Subsequent to a public hearing and various

meetings, Regional Water Board staff requested major permit holders in this region, under authority of section 13267 of California Water Code, to report on the water quality of the Estuary. These permit holders, including the Discharger and collectively known as the Bay Area Clean Water Agencies (BACWA), responded to this request by initiating a collaborative effort, through the San Francisco Estuary Institute (formerly the Aquatic Habitat Institute) - the San Francisco Bay Regional Monitoring Program for Trace Substances (RMP). The RMP involves collection of data for pollutants and toxicity in water, sediment, and biota of the Estuary.

The Discharger shall monitor ambient receiving water for the priority, toxic pollutants or continue to participate in the RMP to provide on-going characterization of water quality in the Bay. Conventional water quality parameters (pH, salinity, and hardness) shall also be sufficiently and simultaneously characterized in the receiving water at a point after the discharge has mixed with receiving water. This permit may be reopened, as appropriate, to incorporate effluent limits or other requirements based on Regional Water Board review of these data.

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

c. Optional Mass Offset

If the Discharger can demonstrate that further net reductions of the total mass loadings of 303(d)-listed pollutants to the receiving water cannot be achieved through economically feasible measures such as aggressive source control, wastewater reuse, and treatment plant optimization, but only through a mass offset program, the Discharger may submit to the Regional Water Board for approval a mass offset plan to reduce 303(d)-listed pollutants to the same watershed or drainage basin. The Regional Water Board may modify this Order to allow an approved mass offset program.

### **3. Best Management Practices and Pollutant Minimization Program**

- a. The Discharger shall continue to improve, in a manner acceptable to the Executive Officer, its existing Pollutant Minimization Program to reduce pollutant loadings to the treatment plant and therefore to the receiving waters.
- b. The Discharger shall submit an annual report, acceptable to the Executive Officer, no later than February 28 of each calendar year. For those agencies choosing to submit earlier in the year, the report shall cover the preceding 12 months two months prior to the submittal date. As an example, a report submitted on June 30, shall cover the preceding 12 months ending in April. Each annual report shall include at least the following information:

- (1) A brief description of its 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/or 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 the pollutants. The Discharger should 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 themselves or participate in group, regional, or national tasks that will address its pollutants of concern. The Discharger is strongly encouraged to participate in group, regional, or national tasks that will address its pollutants of concern whenever it is efficient and appropriate to do so. A time line shall be included for the implementation of each task.
- (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 to the program.
- (6) Continuation of Public Outreach Program. The Discharger shall prepare a public outreach program to communicate pollution prevention to its service area. Outreach may include participation in existing community events such as county fairs, initiating new community events such as displays and contests during Pollution Prevention Week, conducting school outreach programs, conducting plant tours, and providing public information in newspaper articles or advertisements, radio or television stories or spots, newsletters, utility bill inserts, and web site. Information shall be specific to the target audiences. The Discharger shall coordinate with other agencies as appropriate.
- (7) Discussion of criteria used to measure Program's and tasks' effectiveness. The Discharger shall establish criteria to evaluate the effectiveness of its Pollution Minimization Program. This shall also include a discussion of the specific criteria used to measure the effectiveness of each of the tasks in item b.(3)., b.(4)., b.(5)., and b.(6).
- (8) Documentation of efforts and progress. This discussion shall detail all of the Discharger's activities in the Pollution Minimization Program during the reporting year.

(9) Evaluation of Program's and tasks' effectiveness. This Discharger shall utilize the criteria established in b.(7) 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 (PMP) as further described below when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:

(1) A sample result is reported as DNQ and the effluent limitation is less than the ML as shown in Table 8 of this Order or SIP Appendix 4; or

(2) A sample result is reported as ND and the effluent limitation is less than the MDL, as defined in 40 CFR Part 136 Appendix B.

d. If triggered by the reasons in c. above, the Discharger's PMP 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 pollutant(s), 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 pollutant(s) in the influent to the wastewater treatment system, or alternative measures approved by the Executive Officer, when it is demonstrated that influent monitoring is unlikely to produce useful analytical data;

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

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

(5) The annual report required by 3.b. above, shall specifically address the following items:

- i. All PMP monitoring results for the previous year;
- ii. A list of potential sources of the reportable priority pollutant(s);
- iii. A summary of all actions undertaken pursuant to the control strategy; and
- iv. A description of actions to be taken in the following year.

**4. Requirement to Assure Compliance with Final Limits**

The Discharger shall comply with the following tasks and dates:

Task	Compliance date
1. Implement source control measures identified in the Discharger's Infeasibility Report to reduce concentrations of cyanide, mercury, and dioxin-TEQ to the treatment plant and thus receiving waters	Upon the effective date of this Order
2. The discharger shall evaluate and report on the effectiveness of its source control measures in reducing concentrations of mercury, cyanide, and dioxin-TEQ to its treatment plant. If previous measures have not been successful in enabling the Discharger to comply with final limits for mercury, cyanide, or dioxin-TEQ, the Discharger shall also identify and implement additional source control measures to further reduce concentrations of these pollutants. If the cyanide SSO becomes effective and an alternate limit takes effect, the Discharger shall implement any applicable additional pollutant minimization measures described in Basin Plan implementation requirements associated with the cyanide SSO.	Annually in the Annual Best Management Practices and Pollutant Minimization Report required by Provision VI.C.3
3. In the event that source control measures are insufficient for meeting final water quality based effluent limits specified in Effluent Limitations and Discharge Specifications A.3 for mercury, cyanide, and dioxin-TEQ, the Discharger shall submit a schedule for implementation of additional actions to reduce the concentration of these pollutants.	July 1, 2009
4. The Discharger shall commence implementation of the identified additional actions in accordance with the schedule submitted in Task 3 above.	Within 45 days of the date specified for Task 3 above.
5. Full compliance with IV Effluent Limitations and Discharger Specifications A.3 for mercury and cyanide.	April 28, 2010
6. Full compliance with IV Effluent Limitations and Discharger Specifications A.3 for dioxin-TEQ. Alternatively, the Discharger may comply with the limit in IV through implementation of a mass offset strategy for dioxin-TEQ in accordance with policies in effect at that	June 30, 2011

time.	
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## 5. Construction, Operation and Maintenance Specifications

### a. Wastewater Facilities, Review and Evaluation, and Status Reports

- (1) The Discharger shall operate and maintain its wastewater collection, treatment, and disposal facilities in a manner to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary, in order 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.
- (2) The Discharger shall regularly review and evaluate its wastewater facilities and operation practices in accordance with section a.1 above. Reviews and evaluations shall be conducted as an ongoing component of the Discharger's administration of its wastewater facilities.
- (3) The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its wastewater facilities and operation practices, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall also include, in each annual self-monitoring report, a description or summary of review and evaluation procedures, and applicable wastewater facility programs or capital improvement projects.

### b. Operations and Maintenance Manual (O&M), Review and Status Reports

- (1) The Discharger shall maintain an O&M Manual as described in the findings of this Order for the Discharger's wastewater facilities. The O&M Manual shall be maintained in usable condition and be available for reference and use by all applicable personnel.
- (2) The Discharger shall regularly review, revise, or update, as necessary, the O&M Manual(s) so that the document(s) may remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and revisions or updates shall be completed as necessary. For any significant changes in treatment facility equipment or operation practices, applicable revisions shall be completed within 360 days of completion of such changes.
- (3) The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its O&M manual, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall also include, in each annual self-monitoring report, a

description or summary of review and evaluation procedures and applicable changes to its operations and maintenance manual.

c. Contingency Plan, Review and Status Reports

- (1) The Discharger shall maintain a Contingency Plan as required by Regional Water Board Resolution 74-10 (Attachment G) and as prudent in accordance with current municipal facility emergency planning. The discharge of pollutants in violation of this Order where the Discharger has failed to develop and/or adequately implement a Contingency Plan will be the basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.
- (2) The Discharger shall regularly review and update, as necessary, the Contingency Plan so that the plan may remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and updates shall be completed as necessary.
- (3) The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its Contingency Plan review and update. The Discharger shall also include, in each annual self-monitoring report, a description or summary of review and evaluation procedures and applicable changes to its Contingency Plan.

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

a. Pretreatment Program

- (1) Pretreatment Program: The Discharger shall implement and enforce its approved pretreatment program in accordance with federal pretreatment regulations (40 CFR 403); pretreatment standards promulgated under CWA section 307 (b), 307 (c), and 307 (d); pretreatment requirements specified at 40 CFR 122.44 (j); and the requirements of Attachment H of this Order. The Discharger's responsibilities include, but are not limited to:
  - (a) Enforcement of National Pretreatment Standards established at 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 at 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 "Pretreatment Requirements".
  - (d) Evaluate the need to revise local limits pursuant to 40 CFR 403.5 (c) (1); and within 180 days after the effective date of this Order, submit a report

acceptable to the Executive Officer describing the changes with a plan and schedule for implementation.

- (2) The Discharger shall implement its approved pretreatment program and the program shall be an enforceable condition of this permit. 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.
- (3) The District submitted an evaluation of its Local Discharge Limits, dated December 29, 2004 (December 2004 report). On October 11, 2006, the Discharger submitted a response to the Regional Water Board staff's comments on the December 2004 report. The Regional Water Board approves all the District's modifications to its Local Discharge Limits and classifies them as a non-substantial modification to its pretreatment program. Subsequently, the Discharger notified the Regional Water Board of its intent to modify its pretreatment program by adopting the proposed Local Discharge Limits into its sewer use ordinance in a letter dated November 7, 2006. Therefore, the District may implement the proposed Local Discharge Limits 45 days after this date.

b. Sludge Management Practices Requirements

- (1) All sludge generated by the Discharger must be disposed of in a municipal solid waste landfill, reused by land application, disposed of in a sludge-only landfill, or fired in a sewage sludge incinerator in accordance with 40 CFR 503. If the Discharger desires to dispose of sludge 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) Sludge 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 sludge use or disposal which has a likelihood of adversely affecting human health or the environment.
- (4) The handling and management of sludge shall not cause waste material to be in a position where it is or can be carried from the sludge treatment and storage site and deposited in waters of the State.
- (5) Sludge 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

sludge materials in temporary storage sites. 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 sludge that is 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 information as specified at 40 CFR 503, postmarked February 15 of each year, for the period covering the previous calendar year.
- (7) Sludge that is 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 sludge disposed of and the landfill(s) to which it was sent.
- (8) Permanent on-site sludge storage is not authorized by this permit. A report of Waste Discharge shall be filed and the site brought into compliance with all applicable regulations prior to commencement of any such activity by the Discharger.
- (9) Sludge 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 permit prior to expiration if changes occur in applicable state and federal sludge regulations.

c. Sanitary Sewer Overflows and Sewer System Management

The Discharger's collection system is part of the facility that is subject to this Order. As such, the Discharge must properly operate and maintain its collection system (Attachment D, Standard Provisions - Permit Compliance, subsection I.D). The Discharger must 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 (Order No. 2006-0003 DWQ) has requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. While the Discharger must comply with both the General Waste Discharge Requirements for Collection System Agencies (General Collection System WDR) and this Order, the General Collection System WDR more clearly and specifically stipulates requirements for operation and maintenance and for reporting and mitigating sanitary sewer overflows. Implementation of the General Collection System WDR requirements for proper operation and maintenance and mitigation of spills will satisfy the corresponding federal NPDES requirements specified in this Order. Following reporting requirements in the General Collection System WDR will satisfy NPDES reporting requirements for sewage spills. Furthermore, the Discharger

shall comply with the schedule for development of sewer system management plans (SSMPs) as indicated in the letter issued by the Regional Water Board on July 7, 2005, pursuant to Water Code Section 13267. Until the statewide on-line reporting system becomes operational, the Discharger shall report sanitary sewer overflows electronically according to the Regional Water Board's SSO reporting program.

## **7. Other Special Provisions**

Not Applicable

## **VII. COMPLIANCE DETERMINATION**

Compliance with the effluent limitations contained in section IV of this Order will be determined as specified below:

### **A. General.**

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP and Attachment A of this Order. 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 ML as shown in Table 8 of this Order or SIP Appendix 4.

### **B. Multiple Sample Data.**

When determining compliance with effluent limitations for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
2. 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.

## ATTACHMENT A – DEFINITIONS

**Arithmetic Mean ( $\mu$ )**, 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:

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

**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 the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

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

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

**Detected, but Not Quantified (DNQ)** are those sample results less than the ML as shown in Table 8 of this Order or SIP Appendix 4, 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 U.S. EPA 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 the 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 included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

**Inland Surface Waters** 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 a quantification level established by the SWRCB in SIP Appendix 4. t.

**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 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 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.

**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.

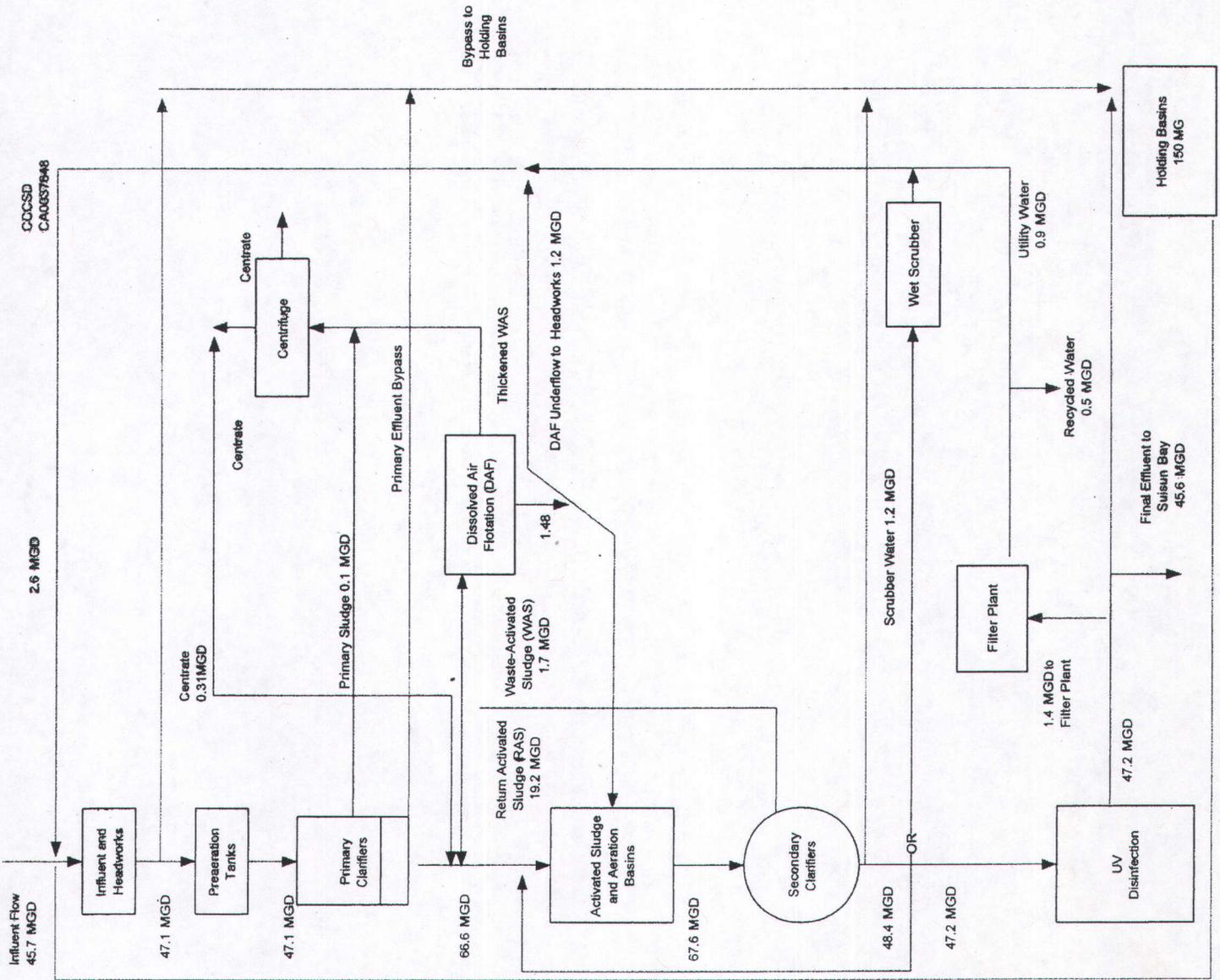
**Toxicity Reduction Evaluation (TRE)** is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first 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 – MAP





Water Balance and Flows Between  
Treatment Units



LEGEND

- ← Flow Through Plant
- ← Scrubber Water
- ← Primary Sludge and Return or Waste-Activated Sludge
- ← DAF Underflow
- ← Thickened WAS and Centrate
- ← Filter Plant Flow
- ← Bypass to and from holding basins

## **ATTACHMENT D – STANDARD PROVISIONS**

### **I. STANDARD PROVISIONS – PERMIT COMPLIANCE**

#### **A. Duty to Comply**

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 C.F.R. § 122.41(a).)
2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

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

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

#### **C. Duty to Mitigate**

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

#### **D. Proper Operation and Maintenance**

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

#### **E. Property Rights**

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)
2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

## F. Inspection and Entry

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

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 C.F.R. § 122.41(i)(1));
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 C.F.R. § 122.41(i)(2));
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 C.F.R. § 122.41(i)(3)); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (40 C.F.R. § 122.41(i)(4).)

## G. Bypass

1. Definitions
  - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).) CCCSD has several basins for temporary waste water storage. For the above definition of 'bypass' the storage basins are considered a part of the treatment plant facility.
  - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)
2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)
3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):

- a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));
  - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and
  - c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)
4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)
5. Notice
- a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 C.F.R. § 122.41(m)(3)(i).)
  - b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 C.F.R. § 122.41(m)(3)(ii).)

#### H. Upset

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

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)
2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):

- a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
  - b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));
  - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and
  - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

## **II. STANDARD PROVISIONS – PERMIT ACTION**

### **A. General**

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

### **B. Duty to Reapply**

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

### **C. Transfers**

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

### **III. STANDARD PROVISIONS – MONITORING**

- A.** Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)
- B.** Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order. (40 C.F.R. § 122.41(j)(4); § 122.44(i)(1)(iv).)

### **IV. STANDARD PROVISIONS – RECORDS**

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

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

- 1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
- 2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
- 3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
- 4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
- 5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
- 6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

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

- 1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and
- 2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

## V. STANDARD PROVISIONS – REPORTING

### A. Duty to Provide Information

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

### B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 C.F.R. § 122.41(k).)
2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 C.F.R. § 122.22(a)(3).)
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and
  - c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)
4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board

and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

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

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

### **C. Monitoring Reports**

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.22(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 C.F.R. § 122.41(l)(4)(i).)
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

### **D. Compliance Schedules**

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

### **E. Twenty-Four Hour Reporting**

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates

- and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 C.F.R. § 122.41(l)(6)(i).)
2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(l)(6)(ii)):
    - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)
    - b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)
  3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii).)

#### **F. Planned Changes**

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

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 C.F.R. § 122.41(l)(1)(ii).)
3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 C.F.R. § 122.41(l)(1)(iii).)

#### **G. Anticipated Noncompliance**

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

#### **H. Other Noncompliance**

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are

submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 C.F.R. § 122.41(l)(7).)

#### **I. Other Information**

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

### **VI. STANDARD PROVISIONS – ENFORCEMENT**

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

### **VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS**

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

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

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 C.F.R. § 122.42(b)(1)); and
2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order. (40 C.F.R. § 122.42(b)(2).)
3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 C.F.R. § 122.42(b)(3).)

## ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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## ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify monitoring and reporting requirements. California Water Code sections 13267 and 13383 also authorize the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California regulations.

### I. GENERAL MONITORING PROVISIONS

- A. The Discharger shall comply with the MRP for this Order as adopted by the Regional Water Board, and with all of the Self-Monitoring Program, Part A, adopted August 1993 (SMP, Attachment G). The MRP and SMP may be amended by the Executive Officer pursuant to USEPA regulations at 40 CFR 122.62, 122.63, and 124.5. If any discrepancies exist between the MRP and SMP, the MRP shall prevail.
- B. Sampling is required during the entire year when discharging. All analyses shall be conducted using current USEPA methods, or methods that have been approved by the USEPA Regional Administrator pursuant to 40 CFR 136.4 and 40 CFR 136.5, or equivalent methods that are commercially and reasonably available and that provide quantification of sampling parameters and constituents sufficient to evaluate compliance with applicable effluent limits and to perform reasonable potential analysis. Equivalent methods must be more sensitive than those specified in 40 CFR 136, must be specified in the permit, and must be approved for use by the Executive Officer, following consultation with the State Water Quality Control Board's Quality Assurance Program.
- C. Sampling and analysis of additional constituents is required pursuant to Table 1 of the Regional Water Board's August 6, 2001 Letter entitled, Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy (Attachment G).
- D. *Minimum Levels (MLs)*. For compliance and reasonable potential monitoring, analyses shall be conducted using the commercially available and reasonably achievable detection levels that are lower than the WQOs/WQC or the effluent limitations, whichever is lower. The objective is to provide quantification of constituents sufficient to allow evaluation of observed concentrations with respect to the Minimum Levels given below. All Minimum Levels are expressed as µg/l.

Table E-1 lists the test method the Discharger may use for compliance and reasonable potential monitoring for the pollutants with effluent limits established by the Order.

**Table E-1. Test Methods and Minimum Levels for Pollutants with Effluent Limits**

CTR #	Constituent	Types of Analytical Methods <sup>[1]</sup>											
		Minimum Levels (µg/L)											
		GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGF AA	HYD RIDE	CVAA	DCP
6	Copper						5		0.5	2			
7	Lead						5		0.5	2			
8	Mercury <sup>[2]</sup>											0.0005	
14	Cyanide				5								
16a	Dioxin-TEQ <sup>[3]</sup>												
18	Acrylonitrile	2	2										

[1] Analytical Methods / Laboratory techniques are defined as follows:

- GC = Gas Chromatography;
- GCMS = Gas Chromatography/Mass Spectrometry;
- Color = Colorimetric;
- GFAA = Graphite Furnace Atomic Absorption;
- ICPMS = Inductively Coupled Plasma/Mass Spectrometry;
- SPGF AA = Stabilized Platform Graphite Furnace Atomic Absorption (i.e. EPA 200.9);
- CVAA = Cold Vapor Atomic Absorption.

[2] Use ultra-clean sampling (USEPA 1669) to the maximum extent practicable, and ultra-clean analytical methods (USEPA 1631) for mercury monitoring. The Discharger may use alternative methods of analysis (such as USEPA 245), if the alternative method has an ML of 0.0005 µg/L or less.

[3] Use U.S. EPA Method 1613. Minimum Levels for the various congeners are shown as footnotes in the permit IV.A, on page 12.

## 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-2. Monitoring Station Locations**

Discharge Point	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
Influent	INF-001	Formerly Sampling Station I-001, at any point in the treatment facility headworks at which all waste tributary to that plant is present and preceding any phase of treatment.
001	EFF-001	Formerly Sampling Station E-001, at any point in the treatment facility between the point of discharge and the point at which all flow tributary to the outfall is present.
EFF-002	EFF-002	Near the northwest corner of Holding Basin C, the outfall to the unnamed drainage channel, which is tributary to Pacheco Slough and Walnut Creek. This discharge point has not been used since 1998 and will not be used unless it is essential to avoid flooding of the treatment plant facilities or homes in the service area.
EFF-003	EFF-003	Near the northeast corner of Holding Basin B. The discharge will be directly to Walnut Creek. EFF-003 is the proposed new location for the CCCSD emergency overflow structure. This discharge structure has not been constructed yet. EFF-002 will be abandoned in approximately five years when a current property lease expires. The property over which EFF-002 currently flows is being developed for industrial use and will eliminate the use of EFF-002.

Discharge Point	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
EFF-004	EFF-004	Formerly M-003, emergency bypass to Grayson Creek. This could occur should mechanical problems result in reduction of influent pumping capacity below influent flow. Discharge from this location would be raw sewage except as may be diluted by peak wet weather flows
Receiving Water	RSW-001	Formerly C-001, at a point in Suisun Bay, located within 25 feet of the point of discharge from the outfall diffuser section.
Receiving Water	RSW-002	Formerly C-002, at a point in Suisun Bay, located 100 feet generally west from the offshore end of the diffuser section of the outfall line.
Receiving Water	RSW-003	Formerly C-003, at a point in Suisun Bay, located 100 feet generally north from the offshore end of the diffuser section of the outfall line.
Receiving Water	RSW-004	Formerly C-004, at a point in Suisun Bay, located 100 feet generally east from the offshore end of the diffuser section of the outfall line.
Receiving Water	RSW-005	Formerly C-005, at a point in Suisun Bay, located 100 feet generally south from the shoreward end of the diffuser section of the outfall line.
Receiving Water	RSW-R	Formerly C-R, at a point in Suisun Bay, located 2,000 feet upstream from the diffuser section of the outfall line in water of the same depth (~5 feet) as station C-001 and not located in dredged channel.
Overflows and Bypasses	OV-1 thru OV-n	At points in the collection system including manholes, pump stations, or any other location where overflows and bypasses occur.
Land Observations	P-1 thru P-n	Located along the periphery of the WWTP at equidistant intervals, not to exceed 200 feet each.
Rainfall	R-1	The nearest official National Weather Service rainfall station or other station acceptable to the Executive Officer.
Biosolids	BIO-001	Sludge monitoring in the treatment facility.

### III. INFLUENT MONITORING REQUIREMENTS

#### A. Monitoring Location INF-001

1. The Discharger shall monitor influent to the facility at INF-001 as follows.

**Table E-3. Influent Monitoring**

Parameter	Units	Minimum Sampling Frequency	Required Analytical Method
		C-24	
Flow Rate <sup>[1]</sup>	mgd	Cont/D	meter
CBOD <sub>5</sub>	mg/L, kg/day	2/W	<sup>[2]</sup>
TSS	mg/L, kg/day	2/W	<sup>[2]</sup>

<sup>[1]</sup> For influent flows, the following information shall be reported monthly:

Daily: Daily Average Flow  
 Monthly: Monthly Average Flow, Monthly: Maximum Daily Flow  
 Monthly: Minimum Daily Flow, Monthly: Total Flow Volume

<sup>[2]</sup> Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136.

#### IV. EFFLUENT MONITORING REQUIREMENTS

##### A. Monitoring Location E-001

1. The Discharger shall monitor treated effluent at Monitoring Location EFF-001 as follows.

**Table E-4. Effluent Monitoring** <sup>[1]</sup>

Parameter	Units	Minimum Sampling Frequency		Required Analytical Method
		G	C-24	
Flow <sup>[2]</sup>	MGD		Cont/D	meter
CBOD <sub>5</sub> <sup>[3]</sup>	mg/L, kg/day		2/W	[13]
TSS <sup>[3]</sup>	mg/L, kg/day		4/W	[13]
Oil and Grease <sup>[4]</sup>	mg/L		M	[13]
pH <sup>[5]</sup>	standard units	D		[13]
Enterococci <sup>[6]</sup>	colonies/100 mL	5/W		[13]
Acute Toxicity <sup>[7]</sup>	% survival		M	[13]
Chronic Toxicity <sup>[8]</sup>	TUc		2M	[13]
Ammonia Nitrogen	mg/L N		M	[13]
Temperature	° C	D		[13]
Dissolved Oxygen	mg/L	D		[13]
Dissolved Sulfides <sup>[14]</sup>	mg/L	D		[13]
Copper	µg/L		M	[13]
Lead	µg/L		M	[13]
Mercury <sup>[9]</sup>	µg/L		M	[13]
Cyanide <sup>[10]</sup>	µg/L		M	[13]
Acrylonitrile	µg/L		2M	[13]
Dioxin-TEQ <sup>[11]</sup>	µg/L		2/Y	[13]
CTR Priority Pollutants <sup>[12]</sup>	µg/L	1/Y and in accordance with the August 6, 2001 Letter		[13]

<sup>[1]</sup> Testing conducted under the pretreatment and reuse programs may be used to satisfy the monitoring requirements of this Order. All analyses shall be performed using current U.S. EPA methods, as specified in 40 CFR Part 136. Analytical results for metals shall be expressed as total recoverable metal.

<sup>[2]</sup> Flow Monitoring

For effluent flows, the following information shall be reported monthly:

Daily: Daily Average Flow (MGD)

Monthly: Monthly Average Flow (mgd)

Monthly: Maximum Daily Flow (mgd)

Monthly: Minimum Daily Flow (mgd)

Monthly: Total Flow Volume (MG)

- [3] The percent removal for BOD and TSS shall be reported for each calendar month in accordance with Effluent Limitation IV.2.
- [4] Each oil & grease sampling event shall consist of a composite sample comprised of three grab samples taken at equal intervals during the sampling date, with each grab sample being collected in a glass container. Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent rinsings as soon as possible after use, and the solvent rinsings shall be added to the composite sample for extraction and analysis.
- [5] If pH is monitored continuously; the minimum and maximum pH values for each day shall be reported in monthly self-monitoring reports.
- [6] The Discharger shall monitor for enterococci using USEPA's Membrane Filter Test Method 1600.
- [7] Acute bioassay test shall be performed in accordance with Section V.A of this MRP.
- [8] Critical Life Stage Toxicity Test shall be performed and reported in accordance with the Chronic Toxicity Requirements specified in Sections V.B of the MRP.
- [9] Mercury: The Discharger may, at its option, sample effluent mercury either as grab or as 24-hour composite samples. Use ultra-clean sampling (U.S. EPA 1669) to the maximum extent practicable and ultra-clean analytical methods (U.S. EPA 1631) for mercury monitoring. The Discharger may only use alternative methods if the method has an ML of 0.5 ng/L or less, and approval is obtained from the Executive Officer prior to conducting the monitoring.
- [10] The Discharger may analyze for cyanide as Weak Acid Dissociable Cyanide using protocols specified in Standard Methods Part 4500-CN-I, USEPA Method OI 1677, or an equivalent alternative as specified in the latest edition of *Standard Methods for Analysis of Water and Wastewater*. Alternative methods of analysis must be approved by the Executive Officer.
- [11] Dioxin-TEQ analyzed by U.S. EPA Method 1613 using ½ USEPA specified MLs.
- [12] Those pollutants identified as Compound Nos. 1 – 126 by the California Toxics Rule at 40 CFR 131.38 (b) (1).
- [13] Pollutants shall be analyzed using the analytical methods described in 40 CFR 136, *Guidelines Establishing Test procedures for the Analysis of Pollutants*. For the priority CTR pollutants, analytical methods shall meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP; and when no methods are specified for a pollutant, the Discharger shall use analytical methods approved by the Regional or State Water Board.
- [14] Measured when dissolved oxygen concentration is less than 2.0 mg/L

**C. Monitoring Locations EFF-002, EFF-003, EFF-004, and EFF-005**

The Discharger shall monitor effluent at Monitoring Location Nos. EFF-002, EFF-003, EFF-004, and EFF-005 in accordance with the following schedule.

**Table E-5. Effluent Monitoring at Eff-002, Eff-003, Eff-004, and Eff-005** <sup>[1]</sup>

Parameter	Units	Minimum Sampling Frequency		Required Analytical Method
		G	C-24	
Flow <sup>[1]</sup>	MGD		Cont/D	meter
CBOD <sub>5</sub> <sup>[2]</sup>	mg/L, kg/day	D		<sup>[3]</sup>
TSS <sup>[2]</sup>	mg/L, kg/day	D		<sup>[3]</sup>
Oil and Grease	mg/L	D		<sup>[3]</sup>
Enterococci <sup>[2]</sup>	colonies/100 mL	D		<sup>[3]</sup>
Ammonia Nitrogen <sup>[2]</sup>	mg/L N	D		<sup>[3]</sup>

- [1] The volume and duration of the discharge shall be recorded and reported for each day of the discharge.
- [2] During each discharge event from Discharge Point Nos. E-002, E-003, E-004, and/or E-005, daily grab samples of receiving water shall also be collected at locations about 500 feet upstream and 500 feet downstream from the discharge point(s) and analyzed for dissolved oxygen, pH, CBOD<sub>5</sub>, TSS, enterococci bacteria, and ammonia.
- [3] Pollutants shall be analyzed using the analytical methods described in 40 CFR 136, *Guidelines Establishing Test procedures for the Analysis of Pollutants*. For the priority CTR pollutants, analytical methods shall meet

the lowest minimum levels (MLs) specified in Attachment 4 of the SIP; and when no methods are specified for a pollutant.

## V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

The Discharger shall monitor acute and chronic toxicity at E-001 as follows.

### A. Whole Effluent Acute Toxicity

1. Compliance with the acute toxicity effluent limitations of this Order shall be evaluated by measuring survival of test organisms exposed to 96-hour continuous flow-through bioassays.
2. Test organisms shall be fathead minnows (*Pimephales promelas*) or rainbow trout (*Oncorhynchus mykiss*) unless specified otherwise in writing by the Executive Officer.
3. All bioassays shall be performed according to the most up-to-date protocols in 40 CFR Part 136, currently in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms*, 5<sup>th</sup> Edition.
4. If specific identifiable substances in the discharge can be demonstrated by the Discharger as being rapidly rendered harmless upon discharge to the receiving water, compliance with the acute toxicity limit may be determined after the test samples are adjusted to remove the influence of those substances. Written approval from the Executive Officer must be obtained to authorize such an adjustment.
5. Effluent used for fish bioassays must be dechlorinated prior to testing. Monitoring of the bioassay water shall include, on a daily basis, the following parameters: pH, dissolved oxygen, ammonia (if toxicity is observed), temperature, hardness, and alkalinity. These results shall be retained by the discharger. If a violation of acute toxicity requirements occurs or if the control fish survival rate is less than 90 percent, the bioassay test shall be restarted with new batches of fish and shall continue back to back until compliance is demonstrated.

### B. Whole Effluent Chronic Toxicity

1. Chronic Toxicity Monitoring Requirements
  - a. *Sampling*. The Discharger shall collect 24-hour composite samples of the effluent at the compliance point station specified in a table 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*. Red abalone (*H. rufescens*) with *Mysidopsis bahia* as an alternate species under conditions that suitable Red Abalone is not available. The Executive Officer may change to another test species if data suggest that another test species is more sensitive to the discharge.

- c. *Methodology.* Sample collection, handling and preservation shall be in accordance with USEPA protocols. In addition, bioassays shall be conducted in compliance with the most recently promulgated test methods, as shown in Appendix E-1. These are "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms," currently third edition (EPA-821-R-02-014), and "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," currently fourth Edition (EPA-821-R-02-013), with exceptions granted 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 percent effluent, as discharged.

## 2. Chronic Toxicity Reporting Requirements

- a. *Record Retention.* Toxicity test results for the current reporting period shall include, at a minimum, the following for each test. The data shall be retained on site, and available for inspection, for up to 5 years.
  - (1) Sample date(s)
  - (2) Test initiation date
  - (3) Test species
  - (4) End point values for each dilution (e.g., number of young, growth rate, percent survival)
  - (5) NOEC value(s) in percent effluent
  - (6) IC<sub>15</sub>, IC<sub>25</sub>, IC<sub>40</sub>, and IC<sub>50</sub> values (or EC<sub>15</sub>, EC<sub>25</sub> ... etc.) as percent effluent
  - (7) TUC values (100/NOEC, 100/IC<sub>25</sub>, or 100/EC<sub>25</sub>)
  - (8) Mean percent mortality ( $\pm$ s.d.) after 96 hours in 100% effluent (if applicable)
  - (9) NOEC and LOEC values for reference toxicant test(s)
  - (10) IC<sub>50</sub> or EC<sub>50</sub> value(s) for reference toxicant test(s)
  - (11) Available water quality measurements for each test (pH, D.O., temperature, conductivity, hardness, salinity, ammonia)
- b. *Compliance Summary.* The results of the chronic toxicity testing shall be provided in the self-monitoring report and shall include a summary table of chronic toxicity data from at least eleven of the most recent samples. The summary table shall include information required by provisions 2. a. (1), (3), (5), (6) (IC<sub>25</sub> or EC<sub>25</sub>), (7), and (8), immediately above.

## 3. Chronic Toxicity Reduction Evaluation (TRE)

- a. *Prepare 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. *Submit Specific TRE Work Plan.* Within 30 days of exceeding either trigger for accelerated monitoring, the Discharge shall submit to the Regional Water Board a TRE work plan, which should be the generic work plan revised as appropriate for this toxicity event after consideration of available discharge data.
- c. *Initiate TRE.* Within 30 days of the date of completion of the accelerated monitoring tests observed to exceed either trigger, the Discharger shall initiate a TRE in accordance with a TRE work plan that incorporates any and all comments from the Executive Officer.
- d. The TRE shall be specific to the discharge and be in accordance with current technical guidance and reference materials, including USEPA guidance materials. The TRE shall be conducted as a tiered evaluation process, such as summarized below:
  - (1) Tier 1 consists of basic data collection (routine and accelerated monitoring).
  - (2) Tier 2 consists of evaluation of optimization of the treatment process, including operation practices and in-plant process chemicals.
  - (3) Tier 3 consists of a toxicity identification evaluation (TIE).
  - (4) Tier 4 consists of evaluation of options for additional effluent treatment processes.
  - (5) Tier 5 consists of evaluation of options for modifications of in-plant treatment processes.
  - (6) Tier 6 consists of implementation of selected toxicity control measures, and follow-up monitoring and confirmation of implementation success.
- e. The TRE may be ended at any stage if monitoring finds there is no longer consistent toxicity (complying with Effluent Limitations Section IV.A. 1.e).
- 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 source(s) and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with chronic toxicity evaluation parameters.

- h. Many recommended TRE elements parallel required or recommended efforts of source control, pollution prevention and storm water control programs. TRE efforts should be coordinated with such efforts. To prevent duplication of efforts, evidence of complying with requirements or recommended efforts of such programs may be acceptable to comply with TRE requirements.
- i. The Regional Water Board recognizes that chronic toxicity may be episodic and identification of causes of and reduction of sources of chronic toxicity may not be successful in all cases. Consideration of enforcement action by the Regional Water Board will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

**VI. LAND DISCHARGE MONITORING REQUIREMENTS**

Not Applicable

**VII. RECLAMATION MONITORING REQUIREMENTS**

Not Applicable

**VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER**

Receiving water monitoring is required under this Order at the same frequency and for the same constituents as the previous Order.

**IX. OTHER MONITORING REQUIREMENTS**

**A. Overflows and Bypasses (OV-1 thru OV-n)**

- 1. The Discharger shall monitor all bypass events or overflows, for which monitoring requirements are not otherwise established by this Monitoring and Reporting Program, in accordance with the following schedule.

**Table E-6. Overflows and Bypasses Monitoring Requirements**

Parameter [1]	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow and Total Volume	MGD	Continuous	1 / Day	Pollutants shall be analyzed using analytical methods described in 40 CFR 136 (Guidelines Establishing Test procedures for the Analysis of Pollutants)
Duration	hours	Continuous	1 / Day	
CBOD <sub>5</sub>	mg/L; kg/day	Grab	1 / Day	
TSS	mg/L; kg/day	Grab	1 / Day	
Enterococci	MPN/ 100 mL	Grab	1 / Day	
Fecal Coliform	MPN/ 100 mL	Grab	1 / Day	
Total Coliform	MPN/100 mL	Grab	1 / Day	
Standard Observations	--	Observation	Each Occurrence	

**X. REPORTING REQUIREMENTS**

**A. General Monitoring and Reporting Requirements**

1. The Discharger shall comply with all Standard Provisions (Attachment D and G) related to monitoring, reporting, and recordkeeping, except as otherwise specified below.

**B. Self Monitoring Reports (SMRs)**

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.
2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
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 2 / Week, 5 / Week	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday
1 / Month	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1 <sup>st</sup> 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 April 1 through June 30 July 1 through September 30 October 1 through December 31
1 / Year	Closest of May 1 or November 1 following (or on) permit effective date	Alternate between once during November 1 through April 30 (one year), and once during May 1 through October 31 (following year)
2 / Year	Closest of May 1 or November 1 following (or on) permit effective date	One during November 1 through April 30 One during May 1 through October 31

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period
Each Occurrence	Anytime during the discharge event or as soon as possible after aware of the event	At anytime which sampling can characterize the discharge event

4. Reporting Protocols. The Discharger shall report with each sample result the applicable ML as shown in Table 8 of this Order or SIP Appendix 4. and the current Method Detection Limit (MDL), as determined by the procedure in Part 136.

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

- a. Sample results greater than or equal to the ML as shown in Table 8 of this Order or SIP Appendix 4 shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the ML as shown in Table 8 of this Order or SIP Appendix 4, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

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

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
  - d. Dischargers are to instruct laboratories to establish calibration standard (curve) such that the lowest point on the calibration curve is not higher than the respective ML value shown in SIP Appendix 4. 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 interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

- b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and 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:

San Francisco Bay Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612  
Attn: NPDES Division

### **C. Discharge Monitoring Reports (DMRs)**

1. As described in Section X.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below.
2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharge shall submit the original DMR and one copy of the DMR to the address listed below:

State Water Resources Control Board  
Discharge Monitoring Report Processing Center  
Post Office Box 671  
Sacramento, CA 95812

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated or modified cannot be accepted.

### **D. Modifications to Part A of Self-Monitoring Program (Attachment G)**

1. If any discrepancies exist between SMP Part A, August 1993 (Attachment G) and this MRP, this MRP prevails.
2. Modify Section F.4 as follows:

#### **Self-Monitoring Reports**

[Add the following to the beginning of the first paragraph]

For each calendar month, a self-monitoring report (SMR) shall be submitted to the Regional Water Board in accordance with the requirements listed in Self-Monitoring Program, Part A. The purpose of the report is to document treatment performance, effluent quality and compliance with waste discharge requirements prescribed by

this Order, as demonstrated by the monitoring program data and the Discharger's operation practices.

[And add at the end of Section F.4 the following:]

g. If the Discharger wishes to invalidate any measurement, the letter of transmittal will include a formal request to invalidate the measurement; the original measurement in question, the reason for invalidating the measurement, all relevant documentation that supports the invalidation (e.g., laboratory sheet, log entry, test results, etc.), and discussion of the corrective actions taken or planned (with a time schedule for completion), to prevent recurrence of the sampling or measurement problem. The invalidation of a measurement requires the approval of Regional Water Board staff and will be based solely on the documentation submitted at that time.

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 the process approved by the Executive Officer in a letter dated December 17, 1999, Official Implementation of Electronic Reporting System (ERS) and in the Progress Report letter dated December 17, 2000, or in a subsequently approved format that the Permit has been modified to include.
- 2) Monthly or Quarterly Reporting Requirements: For each reporting period (monthly or quarterly as specified in SMP Part B), an electronic SMR shall be submitted to the Regional Water Board in accordance with Section F.4.a-g. above. However, until USEPA approves the electronic signature or other signature technologies, Dischargers that are using the ERS must submit a hard copy of the original transmittal letter, an ERS printout of the data sheet, a violation report, and a receipt of the electronic transmittal.
- 3) Annual Reporting Requirements: Dischargers who have submitted data using the ERS for at least one calendar year are exempt from submitting an annual report electronically, but a hard copy of the annual report shall be submitted according to Section F.5 below.

7. Add at the end of Section F.5, Annual Reporting, the following:

- d. A plan view drawing or map showing the Discharger's facility, flow routing and sampling and observation station locations.

**E. Other Reports**

N/A

## 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-Kärber.  $EC_{25}$  is the concentration of toxicant (in percent effluent) that causes a response in 25 percent of the test organisms.
- C. Inhibition concentration (IC) is a point estimate of the toxicant concentration that would cause a given percent reduction in a nonlethal, nonquantal biological measurement, such as growth. For example, an  $IC_{25}$  is the estimated concentration of toxicant that would cause a 25 percent reduction in average young per female or growth. IC values may be calculated using a linear interpolation method such as USEPA's Bootstrap Procedure.
- D. No observed effect concentration (NOEC) is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. It is determined using hypothesis testing.

##### II. Chronic Toxicity Screening Phase Requirements

- A. The Discharger shall perform screening phase monitoring:
  1. Subsequent to any significant change in the nature of the effluent discharged through changes in sources or treatment, except those changes resulting from reductions in pollutant concentrations attributable to source control efforts, or
  2. Prior to permit reissuance. Screening phase monitoring data shall be included in the NPDES permit application for reissuance. The information shall be as recent as possible, but may be based on screening phase monitoring conducted within 5 years before the permit expiration date.
- B. Design of the screening phase shall, at a minimum, consist of the following elements:
  1. Use of test species specified in **Appendix E-2**, attached, and use of the protocols referenced in those tables, or as approved by the Executive Officer.

2. Two stages:
    - a. Stage 1 shall consist of a minimum of one battery of tests conducted concurrently. Selection of the type of test species and minimum number of tests shall be based on **Appendix E-2** (attached).
    - b. Stage 2 shall consist of a minimum of two test batteries conducted at a monthly frequency using the three most sensitive species based on the Stage 1 test results and as approved by the Executive Officer.
  3. Appropriate controls.
  4. Concurrent reference toxicant tests.
  5. Dilution series 100%, 50%, 25%, 10%, 5%, 0 %, where “%” is percent effluent as discharged, or as otherwise approved the Executive Officer.
- C. The Discharger shall submit a screening phase proposal acceptable to the Executive Officer. The proposal shall address each of the elements listed above. If within 30 days, the Executive Officer does not comment, the Discharge 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	( <i>Skeletonema costatum</i> ) ( <i>Thalassiosira pseudonana</i> )	Growth rate	4 days	1
Red alga	( <i>Champia parvula</i> )	Number of cystocarps	7-9 days	3
Giant kelp	( <i>Macrocystis pyrifera</i> )	Percent germination; germ tube length	48 hours	2
Abalone	( <i>Haliotis rufescens</i> )	Abnormal shell development	48 hours	2
Oyster Mussel	( <i>Crassostrea gigas</i> ) ( <i>Mytilus edulis</i> )	Abnormal shell development; percent survival	48 hours	2
Echinoderms - Urchins	( <i>Strongylocentrotus purpuratus</i> , <i>S. franciscanus</i> )	Percent fertilization	1 hour	2
Sand dollar	( <i>Dendraster excentricus</i> )			
Shrimp	( <i>Mysidopsis bahia</i> )	Percent survival; growth	7 days	3
Shrimp	( <i>Holmesimysis costata</i> )	Percent survival; growth	7 days	2
Topsmelt	( <i>Atherinops affinis</i> )	Percent survival; growth	7 days	2
Silversides	( <i>Menidia beryllina</i> )	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)	Cell division rate	4 days	4

**Toxicity Test Reference:**

4. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, third edition. EPA/600/4-91/002. July 1994.

### Toxicity Test Requirements for Stage One Screening Phase

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

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

- (a) The salinity of the effluent is above 1 part per thousand (ppt) greater than 95 percent of the time, or
- (b) The ionic strength (TDS or conductivity) of the effluent at the test concentration used to determine compliance is documented to be toxic to the test species.

[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” are fully applicable to this Discharger.

### I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

**Table F-1. Facility Information**

<b>WDID</b>	2 071008001
<b>Discharger</b>	Central Contra Costa Sanitary District
<b>Name of Facility</b>	Central Contra Costa Sanitary District Collection System and WWTP
<b>Facility Address</b>	5019 Imhoff Place
	Martinez, CA 94553
	Contra Costa County
<b>Facility Contact, Title and Phone</b>	Douglas J. Craig, Director of Operations, 925-229-7284
<b>Authorized Person to Sign and Submit Reports</b>	Douglas J. Craig, Director of Operations, 925-229-7284
<b>Mailing Address</b>	SAME
<b>Billing Address</b>	SAME
<b>Type of Facility</b>	POTW
<b>Major or Minor Facility</b>	Major
<b>Threat to Water Quality</b>	1
<b>Complexity</b>	B
<b>Pretreatment Program</b>	Y
<b>Reclamation Requirements</b>	Y
<b>Facility Permitted Flow</b>	53.8 MGD
<b>Facility Design Flow</b>	42.2 MGD measured average dry weather
	56.9 MGD measured peak dry weather
	260 MGD measured peak wet weather
<b>Watershed</b>	San Francisco Bay
<b>Receiving Water</b>	Suisun Bay
<b>Receiving Water Type</b>	Estuarine

- A. The Central Contra Costa Sanitary District (hereinafter the Discharger) is the owner and operator of a municipal wastewater treatment plant and its sewage collection system.

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

- B. The facility discharges wastewater to Suisun Bay, waters of the United States, and is currently regulated by the previous permit, which was adopted on May 31, 2001 and expired on May 31, 2006. The terms and conditions of the current Order have been automatically continued and remain in effect until new Waste Discharge Requirements and NPDES permit are adopted pursuant to this Order.
- C. The Discharger filed a Report of Waste Discharge and submitted an application for renewal of its Waste Discharge Requirements and National Pollutant Discharge Elimination System (NPDES) permit on November 30, 2005.

## II. FACILITY DESCRIPTION

The Discharger provides sewerage service for Central Contra Costa County and serves a population of approximately 445,000. The facility's design average dry weather flow capacity is 53.8 million gallons per day (MGD).

### A. Description of Wastewater and Biosolids Treatment or Controls

Wastewater originates from domestic, commercial, and industrial sources within a number of cities, towns, and unincorporated areas in Central Contra Costa County. The Discharger collects, treats, recycles and disposes waste water from 445,000 residents in an area that covers 141 square miles and includes approximately 1500 miles of sewer pipes that range in size from 6 inches and 102 inches in diameter. There are 19 sewage pumping stations that deliver the waste water to the treatment plant. The treatment system at this facility consists of screening, pre-aeration and grit removal, primary sedimentation, anaerobic selection, biological activated-sludge secondary treatment, secondary clarification, and ultraviolet disinfection. Treated wastewater is discharged to Suisun Bay, a water of the United States, through a submerged outfall equipped with a multi-port diffuser at a location approximately 1600 feet off shore and at a depth of about 24 feet below mean lower water.

The facility's dry weather design capacity is 53.8 MGD. The Discharger's Report of Waste Discharge describes the average daily flow rates that vary between 26.7 and 260 MGD.

The Discharger drains and inspects its outfall approximately one time every five years, including verification of pipe alignment and assessment of physical integrity of pipe joints, bracing, and air release valves. During the inspection and repair period, which normally requires two or four weeks, secondary treated effluent is discharged to Pacheco Slough, which is tributary to Walnut Creek and ultimately to Suisun Bay. If a major joint repair is required, the discharge to Pacheco Slough may continue for up to additional eight weeks. Inspection of the outfall and repair work is typically conducted during the low flow period in dry seasons. The Discharger will be constructing a project to discharge excessive wet weather flows to Walnut Creek from Basin B at point EFF-003 instead of discharging from Basin C at point EFF-002.

Waste-activated sludge is thickened via dissolved air flotation, combined with primary sludge and lime, and dewatered by centrifuges before being incinerated on-site. Ash is hauled to an off-site recycling facility and is ultimately used as a soil amendment. If sludge

incinerators are inoperable, sludge may be transported to the East Bay Municipal Utility District or to local landfills.

### B. Discharge Points and Receiving Waters

The discharge point, authorized by the Order, and receiving water, are shown in Table F-2 below.

**Table F-2. Discharge Location**

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	POTW Effluent	38°, 2', 44" N	122°, 5', 55" W	Suisun Bay

### C. Storm Water

USEPA regulations pertaining to storm water, promulgated on November 19, 1990, are established at 40 CFR Parts 122, 123, and 124 and require specific categories of industrial activity to obtain NPDES permits and to implement Best Available Technology Economically Available (BAT) and Best Conventional Pollutant Control Technology (BCT) to control pollutants in discharges of industrial storm water.

The Discharger owns and operates 19 pump stations, which are located in the west, north, and southeast parts of the service area. These pump stations vary widely in size and capacity. As acknowledged by a letter to the Discharger from the Regional Water Board on February 14, 1994, storm water runoff from the grounds of the pump stations is categorically exempt from USEPA's storm water regulations; however, the Discharger works to minimize the impacts of runoff from these sites by directing some or all site storm water to pump station wet wells and by general housekeeping practices.

Storm water from the grounds of the WWTP is directed to the head works and is, therefore, regulated by this Order. The Discharger is not required to seek coverage under the statewide general NPDES permit for storm water discharges associated with industrial activities (NPDES General Permit CAS000001).

### D. Wet Weather Flow Management

The WWTP has three holding basins, designated as Holding Basins A-North, B, and C, for temporary storage of wet weather flows that exceed the facility's treatment capacity. Surplus wastewater, usually primary effluent, is routed from these basins, which have a combined volume of 140 million gallons, back to the treatment plant when capacity becomes available. The three basins provide a hydraulic retention time of two days, allowing additional biological and physical treatment. Emergency outfalls from the holding basins are identified by the Order as Discharge Points EFF-002 and EFF-003. The last unscheduled, emergency discharge from these basins occurred in 1998.

A fourth basin, owned but not operated by the Discharger, located near Basin B, is used to hold and dry alum sludge from potable water production by the Contra Costa Water District. Dry alum sludge is hauled off site by the District for final disposal.

**E. Wastewater Reclamation**

The Discharger began reclaiming a portion of its treated effluent in 1995. Tertiary treated effluent is delivered to industrial and urban landscape clients within the Discharger's service area. The amount of reclaimed wastewater supplied since 1997 has been increasing annually; and in 2004, the Discharger delivered a total of 190 million gallons of tertiary treated effluent for reclamation.

The Discharger is currently regulated under Order 96-011 (General Water Reuse Requirements for Municipal Wastewater and Water Agencies) as a producer and distributor of non-potable recycled wastewater.

**F. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data**

Effluent limitations contained in the previous permit for discharges from Discharge Point 001 (Monitoring Location M-001) and representative monitoring data from the term of the previous permit are as follows.

**Table F-3. Historic Conventional Substances Effluent Limitations and Monitoring Data**

Parameter	(units)	Effluent Limitations			Monitoring Data (From 05/01 To 05/06)	
		Monthly Average	Weekly Average	Instantaneous Maximum	Mean	Maximum
CBOD <sub>5</sub>	mg/L	25	40	45	5.6	31
TSS	mg/L	30	45	60	8.0	44
Settleable Matter	ml/L-hr	0.1	--	0.2	ND	ND
Oil and Grease	mg/L	10	--	20	1.9	6.6
pH		6.0 to 9.0			6.7 (min)	8.1
Enterococci	Col./100 ml	33 30-day geometric mean		108	10	103

**Table F-4. Historic Toxic Substances Effluent Limitations and Monitoring Data**

Parameter	Units	Water Quality-Based Effluent Limits (WQBELs)		Interim Limits		Monitoring Data (From 05/01 To 05/06)	
		Daily Maximum	Monthly Average	Daily Maximum	Monthly Average	Mean <sup>(1)</sup>	Maximum
Copper	µg/L	19.5	14.2	--	--	8.4	14.9
Mercury	µg/L	--	--	1	0.087	0.0307	0.205
Lead	µg/L	8.2	3.5	--	--	0.92	3.6
Cyanide	µg/L	--	--	18	--	3.4	9.9
Dioxin-TEQ	µg/L	---	---	(2)	(2)	2.34 x 10 <sup>-7</sup>	0.017x10 <sup>-6</sup>
4,4'-DDE	µg/L	0.00118	0.000059	--	--	<0.002	<0.003
Dieldrin	µg/L	0.00028	0.00014	--	--	<0.002	<0.002
Acrylonitrile	µg/L	--	--	7	--	1.0	2.6
Bis(2-Ethylhexyl) Phthalate	µg/L	--	--	190	--	0.9	1.56
Tributyltin	µg/L	--	--	--	0.06	<0.003	0.006

- (1) Mean Discharge values include Non-detected and Detected but Not Quantified (DNQ) values in the computation. DNQs were assumed to be at the reported values. For ND data the MDL value was used in the calculation.
- (2) The previous permit established an interim mass-based limitation for dioxin-TEQ of 0.836 mg/month.

**G. Compliance Summary**

1. **Compliance with Numeric Effluent Limits.** No exceedances of numeric effluent limits were observed during the permit term.
2. **Compliance with Permit Provisions.** A list of special activities required by the previous permit and the status of each activity, is shown in Table F-5 below.

**Table F-5. Status of Special Activities in Provisions of the Previous Permit**

No.	Description of Activity	Status of Completion
1	Development of techniques for successful performance of acute toxicity tests using U.S. EPA 4 <sup>th</sup> Edition Protocols	Completed
2	Special study to investigate the feasibility and reliability of different methods of increasing sample volume to lower the detection limits for dioxins and furans	Completed
3	Investigation of alternative analytical procedures that result in lower detection limits for certain organic pollutants	Completed
4	Chronic toxicity characterization study	Completed
5	Ambient background water quality characterization study for acrylonitrile, bis(2-ethylhexyl)phthalate, cyanide, tributyltin, and Regional Water Board's 13267 letter analytes	Completed
6	Site-specific objective study for cyanide	Completed
7	Contingency plan	Completed
8	Pollution Prevention Program	Completed
9	Review and update of Operations and Maintenance procedure	Completed
10	Participation in TMDL development	Completed

3. **Compliance with Submittal of Self-Monitoring Reports.** The Discharger submitted all Self-Monitoring Reports on or before the due date during the term of the previous permit.

**H. Planned Changes**

N/A

**III. APPLICABLE PLANS, POLICIES, AND REGULATIONS**

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

**A. Legal Authorities**

This Order is issued pursuant to CWA section 402 and implementing regulations adopted by the USEPA and Chapter 5.5, Division 7 of the California Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this

facility to surface waters. This Order also serves as Waste Discharge Requirements pursuant to Article 4, Chapter 4, Division 7 of the California Water Code (commencing with section 13260).

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

Under California Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100 through 21177.

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

**1. Water Quality Control Plans.** The Regional Water Board adopted the *Water Quality Control Plan for the San Francisco Basin* (the Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Because of the marine influence on receiving waters of the San Francisco Bay, total dissolved solids levels in the Bay commonly (and often significantly) exceed 3,000 mg/L and thereby meet an exception to State Water Board Resolution No. 88-63. Beneficial uses applicable to Suisun Bay are as follows.

**Table F-6. Basin Plan Beneficial Uses**

Discharge Point	Receiving Water	Beneficial Uses
001	Suisun Bay	Ocean, Commercial, and Sport Fishing (COMM) Estuarine Habitat (EST) Industrial Service Supply (IND) Fish Migration (MIGR); Navigation (NAV) Preservation or Rare, Threatened or Endangered Species (RARE) Non-Contact (REC-2) Water Recreation Wildlife Habitat (WILD) Fish Spawning (SPWN)

Requirements of this Order implement the Basin Plan.

**2. Thermal Plan.** The State Water Board adopted the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains WQOs for coastal and interstate surface waters as well as enclosed bays and estuaries. Requirements of this Order implement the Thermal Plan.

**3. 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 forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR, which established new water quality criteria for toxic pollutants in California waters and incorporated the previously adopted NTR

criteria that were applicable in the State. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

- 4. State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA 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 C.F.R. 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. Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations (WQBELs). The technology-based effluent limitations consist of restrictions on CBOD<sub>5</sub>, TSS, Oil and Grease, and pH. Restrictions on these constituents are specified in federal regulations as discussed in the attached Fact Sheet, Attachment F, and the permit's technology-based pollutant restrictions are no more stringent than required by the CWA. WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual WQBELs are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR 131.21 (c) (1).
- 6. 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 in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

7. **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 that effluent limitations in a reissued permit be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. All limitations and requirements of the Order are consistent with anti-backsliding requirements of the CWA and NPDES regulations.

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

On June 6, 2003, the USEPA approved a revised list of impaired water bodies prepared by the State [the 303(d) list]), prepared pursuant to CWA section 303 (d), which requires identification of specific water bodies where water quality standards will not be met after implementation of technology-based effluent limitations on point sources. Suisun Bay is included on the 303 (d) list as impaired by chlordane, DDT, diazinon, dieldrin, dioxin compounds, exotic species, furan compounds, mercury, nickel, PCBs, dioxin-like PCBs, and selenium. The SIP requires final effluent limitations for all 303 (d)-listed pollutants to be consistent with total maximum daily loads and associated waste load allocations.

1. **Total Maximum Daily Loads.** The Regional Water Board plans to adopt Total Maximum Daily Loads (TMDLs) for pollutants on the 303 (d) list in Suisun Bay within the next ten years. Future review of the 303 (d) list for Suisun Bay may result in revision of the schedules or provide schedules for other pollutants.
2. **Waste Load Allocations.** TMDLs will establish waste load allocations (WLAs) for point sources and load allocations (LAs) for non-point sources, and will result in achieving water quality standards for the waterbodies. Final WQBELs for 303 (d)-listed pollutants in this discharge will be based on WLAs contained in the respective TMDLs.
3. **Implementation Strategy.** The Regional Water Board's strategy to collect water quality data and to develop TMDLs is summarized below.
  - a. **Data Collection.** The Regional Water Board has given dischargers the option to assist in developing and implementing analytical techniques capable of detecting 303 (d)-listed pollutants at the concentrations of concern or at concentrations equivalent to applicable WQOs/WQC. This collective effort may include development of sample concentration techniques for approval by the USEPA. The Regional Water Board will require dischargers to characterize the pollutant loads from their facilities into the water-quality limited waterbodies. The results will be used in the development of TMDLs, and may be used to update or revise

the 303 (d) list or change the WQOs/WQC for the impaired waterbodies including Suisun Bay.

- b. Funding Mechanism.** The Regional Water Board has received, and anticipates continuing to receive, resources from federal and State agencies for TMDL development. To ensure timely development of TMDLs, the Regional Water Board intends to supplement these resources by allocating development costs among dischargers through the RMP or other appropriate funding mechanisms.

#### **E. Other Plans, Polices and Regulations**

N/A

### **IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in 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 WQBELs to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs may be established: (1) using USEPA criteria guidance under CWA section 304 (a), supplemented where necessary by other relevant information; (2) on an indicator parameter for the pollutant of concern; or (3) using a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided at 40 CFR 122.44 (d) (1) (vi).

#### **A. Discharge Prohibitions**

- 1. Discharge Prohibition III.A.** (No discharge receiving less than 10:1 dilution). This prohibition is retained from the previous permit and is based on Discharge Prohibition No. 1 from Table 4-1 of the Basin Plan, which prohibits discharges that do not receive a minimum 10:1 initial dilution. This Order subsequently allows a 10:1 dilution credit in the calculation of some water quality based effluent limitations, and these limits would not be protective of water quality, if the discharge did not actually achieve a 10:1 minimum initial dilution.
- 2. Discharge Prohibition III.B.** (No bypass or overflow of untreated or partially treated wastewaters). This prohibition is based on the Basin Plan, which prohibits the discharge of partially treated and untreated wastes (Chapter 4, Discharge Prohibition No.15). This prohibition is also based on general concepts contained in sections 13260 through 13264 of the California Water Code that relate to the discharge of waste to State waters without filing for and being issued a permit. Under certain circumstances, as stated at 40 CFR 122.41 (m), facilities may bypass waste streams to waters of the State in order to prevent loss of life, personal injury, or severe

property damage, or if there were no feasible alternatives to the bypass and the Discharger submitted notices of the anticipated bypass to waters of the State.

3. **Discharge Prohibition III.C.** (Average dry weather flow not to exceed dry weather design capacity). This prohibition is based on the design capacity of the facility. Exceedance of the design, average dry weather flow capacity may result in lowering the reliability of achieving compliance with water quality requirements.
4. **Discharge Prohibition III.D.** (No discharge except as described by the Order). This prohibition is based on California Water Code section 13260, which requires filing a Report of Waste Discharge before discharges can occur. Discharges not described in the ROWD, and subsequently in the Order, are prohibited.
5. **Discharge Prohibition III.E.** (No sanitary sewer overflows (SSO) to waters of the United States). The Clean Water Act prohibits the discharge of wastewater to surface waters except as authorized under an NPDES permit. POTWs must achieve secondary treatment, at a minimum, and any more stringent limitations that are necessary to achieve water quality standards. [33 U.S.C. §1311(b)(1)(B) and (C).] Thus, an SSO that results in the discharge of raw sewage, or sewage not meeting secondary treatment, to surface waters is prohibited under the Clean Water Act.

## **B. Technology-Based Effluent Limitations**

### **1. Scope and Authority**

NPDES regulations at 40 CFR 122.44 (a) require that permits include applicable technology-based limitations and standards. The Order includes such limitations based on the minimum level of effluent quality attainable by secondary treatment, as established by the USEPA at 40 CFR 133. This Secondary Treatment Regulation includes requirements for BOD<sub>5</sub> (or CBOD<sub>5</sub>), suspended solids, and pH. The Regional Board, in Table 4-2 of the Basin Plan, has supplemented these technology based requirements with additional requirements for conventional pollutants (bacteria, settleable matter, oil and grease, and total residual chlorine). This Order, therefore, includes effluent limitations for CBOD<sub>5</sub>, suspended solids, pH, bacteria, and oil and grease, which reflect the applicable technology based requirements of 40 CFR 133 and the applicable requirements for conventional pollutants established by Table 4-2 of the Basin Plan.

All effluent limitations for CBOD<sub>5</sub>, suspended solids, pH, bacteria, and oil and grease are the same as in the previous permit, with one exception being that limitations for settleable solids have not been retained by this Order. For the Central Contra Costa Wastewater Treatment Facility, like other facilities achieving secondary or more advanced levels of treatment, the Regional Board has determined that compliance with the requirements of 40 CFR 133 and of Table 4-2 of the Basin Plan will likewise assure removal of settleable solids to acceptably low levels - below 0.1 ml/L/hr (30 day average) and 0.2 ml/L/hr (daily maximum).

The Order does not include effluent limitations for chlorine, because the facility achieves disinfection by ultraviolet light. Any discharge of chlorine would be inconsistent with information provided by the Discharger in its Report of Waste Discharge and would, therefore, be considered a violation of Discharge Prohibition III. D of the Order.

This Order establishes the following technology-based effluent limitations.

- a. **CBOD<sub>5</sub>**. Effluent limitations for CBOD<sub>5</sub> of 25 mg/L (average monthly), 40 mg/L (average weekly), and 50 mg/L (Maximum daily) are retained from the previous permit and reflect requirements of USEPA's secondary treatment regulations at 40 CFR 133.102, as well as requirements established by Table 4-2 of the Basin Plan for conventional pollutants. A requirement for 85 percent CBOD<sub>5</sub> removal has also been retained from the expiring permit and reflects requirements of USEPA's secondary treatment regulations and requirements established by Table 4-2 of the Basin Plan.
- b. **Total Suspended Solids (TSS)**. Effluent limitations for TSS of 30 mg/L (average monthly), 45 mg/L (average weekly), and 60 mg/L (maximum daily) are retained from the previous permit and reflect requirements of USEPA's secondary treatment regulations at 40 CFR 133.102, as well as requirements established by Table 4-2 of the Basin Plan for conventional pollutants. A requirement for 85 percent TSS removal has also been retained from the expiring permit and reflects requirements of USEPA's secondary treatment regulations and requirements established by Table 4-2 of the Basin Plan.
- c. **pH**. Effluent limitations requiring pH of effluent to be within the range of 6.0- 9.0 are retained from the previous permit and reflect requirements of USEPA's secondary treatment regulations at 40 CFR 133.102, as well as requirements established by Table 4-2 of the Basin Plan for deep water discharges of conventional pollutants.
- d. **Oil and Grease**. Effluent limitations for oil and grease of 10 mg/L (average monthly) and 20 mg/L (maximum daily) are retained from the previous permit and reflect requirements established by Table 4-2 of the Basin Plan for discharges of conventional pollutants. These limitations are also typical requirements of secondary treatment.
- e. **Enterococci Bacteria**. Enterococci are more closely associated with gastrointestinal disease than fecal coliform bacteria for water contact. Effluent limitations for enterococci bacteria were previously established, as alternatives to limitations for coliform bacteria.

The limit for Enterococci bacteria established by this Order (geometric mean not to exceed 35 colonies per 100 milliliters) is based on water quality criteria established by the USEPA at 40 CFR 131.41 for coastal recreation waters, including coastal estuaries, in California. These water quality criteria became effective on December 16, 2004. [69 Fed Reg. 67218 (November 16, 2004)].

Although USEPA also established single sample maximum criteria for Enterococci bacteria, this Order implements only the geometric mean criterion of 35 colonies per 100 milliliters as an effluent limitation. When these water quality criteria were promulgated, USEPA expected that the single sample maximum values would be used for making beach notification and beach closure decisions. "Other than in the beach notification and closure decision context, the geometric mean is the more relevant value for assuring that appropriate actions are taken to protect and improve water quality because it is a more reliable measure, being less subject to random variation ...." [69 Fed Reg. 67224 (November 16, 2004)]

Effluent limitations for enterococci bacteria in the previous permit (average monthly limit of 33 colonies /100 ml and a single maximum of 108 colonies/100 ml) were based on protection of fresh water quality. This determination was incorrect. Instead, it would have been appropriate to implement the marine and estuarine criterion of 35 colonies/100 ml that was available at that time. This was because it was more appropriate for the estuarine receiving water for this discharge. It was also incorrect to apply the single sample maximum criterion as an effluent limitation in the previous permit. As stated in the criteria document, "...a decision based on a single sample ... may be erroneous...." These conclusions are further supported by the USEPA in its 2004 rule discussed above.

Because this Order corrects bacteria limits of the previous Order, which were based on protection of fresh water quality, limitations for Enterococci bacteria are consistent with the exception to the Clean Water Act's backsliding provisions, expressed at CWA 402(o)(2)(B)(ii) for technical mistakes.

## 2. Applicable Technology-Based Effluent Limitations

The Order is retaining/establishing the following technology based effluent limitations, applicable to Discharge Point 001, from the previous permit.

**Table F-7. Summary of Technology-Based Effluent Limitations**

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
CBOD <sub>5</sub>	mg/L	25	40	50	---	---
TSS	mg/L	30	45	60	---	---
pH	s.u.	---	---	---	6.0	9.0
Oil & Grease	mg/L	10	---	20	---	---

- **CBOD<sub>5</sub> and TSS 85% Percent Removal:** The average monthly percent removal of CBOD<sub>5</sub> and TSS shall not be less than 85 percent.
- **Enterococci Bacteria:** The monthly geometric mean shall not exceed 35 colonies per 100 ml of effluent sample.

## C. Water Quality-Based Effluent Limitations (WQBELs)

### 1. Scope and Authority

- a. NPDES regulations at 40 CFR 122.44 (d) (1) (i), require permits to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard (Reasonable Potential). The process for determining Reasonable Potential and calculating WQBELs, when necessary, is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in the California Toxics Rule (CTR), National Toxics Rule (NTR), the San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan), other State plans and policies.
- b. NPDES regulations and the State Implementation Policy (SIP) provide the basis to establish Maximum Daily Effluent Limitations (MDELs).
  - (1) **NPDES Regulations.** NPDES regulations at 40 CFR Part 122.45 (d) state: "For continuous discharges all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall unless impracticable be stated as maximum daily and average monthly discharge limitations for all discharges other than publicly owned treatment works."
  - (2) **SIP.** The SIP (page 8, Section 1.4) requires WQBELs be expressed as MDELs and average monthly effluent limitations (AMELs).
- c. MDELs are used in this Order to protect against acute water quality effects. The MDELs are necessary for preventing fish kills or mortality to aquatic organisms.

### 2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The WQC and WQOs applicable to the receiving waters for this discharge are from the Basin Plan; the California Toxics Rule (CTR), established by USEPA at 40 CFR 131.38; and the National Toxics Rule (NTR), established by USEPA at 40 CFR 131.36. Some pollutants have WQC/WQOs established by more than one of these three sources.

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

Effects on aquatic organisms, wildlife, and human health will be considered.” Effluent limitations and provisions contained in this Order are designed, based on available information, to implement these objectives.

- b. **CTR.** The CTR specifies numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 57 priority toxic pollutants. These criteria apply to all inland surface waters and enclosed bays and estuaries of the San Francisco Bay Region, although Tables 3-3 and 3-4 of the Basin Plan include numeric objectives for certain of these priority toxic pollutants, which supersede criteria of the CTR (except in the South Bay south of the Dumbarton Bridge).
- 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 toxic organic pollutants for waters of San Francisco Bay upstream to, and including Suisun Bay and the Delta.
- d. **Technical Support Document for Water Quality-Based Toxics Controls.** Where numeric objectives have not been established or updated in the Basin Plan, NPDES regulations at 40 CFR Part 122.44 (d) require that WQBELs be established based on USEPA criteria, supplemented where necessary by other relevant information, to attain and maintain narrative WQOs to fully protect designated beneficial uses.

To determine the need for and establish WQBELs, when necessary, the Regional Water Board staff has followed the requirements of applicable NPDES regulations, including 40 CFR Parts 122 and 131, as well as guidance and requirements established by the Basin Plan; USEPA's *Technical Support Document for Water Quality-Based Toxics Control* (the TSD, EPA/505/2-90-001, 1991); and the State Water Resources Control Board's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (the SIP, 2005).

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

The receiving water for this Discharger, Suisun Bay, is an estuarine water environment based on salinity data collected by the discharger in the vicinity of the outfall from May 2005 through May 2006. The data shows the receiving water's minimum salinity at 0.1 parts per thousand (ppt), its maximum salinity at 15.4 ppt, and its average salinity at 4.73 ppt. As salinity was less than 1 ppt in 43

percent of receiving water samples and greater than 10 ppt in 29 percent of the receiving water samples, both the freshwater and saltwater criteria from the Basin Plan, NTR, and CTR are applicable to this discharge.

- f. Site-Specific Metals Translators.** Because NPDES regulations at 40 CFR 122.45 (c) require effluent limitations for metals to be expressed as total recoverable metal, and applicable water quality criteria for the metals are typically expressed as dissolved metal, 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 which are used in NPDES permitting activities; however, site-specific conditions such as water temperature, pH, suspended solids, and organic carbon greatly impact the form of metal (dissolved, filterable, or otherwise) which is present and therefore available in the water to cause toxicity. In general, the dissolved form of the metals is more available and more toxic to aquatic life than filterable forms. Site-specific translators can be developed to account for site-specific conditions, thereby preventing exceedingly stringent or under protective water quality objectives.

For discharges to deep water environments of Suisun Bay, such as the Discharger's discharge, the Regional Water Board staff are using the following translators for copper and nickel, based on recommendations of the Clean Estuary Partnership's *North of Dumbarton Bridge Copper and Nickel Development and Selection of Final Translators* (2005). In determining the need for and calculating WQBELs for all other metals, the Regional Water Board staff have used default translators established by the USEPA in the CTR at 40 CFR 131.38 (b) (2), Table 2.

**Table F-8. Copper and Nickel Site Specific Translators**

CU and Ni Translators for Deepwater Discharges to San Pablo Bay	Copper		Nickel	
	AMEL Translator	MDEL Translator	AMEL Translator	MDEL Translator
	0.38	0.67	0.27	0.57

### 3. Determining the Need for WQBELs

NPDES regulations at 40 CFR 122.44 (d) (1) (i) require permits to include WQBELs for all pollutants (non-priority or priority) "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any narrative or numeric criteria within a State water quality standard" (have Reasonable Potential). Thus, assessing whether a pollutant has Reasonable Potential is the fundamental step in determining whether or not a WQBEL is required. For non-priority pollutants, Regional Water Board staff used available monitoring data, receiving water's designated uses, and/or previous permit pollutant limitations to determine Reasonable Potential. For priority pollutants, Regional Water Board staff used the methods prescribed in Section 1.3 of the SIP to determine if the discharge from the Central Contra Costa Sanitary District demonstrates reasonable potential as described below.

### **a. Reasonable Potential Analysis**

Using the methods prescribed in Section 1.3 of the SIP, Regional Water Board staff analyzed the effluent data to determine if the discharge from the facility demonstrates Reasonable Potential. The Reasonable Potential Analysis (RPA) compares the effluent data with numeric and narrative WQOs in the Basin Plan and numeric WQC from the USEPA, the NTR, and the CTR. The Basin Plan objectives and CTR criteria are shown in Appendix A of this Fact Sheet.

### **b. Reasonable Potential Methodology**

Using the methods and procedures prescribed in Section 1.3 of the SIP, Regional Water Board staff analyzed the effluent and background data and the nature of facility operations to determine if the discharge has reasonable potential to cause or contribute to exceedances of applicable SSOs or WQC. Appendix A of this Fact Sheet shows the stepwise process described in Section 1.3 of the SIP.

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

- (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 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 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/WQC. A limitation may be required under certain circumstances to protect beneficial uses.

### **c. Effluent Data**

The Regional Water Board's August 6, 2001 letter titled *Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy* (hereinafter referred to as the Regional Water Board's August 6, 2001 Letter) to all permittees, formally required the Discharger (pursuant to Section 13267 of California Water Code Division 7, Water Quality) to initiate or continue to monitor for the priority pollutants using analytical methods that provide the lowest detection limits reasonably feasible. Regional Water Board staff analyzed this effluent data and the nature of the Central Contra Costa Sanitary District's wastewater treatment facility to determine if the discharge has Reasonable Potential. The RPA was based on the effluent monitoring data collected by the Discharger from May 2003 through April 2006.

#### **d. Ambient Background Data**

Ambient background values are used in the reasonable potential analysis (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 criteria/objectives intended to protect human health from carcinogenic effects, the arithmetic mean of observed ambient water concentrations. The Regional Monitoring Program 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 this data from this station was used as background data in performing the RPA for this Discharger.

Not all the constituents listed in the CTR have been analyzed by the RMP. These data gaps are addressed by the Regional Water Board's August 6, 2001 Letter titled "Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy" (hereinafter referred to as the Board's August 6, 2001 Letter, which is available online at the Regional Water Board's website). The Board's August 6, 2001 Letter formally requires Dischargers (pursuant to Section 13267 of the California Water Code) to conduct ambient background monitoring and effluent monitoring for those constituents not currently monitored by the Regional Monitoring Program and to provide this technical information to the Regional Water Board.

On May 15, 2003, a group of several San Francisco Bay Region Dischargers (known as the Bay Area Clean Water Agencies, or BACWA) submitted a collaborative receiving water study, entitled the *San Francisco Bay Ambient Water Monitoring Interim Report*. This study includes monitoring results from sampling events in 2002 and 2003 for the remaining priority pollutants not monitored by the Regional Monitoring Program. The RPA was conducted and the WQBELs were calculated using Regional Monitoring Program data from 1993 through 2003 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. The Dischargers may utilize the receiving water study provided by BACWA to fulfill all requirements of the August 6, 2001 letter for receiving water monitoring in this Order.

#### **e. RPA Determination**

The maximum effluent concentrations (MECs), most stringent applicable WQOs/WQC, and background concentrations used in the RPA are presented in the following table, along with the RPA results (Yes or No) for each pollutant analyzed. Reasonable potential was not determined for all pollutants, as there are not applicable water quality objectives/criteria for all pollutants, and monitoring data was not available for others. RPA results are shown below and

Appendix A of this Fact Sheet. The pollutants that exhibit Reasonable Potential are copper, lead, mercury, cyanide, dioxin-TEQ and acrylonitrile.

**Table F-9. Summary of Reasonable Potential Analysis**

CTR #	Priority Pollutants	MEC or Minimum DL <sup>[a][b]</sup> (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL <sup>[a][b]</sup> (µg/L)	RPA Results <sup>[c]</sup>
1	Antimony	1.1	4300	1.8	No
2	Arsenic	2.3	36	2.46	No
3	Beryllium	0.04	No Criteria	0.215	Ud
4	Cadmium	0.2	0.79	0.13	No
5a	Chromium (III)	2.7	142	Not Available	Ud
5b	Chromium (VI)	2.7	11.4	4.4	No
6	Copper	14.9	7.2	2.45	<b>Yes</b>
7	Lead	3.6	1.8	0.80	<b>Yes</b>
8	Mercury (303d listed)	0.205	0.025	0.0086	<b>Yes</b>
9	Nickel	8.4	30	3.7	No
10	Selenium (303d listed)	0.45	5	0.39	No
11	Silver	0.8	1.8	0.052	No
12	Thallium	<1.0	6.3	0.21	Th No
13	Zinc	52.5	81	5.1	Zin No
14	Cyanide	9.9	1.0	< 0.4	Cy <b>Yes</b>
15	Asbestos	Not Available	No Criteria	Not Available	Ast Ud os
16	2,3,7,8-TCDD (303d listed)	< 6.53E-07	1.4E-08	Not Available	2,3,7,8-TCDD (303d listed) No
16-TEQ	Dioxin TEQ (303d listed)	1.71E-08	1.4E-08 <sup>[d]</sup>	7.10E-08	Dioxin TEQ (303d listed) <b>Yes</b>
17	Acrolein	< 0.4	780	< 0.5	Acrolein No
18	Acrylonitrile	1.1	0.66	0.03	<b>Yes</b>
19	Benzene	< 0.2	71	< 0.05	No
20	Bromoform	0.1	360	< 0.5	No
21	Carbon Tetrachloride	< 0.2	4.4	0.06	No
22	Chlorobenzene	< 0.2	21000	< 0.5	No
23	Chlorodibromomethane	0.2	34	< 0.05	No
24	Chloroethane	< 0.5	No Criteria	< 0.5	Ud
25	2-Chloroethylvinyl ether	< 0.3	No Criteria	< 0.5	Ud
26	Chloroform	1.8	No Criteria	< 0.5	Ud
27	Dichlorobromomethane	0.1	46	< 0.05	No
28	1,1-Dichloroethane	< 0.2	No Criteria	< 0.05	Ud
29	1,2-Dichloroethane	< 0.2	99	0.04	No
30	1,1-Dichloroethylene	< 0.2	3.2	< 0.5	No
31	1,2-Dichloropropane	< 0.2	39	< 0.05	No
32	1,3-Dichloropropylene	< 0.2	1700	Not Available	No
33	Ethylbenzene	< 0.2	29000	< 0.5	No
34	Methyl Bromide	< 0.2	4000	< 0.5	No
35	Methyl Chloride	< 0.4	No Criteria	< 0.5	Ud
36	Methylene Chloride	0.7	1600	0.5	No
37	1,1,2,2-Tetrachloroethane	< 0.3	11	< 0.05	No
38	Tetrachloroethylene	< 0.2	8.85	< 0.05	No

CTR #	Priority Pollutants	MEC or Minimum DL <sup>[a][b]</sup> (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL <sup>[a][b]</sup> (µg/L)	RPA Results <sup>[c]</sup>
39	Toluene	1.2	200000	< 0.3	No
40	1,2-Trans-Dichloroethylene	< 0.2	140000	< 0.5	No
41	1,1,1-Trichloroethane	< 0.2	No Criteria	< 0.5	Ud
42	1,1,2-Trichloroethane	< 0.3	42	< 0.05	No
43	Trichloroethylene	< 0.1	81	< 0.5	No
44	Vinyl Chloride	< 0.4	525	< 0.5	No
45	2-Chlorophenol	< 0.8	400	< 1.2	No
46	2,4-Dichlorophenol	< 0.9	790	< 1.3	No
47	2,4-Dimethylphenol	< 0.9	2300	< 1.3	No
48	2-Methyl- 4,6-Dinitrophenol	< 1.2	765	< 1.2	No
49	2,4-Dinitrophenol	< 0.6	14000	< 0.7	No
50	2-Nitrophenol	< 1.0	No Criteria	< 1.3	Ud
51	4-Nitrophenol	< 1.4	No Criteria	< 1.6	Ud
52	3-Methyl 4-Chlorophenol	< 1.1	No Criteria	< 1.1	Ud
53	Pentachlorophenol	3.3	7.9	< 1.0	No
54	Phenol	< 0.8	4600000	< 1.3	No
55	2,4,6-Trichlorophenol	< 1.0	6.5	< 1.3	No
56	Acenaphthene	< 0.03	2700	0.0015	No
57	Acenaphthylene	< 0.02	No Criteria	0.00053	Ud
58	Anthracene	< 0.03	110000	0.0005	No
59	Benzidine	< 11	0.00054	< 0.0015	No
60	Benzo(a)Anthracene	< 0.02	0.049	0.0053	No
61	Benzo(a)Pyrene	< 0.02	0.049	0.00029	No
62	Benzo(b)Fluoranthene	< 0.02	0.049	0.0046	No
63	Benzo(ghi)Perylene	< 0.02	No Criteria	0.0027	Ud
64	Benzo(k)Fluoranthene	< 0.02	0.049	0.0015	No
65	Bis(2-Chloroethoxy)Methane	< 0.3	No Criteria	< 0.3	Ud
66	Bis(2-Chloroethyl)Ether	< 0.3	1.4	< 0.3	No
67	Bis(2-Chloroisopropyl)Ether	< 0.3	170000	Not Available	No
68	Bis(2-Ethylhexyl)Phthalate	1.56	5.9	< 0.5	No
69	4-Bromophenyl Phenyl Ether	< 0.3	No Criteria	< 0.23	Ud
70	Butylbenzyl Phthalate	2.0	5200	< 0.52	No
71	2-Chloronaphthalene	< 0.3	4300	< 0.3	No
72	4-Chlorophenyl Phenyl Ether	< 0.3	No Criteria	< 0.3	Ud
73	Chrysene	< 0.02	0.049	0.0024	No
74	Dibenzo(a,h)Anthracene	< 0.03	0.049	0.00064	No
75	1,2-Dichlorobenzene	< 0.2	17000	< 0.8	No
76	1,3-Dichlorobenzene	< 0.2	2600	< 0.8	No
77	1,4-Dichlorobenzene	0.3	2600	< 0.8	No
78	3,3 Dichlorobenzidine	< 0.9	0.077	< 0.001	No
79	Diethyl Phthalate	1.1	120000	< 0.24	No
80	Dimethyl Phthalate	< 0.2	2900000	< 0.24	No
81	Di-n-Butyl Phthalate	0.8	12000	< 0.5	No
82	2,4-Dinitrotoluene	< 0.4	9.1	< 0.27	No

CTR #	Priority Pollutants	MEC or Minimum DL <sup>[a][b]</sup> (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL <sup>[a][b]</sup> (µg/L)	RPA Results <sup>[c]</sup>
83	2,6-Dinitrotoluene	< 0.3	No Criteria	< 0.29	Ud
84	Di-n-Octyl Phthalate	< 0.5	No Criteria	< 0.38	Ud
85	1,2-Diphenylhydrazine	< 0.3	0.54	0.0037	No
86	Fluoranthene	< 0.03	370	0.011	No
87	Fluorene	< 0.02	14000	0.00208	No
88	Hexachlorobenzene	< 0.3	0.00077	0.0000202	No
89	Hexachlorobutadiene	< 0.3	50	< 0.3	No
90	Hexachlorocyclopentadiene	< 0.5	17000	< 0.31	No
91	Hexachloroethane	< 0.2	8.9	< 0.2	No
92	Indeno(1,2,3-cd)Pyrene	< 0.02	0.049	0.004	No
93	Isophorone	< 0.3	600	< 0.3	No
94	Naphthalene	< 0.02	No Criteria	0.0023	Ud
95	Nitrobenzene	< 0.3	1900	< 0.25	No
96	N-Nitrosodimethylamine	< 0.3	8.1	< 0.3	No
97	N-Nitrosodi-n-Propylamine	< 0.3	1.4	< 0.001	No
98	N-Nitrosodiphenylamine	< 0.3	16	< 0.001	No
99	Phenanthrene	< 0.02	No Criteria	0.0061	Ud
100	Pyrene	< 0.02	11000	0.0051	No
101	1,2,4-Trichlorobenzene	< 0.3	No Criteria	< 0.3	Ud
102	Aldrin	< 0.002	0.00014	Not Available	No
103	alpha-BHC	< 0.003	0.013	0.000496	No
104	beta-BHC	< 0.003	0.046	0.000413	No
105	gamma-BHC	< 0.002	0.063	0.0007034	No
106	delta-BHC	< 0.002	No Criteria	0.000042	Ud
107	Chlordane (303d listed)	< 0.003	0.00059	0.00018	No
108	4,4'-DDT (303d listed)	< 0.002	0.00059	0.000066	No
109	4,4'-DDE (linked to DDT)	< 0.002	0.00059	0.000693	No
110	4,4'-DDD	< 0.002	0.00084	0.000313	No
111	Dieldrin (303d listed)	< 0.002	0.00014	0.000264	No
112	alpha-Endosulfan	< 0.002	0.0087	0.000031	No
113	beta-Endosulfan	< 0.002	0.0087	0.000069	No
114	Endosulfan Sulfate	0.003	240	0.0000819	No
115	Endrin	< 0.002	0.0023	0.000036	No
116	Endrin Aldehyde	< 0.002	0.81	Not Available	No
117	Heptachlor	< 0.003	0.00021	0.000019	No
118	Heptachlor Epoxide	< 0.002	0.00011	0.00002458	No
119-125	PCBs sum (303d listed)	< 0.003	0.00017	Not Available	No
126	Toxaphene	< 0.04	0.00020	Not Available	No
	Tributyltin	0.006	0.01 <sup>[d]</sup>	< 0.001	No
	Total PAHs	Not Available	15	0.26	No

- (a) The Maximum Effluent Concentration (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.
- (b) The MEC or maximum background concentration is "Not Available" when there are no monitoring data for the constituent.

- (c) 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.
- (d) WQO translated from a narrative objective in the Basin Plan.

**(1) Constituents with limited data.** The Discharger has performed sampling and analysis for the constituents listed in the CTR. This data set was used to perform the RPA. In some cases, Reasonable Potential cannot be determined because effluent data are limited, or ambient background concentrations are not available. The Dischargers will continue to monitor for these constituents in the effluent using analytical methods that provide the best feasible detection limits. When additional data become available, further RPA will be conducted to determine whether to add numeric effluent limitations to this Order or to continue monitoring.

**(2) Pollutants with no Reasonable Potential.** WQBELs are not included in this Order for constituents that do not demonstrate Reasonable Potential; however, monitoring for those pollutants is still required. If concentrations of these constituents are found to have increased significantly, the Dischargers will be required to investigate the source(s) of the increase(s). Remedial measures are required if the increases pose a threat to water quality in the receiving water.

The previous permit included final limits for 4,4'-DDE and dieldrin; and interim limits for tributyltin and bis(2-ethylhexyl)phthalate; however, because the reasonable potential analysis showed that discharges from the Central Contra Costa Sanitary District no longer demonstrate a reasonable potential to cause or contribute to exceedances of applicable water quality criteria for these pollutants, limitations from the previous permit are not retained, and new limitations are not included in the Order for these pollutants.

**(3) Dilution Credit.** The SIP provides the basis for any dilution credit. The Central Costa County Sanitary District outfall is designed to achieve a minimum of 10:1 dilution. Based on two-dimensional modeling in the Antidegradation report, the discharge generally achieves much greater than 10:1 dilution. A review of RMP data from local and Central Bay stations, there is variability in the receiving water, and the hydrology of the receiving water is itself very complex. There is thus uncertainty associated with the representative nature of the appropriate ambient background data for effluent limit calculations. Pursuant to Section 1.4.2.1 of the SIP, "dilution credit may be limited or denied on a pollutant-by-pollutant basis...." 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.

- (a) For certain bioaccumulative pollutants dilution credits are not included in calculating the final WQBELs. This decision is based on the concentrations of these pollutants in aquatic organisms, sediment, and the water column. The Regional Water Board placed selenium, mercury, and polychlorinated biphenyls (PCBs) on the CWA Section 303(d) list. U.S. EPA added dioxin and furan compounds, chlordane, dieldrin, and 4,4'-DDT to the CWA Section 303(d) list. A dilution credit is also not allowed for mercury. The reasoning for these decisions is based on the following factors that suggest there is no more assimilative capacity in the Bay for these pollutants.

Samples of tissue taken from fish in the 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 Office of Environmental Health and Hazard Assessment (OEHHA) also completed a preliminary review of data in the 1994 San Francisco Bay pilot study, *Contaminated Levels in Fish Tissue from San Francisco Bay*. The results of this study also showed elevated levels of chemical contaminants in the fish tissues. In December 1994 OEHHA subsequently issued an interim consumption advisory covering certain fish species in the Bay. This advisory is still in effect for exposure to sport fish that are found to be contaminated with mercury, dioxins, and pesticides (e.g., DDT).

- (b) Section 2.1.1 of the SIP states that for bioaccumulative compounds on the 303(d) list, the Regional Water Board should consider whether mass-loading limits are limited to current levels. The Regional Water Board finds that mass-loading limits are warranted for mercury in the receiving waters of this Discharger. This is to ensure that this Discharger does not contribute further to impairment of the narrative objective for bioaccumulation.
- (c) For non-bioaccumulative constituents, a conservative allowance of 10:1 dilution for discharges to the Bay has been assigned for protection of beneficial uses. The basis for using 10:1 is that it was granted in the previous permit. This 10:1 dilution ratio also follows the Basin Plan's prohibition, Number 1, which prohibits discharges with less than 10:1 dilution. The dilution credit is also based on SIP provisions, Section 1.4.2, that consider the following:
- (i) A far-field background station is appropriate because the receiving water body (the Bay) is a very complex estuarine system with highly variable and seasonal upstream freshwater inflows and diurnal tidal saltwater inputs. The SIP allows background to be determined on a discharge-by-discharge or water body-by-water body basis (SIP 1.4.3). Consistent with the SIP, Regional Water Board staff have chosen to use a water body-by-water body basis because of the uncertainties inherent in accurately characterizing ambient background in a complex estuarine system on a discharge-by-discharge basis.

The Yerba Buena Island Station fits the guidance for ambient background in the SIP compared to other stations in the RMP. The SIP states that background data are applicable if they are "representative of the ambient receiving water column that will mix with the discharge." Regional Water Board staff believe that water from this station is representative of water that will mix with the discharge from this Discharger. Although this station is located near the Golden Gate, it would represent the typical water flushing in and out of the Bay each tidal cycle and represents the receiving water the will mix with the discharge.

- (ii) Because of the complex hydrology of the San Francisco Bay, a mixing zone has not been established. There are uncertainties in accurately determining the mixing zones for each discharge. The models that have been used to predict dilution have not considered the three-dimensional nature of the currents in the estuary resulting from the interaction of tidal flushes and seasonal fresh water outflows. Salt water is heavier than fresh water, colder saltwater from the ocean flushes in twice a day generally under the warmer fresh river waters that flow out annually. When these waters mix and interact, complex circulation patterns occur due to the different densities of these waters. These complex patterns occur throughout the estuary but are most prevalent in the San Pablo, Carquinez Strait, and Suisun Bay areas. The locations change depending on the strength of each tide and the variable rate of delta outflow. Additionally, sediment loads to the bay from the Central Valley also change on a longer-term basis. These changes can result in changes to the depths of different parts of the Bay making some areas more shallow and/or other areas more deep. These changes affect flow patterns that in turn can affect the initial dilution achieved by a diffuser.
- (iii) The SIP allows a limited mixing zone and dilution credit for persistent pollutants. Discharges to the bay are defined in the SIP as incompletely mixed discharges. Thus, dilution credit should be determined using site-specific information. The SIP 1.4.2.2 specifies that the Regional Water Board "significantly limit a mixing zone and dilution credit as necessary... For example, in determining the extent of a mixing zone or dilution credit, the RWQCB shall consider the presence of pollutants in the discharge that are ...persistent." The SIP defines persistent pollutants to be "substances for which degradation or decomposition in the environment is nonexistent or very slow." The pollutants at issue here are persistent pollutants (e.g. copper). The dilution studies that estimate actual dilution do not address the effects of these persistent pollutants in the Bay environment, such as their long-term effects on sediment concentrations.

#### 4. WQBEL Calculations.

WQBELs were developed for the toxic and priority pollutants that were determined to have reasonable potential to cause or contribute to exceedances of the WQOs or WQC. The WQBELs were calculated based on appropriate WQOs/WQC and the appropriate procedures specified in Section 1.4 of the SIP. The WQOs or WQC used for each pollutant with Reasonable Potential are discussed below.

##### a. Copper

- (1) *Copper WQC.* The salt water, acute and chronic criteria from the Basin Plan and the CTR for copper for protection of aquatic life are 7.2 and 8.2 µg/L, respectively. These criteria were determined using site-specific translators of 0.38 (chronic) and 0.67 (acute), as recommended by the Clean Estuary Partnership's *North of Dumbarton Bridge Copper and Nickel Development and Selection of Final Translators* (2005). Site-specific translators were applied to chronic (3.1 µg/L dissolved metal) and acute (4.8 µg/L dissolved metal) criteria of the Basin Plan and the CTR for protection of salt water aquatic life to calculate the criteria of 8.2 µg/L for chronic protection and 7.2 µg/L for acute protection, which were used to perform the RPA.
- (2) *RPA Results.* The maximum observed effluent concentration for copper of 15 µg/L exceeds the applicable water quality criteria for this pollutant, demonstrating reasonable potential by Trigger 1, as defined previously; and therefore, the Order establishes effluent limitations for copper.
- (3) *Copper WQBELs.* WQBELs are calculated based on water quality criteria of the CTR and based on site-specific water quality objectives (SSOs) recommended by the Clean Estuary Partnerships' *North of Dumbarton Bridge Copper and Nickel Site-Specific Objective (SSO) Derivation* (2004). Both sets of criteria are expressed as total recoverable metal, using site-specific translators recommended by the Clean Estuary Partnership's *North of Dumbarton Bridge Copper and Nickel Development and Selection of Final Translators* (2004), and a water effects ratio (WER) of 2.4, as recommended by the Partnership. The following table compares final effluent limitations for copper from the expiring permit with limitations calculated according to SIP procedures (and a coefficient of variation of 0.26) using the two sets of criteria, described above. The newly calculated limitations take into account the deep water nature of the discharge, and therefore, in accordance with the Basin Plan, are based on a minimum initial dilution of 10 to 1.

**Table F-10. Calculation of Effluent Limitations for Copper**

Effluent Limitations for Copper		
	AMEL	MDEL
Previous Permit	14 µg/L	20 µg/L
Based on CTR Criteria	105 µg/L	150 µg/L
Based on Site Specific Objectives	83 µg/L	118 µg/L

Limitations for copper set in the the previous permit were final limitations, and those limitations are more stringent than newly calculated limits.

- (4) *Feasibility Analysis.* The Discharger has been subject to final copper limitations for the term of expiring permit and has demonstrated compliance with those final effluent limitations. A feasibility analysis for copper has, therefore, not been conducted.
- (5) *Anti-backsliding/Antidegradation.* Because the previous permit limits were lower than the calculated limits and it has been feasible to comply with them, the previous permit limits have been retained to avoid backsliding. Anti-backsliding and antidegradation requirements are thus satisfied, as effluent limitations of the Order are at least as stringent as those in the previous permit. The limit could potentially be revised if the District were to develop an inability to comply due to a material and substantial alteration or addition to the facility, or events over which it has no control and for which there is no reasonably available remedy.

**b. Lead**

- (1) *Lead WQC.* The most stringent applicable water quality criteria for lead are established by the CTR and Basin Plan for protection of freshwater aquatic life – 45 µg/L and 1.8 µg/L, acute and chronic criteria respectively.
- (2) *RPA Results.* The maximum observed effluent concentration for lead of 3.6 µg/L exceeds the applicable water quality criteria for this pollutant, demonstrating reasonable potential by Trigger 1, as defined previously; and therefore, the Order establishes effluent limitations for lead.
- (3) *Lead WQBELs.* The following table compares final effluent limitations for lead from the expiring permit with limitations calculated according to SIP procedures. The newly calculated limitations take into account the deep water nature of the discharge, and therefore, in accordance with the Basin Plan, are based on a minimum initial dilution of 10 to 1.

**Table F-11. Calculation of Effluent Limitations for Lead**

Effluent Limitations for Lead		
	AMEL	MDEL
Previous Permit	3.5 µg/L	8.2 µg/L
New Limits	7.6 µg/L	19 µg/L

Limitations of the previous permit were final limitations, and those limitations are more stringent than newly calculated limits for lead.

- (4) *Feasibility Analysis.* The Discharger has been subject to final lead limitations for the term of expiring permit and has demonstrated compliance with those final effluent limitations. A feasibility analysis for lead has, therefore, not been conducted.

(5) *Anti-backsliding/Antidegradation*. Because the previous permit limits were lower than the calculated limits and it has been feasible to comply with them, the previous permit limits have been retained to avoid backsliding. Anti-backsliding and antidegradation requirements are thus satisfied, as effluent limitations of the Order are at least as stringent as those in the previous permit.

**c. Mercury**

- (1) *Mercury WQC*. The most stringent applicable water quality criteria for mercury are established by the Basin Plan for protection of salt water aquatic life – 2.1 µg/L and 0.025 µg/L, acute and chronic criteria respectively.
- (2) *RPA Results*. This Order establishes effluent limitations for mercury, as the maximum observed effluent concentration of 0.205 µg/L exceeds the applicable chronic criterion for this pollutant, demonstrating reasonable potential by Trigger 1, as defined previously.
- (3) *Mercury WQBELs*. Final WQBELs for mercury, calculated according to SIP procedures are summarized in the following table. Because mercury is a bioaccumulative pollutant, final effluent limitations are calculated without credit for dilution.

**Table F-12. Final Effluent Limitations for Mercury**

Effluent Limitations for Mercury		
	AMEL	MDEL
New Limits	0.018 µg/L	0.046 µg/L

- (4) *Immediate Compliance Infeasible*. Statistical analysis of effluent data for mercury, collected over the period of May 2003 to April 2006, shows that the 95<sup>th</sup> percentile (0.064 µg/L) is greater than the AMEL (0.018 µg/L); the 99<sup>th</sup> percentile (0.094 µg/L) is greater than the MDEL (0.046 µg/L); and the mean (0.032 µg/L) is greater than the long term average of the projected lognormal distribution of the effluent data set after accounting for effluent variability (0.009 µg/L). The Regional Water Board concludes, therefore, that immediate compliance with final effluent limitations for mercury is infeasible.
- (5) *Interim Effluent Limitation*. Because it is infeasible for the Discharger to immediately comply with the final WQBELs for mercury, an interim limitation is required. The previous permit included interim effluent limitations of 0.087 and 1.0 µg/L as average monthly and maximum daily limitations, respectively. These limitations were determined from pooled ultra-clean mercury data for POTWs throughout the Region using secondary treatment (Staff Report: Statistical Analysis of Pooled Data from Region-wide Ultra-clean Sampling, 2000). These interim limitations have been retained in this permit.

- (6) *Interim Mass Limitation.* The interim mass emission limitation for mercury (0.98 pounds per month) from the previous permit is also retained by the Order.
- (7) *Term of Interim Effluent Limitations.* The interim effluent limitations for mercury shall remain in effect through April 28, 2010, or until the Regional Water Board amends the limitations based on additional data or SSOs.
- (8) *Anti-backsliding/Antidegradation.* Anti-backsliding and antidegradation requirements are satisfied as interim limitations for mercury from the previous permit are retained.

**d. Cyanide**

- (1) *Cyanide WQC.* The most stringent applicable water quality criteria for cyanide are established by the NTR for protection of aquatic life in San Francisco Bay. The NTR establishes both the saltwater Criterion Maximum Concentration (acute criterion) and the Criterion Chronic Concentration (chronic criterion) at 1.0 µg/L.
- (2) *RPA Results.* This Order establishes effluent limitations for cyanide because the MEC of 9.9 µg/L exceeds the governing WQC of 1 µg/L, demonstrating reasonable potential by Trigger 1, as defined previously.
- (3) *Cyanide WQBELs.* Final WQBELs for cyanide, calculated according to SIP procedures are summarized in the following table. These limitations take into account the deep water nature of the discharge, and therefore, in accordance with the Basin Plan, are based on a minimum initial dilution of 10 to 1.

**Table F-13. Final Effluent Limitations for Cyanide**

Effluent Limitations for Cyanide		
	AMEL	MDEL
Limitations	2.8 µg/L	6.4 µg/L

- (4) *Immediate Compliance Infeasible.* The Discharger's Feasibility Study asserts that the facility cannot immediately comply with final WQBELs for cyanide. Statistical analysis of effluent data for cyanide, collected over the period of May 2003 through April 2006, show that the 95th percentile (7.7 µg/L) is greater than the AMEL (2.8 µg/L); and the 99th percentile (12 µg/L) is greater than the MDEL (6.4 µg/L). Based on this analysis, the Regional Water Board concurs with the Discharger's assertion of infeasibility to comply with final WQBELs for cyanide.
- (5) *Interim Effluent Limitation.* Because it is infeasible for the Discharger to immediately comply with the final WQBELs for cyanide, an interim effluent limitation is required. Regional Water Board staff considered the Discharger's effluent data from May 2003 through April 2006 and established the 99.87<sup>th</sup>

percentile of the data set (20 µg/L) as a maximum daily, interim effluent limitation.

- (6) *Term of Interim Effluent Limitation.* The cyanide interim effluent limitation shall remain in effect through April 28, 2010, or until the Regional Water Board amends the limitation based on additional data or Site Specific Objectives.
- (7) *Alternative Limit for Cyanide.* As described in *Draft Staff Report on Proposed Site-Specific Water Quality Objectives and Effluent Limit Policy for Cyanide for San Francisco Bay*, dated November 10, 2005, the Regional Water Board is proposing to develop SSOs for cyanide. In this report, the proposed site-specific criteria for marine waters are 2.9 µg/L as a four-day average, and 9.4 µg/L as a one-hour average. Based on these assumptions, and the Dischargers current cyanide data (coefficient of variation = 0.80), final WQBELs for cyanide will be 45 µg/L (MDEL) and 20 µg/L (AMEL). These alternative limits will become effective only if the SSOs are adopted for cyanide and are based on the same assumptions as stated in the Staff report of November 10, 2005.
- (8) *Anti-backsliding/Antidegradation.* Anti-backsliding and antidegradation requirements are satisfied, as the previous permit did not include final effluent limitations for cyanide.

**e. Dioxin-TEQ**

- (1) *WQC.* The most stringent applicable water quality criterion for dioxin-TEQ is  $1.4 \times 10^{-8}$  µg/L, which is translated from the narrative bioaccumulation objective established by the Regional Water Board through the Basin Plan. The Basin Plan's narrative bioaccumulation objective is applicable to dioxins and furans, since these constituents accumulate in sediments and bioaccumulate in the fatty tissue of fish and other organisms. The narrative objective is translated into a numeric objective expressed in 2,3,7,8-TCDD (or dioxin-TEQ) equivalents based on the CTR criterion for 2,3,7,8-TCDD and the application of the Toxic Equivalence Factors (TEFs) for dioxins and furans adopted by the World Health Organization in 1998.
- (2) *RPA Results.* Because the receiving water is currently listed on the CWA 303(d) list as impaired due to dioxins and furans, and the maximum observed effluent concentration of dioxin-TEQ is  $1.71 \times 10^{-8}$  µg/L, which exceeds the translated water quality objective of  $1.4 \times 10^{-8}$  µg/L, dioxin-TEQ in the discharge has a reasonable potential to contribute to exceedances of the narrative bioaccumulation objective.
- (3) *WQBELs.* Concentration-based WQBELs for dioxin-TEQ, using SIP procedures as guidance are  $2.8 \times 10^{-8}$  and  $1.4 \times 10^{-8}$  µg/L as the maximum daily effluent limit (MDEL) and the average monthly effluent limit (AMEL), respectively. Because dioxin-TEQ is a bioaccumulative pollutant, these limitations are calculated without credit for dilution.

- (4) *Immediate Compliance Infeasible.* The Discharger's Feasibility Study asserts the Discharger cannot immediately comply with final concentration-based WQBELs for dioxin-TEQ. The Regional Water Board concurs with the Discharger's assertion of infeasibility to comply, as effluent concentrations of dioxin-TEQ measured during the term of the previous Order exceed the WQBEL (above).
- (5) This Order establishes an interim mass limitation for 2,3,7,8-TCDD Equivalent from the previous permit. There is insufficient data from more recent monitoring to calculate a different performance based limit.
- (6) *Term of Interim Limits.* The interim limits are effective until June 30, 2011, as provided in B.5 of the previous permit. This was, and still is, based on the compliance schedule provision of the Basin Plan (Chapter 4, page 4-14). The Basin Plan provides for up to ten years to comply. This ten-year period started on the effective date of the previous permit which was July 1, 2001.
- (7) *General sources of Dioxins and Furans.* The Regional Water Board recognizes that the primary source of dioxins and furans in the Bay Area is air emissions from combustion sources. Based on staff report "Dioxin in Bay Environment – A Review of the Environmental Concerns, Regulatory History, Current Status, and Possible Regulatory Options" dated February 1998, and the USEPA report "Status of Dioxin Reassessment and Policy Response" of 2000. Dioxins and furans in waste water are mainly attributed to domestic waste and storm water runoff. The latter is especially significant as the storm water carries particles on which the deposited pollutants have become attached. The Discharger operates a sludge incinerator which may also be a source of dioxin-TEQ to its discharge. Despite this, the main source of dioxins and furans in the domestic waste stream is beyond the Discharger's control as it already operates a well-maintained secondary treatment plant (100% compliance past 5 years). Because of this, dioxins and furans concentrations cannot be further reduced without significant upgrades to the facility to advanced treatment which could be overly burdensome and would not be cost effective for the benefits received. Therefore, other strategies should be explored to address the impairment by dioxin-TEQ. These strategies include potential mass offsets which are included in provisions relating to compliance schedule interim requirements for dioxin-TEQ at VI.C.2.d and VI.C.4.
- (8) *Anti-backsliding/Antidegradation.* Anti-backsliding and antidegradation requirements are satisfied, as the previous Order did not include concentration-based limitations for dioxin-TEQ, and the mass-based limit from the previous permit are retained.

**f. Acrylonitrile**

- (1) *Acrylonitrile WQC.* The most stringent applicable water quality criterion for acrylonitrile is 0.66 µg/L, established by the CTR for protection of human health.

- (2) *RPA Results.* This Order establishes effluent limitations for acrylonitrile, as the maximum observed effluent concentration of 1.1 µg/L exceeds the applicable chronic criterion for this pollutant, demonstrating reasonable potential by Trigger 1, as defined previously.
- (3) *Acrylonitrile WQBELs.* Final WQBELs for acrylonitrile, calculated according to SIP procedures are summarized in the following table. These limitations take into account the deep water nature of the discharge, and therefore, in accordance with the Basin Plan, are based on a minimum initial dilution of 10 to 1.

**Table F-14. Effluent Limitations for Acrylonitrile**

Effluent Limitations for Acrylonitrile		
	AMEL	MDEL
Limitations	6.3 µg/L	13 µg/L

- (4) *Immediate Compliance Feasible.* The MEC is less than the newly calculated AMEL and MDEL shown above, and these limitations are less stringent than the interim limitation for acrylonitrile (7.0 µg/L), which the Discharger has been subject to during the term of the previous permit, the Regional Board concludes that immediate compliance with final effluent limitations for acrylonitrile is feasible, and final effluent limitations will become effective upon adoption of the Order.
- (5) *Anti-backsliding/Antidegradation.* Anti-backsliding and antidegradation requirements are satisfied as the previous permit did not include final effluent limitations for acrylonitrile.

**g. Deletion of Effluent Limits**

Based on the RPA results, the following pollutants do not exhibit reasonable potential to cause, or contribute to an excursion above any numeric or narrative WQOs. Thus no WQBEL are needed for these pollutants. Thus the following effluent limitations from the previous permit are excluded from this order:

- (1) Monthly average and daily maximum concentration limits for 4,4'-DDE and Dieldrin.
- (2) Interim daily maximum limits for Tributyltin and Bis(2-ethylhexyl)phthalate.

**Table F-15. Calculation of Water Quality Based Effluent Limitations**

PRIORITY POLLUTANTS	Copper		Lead	Mercury	Cyanide		Dioxin TEQ	Acrylonitrile
Units	ug/L		ug/L	ug/L	ug/L		ug/L	ug/L
Basis and Criteria type	BP & CTR SW Aq Life	Alternate limits using SSOs (December 2004)	BP & CTR FW Aq Life	BP SW Aq Life	NTR Criterion for the Bay	Alternate Limits Using Proposed SSOs	BP HH	CTR HH
CTR Criteria -Acute	7.16	----	45	2.1	1.0	9.4		
CTR Criteria -Chronic	8.16	----	1.8	0.025	1.0	2.9		
SSO Criteria -Acute (December 2004) (Diss.)		3.9						
SSO Criteria -Chronic (December 2004) (Diss.)		2.5						
Water Effects ratio (WER)	2.4	2.4	1	1	1	1	1	1
Lowest WQO			1.77	0.025	1.0	1.0	1.40E-08	0.66
Site Specific Translator - MDEL	0.67	0.67						
Site Specific Translator - AMEL	0.38	0.38						
Dilution Factor (D) (if applicable)	9	9	9	0	9	9	0	9
No. of samples per month	4	4	4	4	4	4	4	4
Aquatic life criteria analysis required? (Y/N)	Y	Y	Y	Y	Y	Y	N	N
HH criteria analysis required? (Y/N)	N	N	N	Y	Y	Y	Y	Y
Applicable Acute WQO	17.18	13.97	45.34	2.10	1	9.4		
Applicable Chronic WQO	19.58	15.79	1.77	0.025	1	2.9		
HH criteria	----	----	----	0.05	220,000	220,000	1.40E-08	0.66
Background (Maximum Conc for Aquatic Life calc)	2.45	2.45	0.804	0.0086	0.4	0.4	7.10E-08	0.03
Background (Average Conc for Human Health calc)	----	----	----	0.0022	0.4	0.4	5.00E-08	0.03
Is the pollutant Bioaccumulative(Y/N)? (e.g., Hg)	N	N	N	Y	N	N	Y	N
ECA acute	149.8	117.7	446.2	2.1	6.4	90.4		
ECA chronic	173.8	135.8	10.433	0.025	6.400	25.400		
ECA HH	----	----	----	0.051	2199996.4	2199996.4	1.40E-08	6.33
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	N	N	N	N	N	N	Y	Y
Avg of effluent data points	8.90	8.90	0.81	0.032	3.03	3.03		
Std Dev of effluent data points	2.28	2.28	0.79	0.031	2.43	2.43		
CV calculated	0.26	0.26	0.98	0.97	0.80	0.80	N/A	N/A
CV (Selected) - Final	0.26	0.26	0.98	0.97	0.80	0.80	0.60	0.60
ECA acute mult99	0.57	0.57	0.21	0.209	0.25	0.25		
ECA chronic mult99	0.75	0.75	0.38	0.380	0.44	0.44		
LTA acute	86.02	67.57	92.53	0.439	1.59	22.45		
LTA chronic	130.23	101.79	3.94	0.010	2.80	11.13		
minimum of LTAs	86.02	67.57	3.94	0.010	1.59	11.13		
AMEL mult95	1.22	1.22	1.93	1.92	1.75	1.75	1.55	1.55
MDEL mult99	1.74	1.74	4.82	4.79	4.03	4.03	3.11	3.11
AMEL (aq life)	105.25	82.67	7.60	0.02	2.79	19.52		
MDEL(aq life)	149.79	117.65	19.02	0.05	6.40	44.81		
MDEL/AMEL Multiplier	1.42	1.42	2.50	2.49	2.30	2.30	2.01	2.01
AMEL (human hlth)	----	----	----	0.051	2199996.4	2199996.4	1.4E-08	6.33
MDEL (human hlth)				0.127	5051820.8	5051820.8	2.8E-08	12.7
minimum of AMEL for Aq. life vs HH	105	83	7.6	0.018	2.8	20	1.4E-08	6.3
minimum of MDEL for Aq. Life vs HH	150	118	19	0.046	6.4	45	2.8E-08	13
Current limit in permit (30-day average)	14.2	14.2	3.5	0.087(interim)(1)	-----	-----	(2)	-----
Current limit in permit (daily)	19.5	19.5	8.2	1.0 (interim)	18 (interim)	18 (interim)	-----	7 (interim)
Final limit - AMEL	14	14	3.5	0.018	2.8	20	(3)	6.3
Final limit - MDEL	20	20	8.2	0.046	6.4	45	(3)	13
Max Effl Conc (MEC)	14.9	14.9	3.6	0.205	9.9	9.9	1.71E-08	1.1

**Notes:**

- (1) Order No. 01-068 included an interim mass emission limitation for mercury of 0.98 lb/month (0.45 kg/month).
- (2) Order No. 01-068 included an interim mass emission limitation for TCDD equivalent of 0.836 mg/month.
- (3) Because the Order establishes a compliance schedule that exceeds the term of the Order, final effluent limitations are not established.

**5. Whole Effluent Toxicity (WET)**

The Basin Plan requires dischargers to either conduct flow-through effluent toxicity tests or perform static renewal bioassays (Chapter 4, Acute Toxicity) to measure the toxicity of wastewaters and to assess negative impacts upon water quality and beneficial uses caused by the aggregate toxic effect of the discharge of pollutants.

This Order includes effluent limitations for whole effluent acute toxicity. Compliance evaluation is based on 96-hour flow through bioassays. All bioassays shall be performed according to the U.S. EPA-approved method in 40 CFR Part 136, currently "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water, 5th Edition."

This permit includes requirements for chronic toxicity based on the Basin Plan narrative toxicity objective, and in accordance with USEPA and State Water Board Task Force guidance, and best professional judgement. This permit includes the Basin Plan narrative toxicity objectives 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 the SIP requirements.

This Order includes chronic toxicity triggers, which are three sample median of 10 chronic toxicity (TUc1) and a single sample maximum of 20 TUc based on Basin Plan Table 4-6 for dischargers to deepwater environments monitoring quarterly.

The Discharger's chronic toxicity monitoring data show that there were no exceedances of the triggers during the term of the previous permit. From March 2002 through April 2006, the eleven sample 90 percentile chronic toxicity value ranged from 7.2 to 7.9 with an average of 7.5; the eleven sample median chronic toxicity value ranged from < 2.0 to 7.4; and the highest observed single chronic toxicity value was 14.7 TUc.

The Discharger has conducted a chronic toxicity screening phase study and the results of this study have been incorporated herein.

The Regional Water Board will consider amending this permit to include numeric toxicity limits if the Discharger fails to implement all reasonable control measure included in its approved TRE workplan, following detection of consistent significant non-artifactual toxicity.

**D. Final Effluent Limitations**

1. Following is a summary of final technology-based and water quality-based effluent limitations established by the Order.

**Table F-16. Effluent Limitations – Conventional Pollutants**

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
CBOD <sub>5</sub>	mg/L	25	40	50	---	---
TSS	mg/L	30	45	60	---	---
pH	s.u.	---	---	---	6.0	9.0
Oil and Grease	mg/L	10	---	20	---	---

- **CBOD<sub>5</sub> and TSS 85% Percent Removal:** The average monthly percent removal of CBOD<sub>5</sub> and TSS shall not be less than 85 percent.
- **Enterococci Bacteria:** The monthly geometric mean shall not exceed 35 colonies per 100 ml of effluent sample.,
- **Toxic Pollutants.** The discharge of effluent at Discharge Point 001 shall not exceed the following limitations.

**Table F-17. Effluent Limitations – Toxic Pollutants**

Parameter	Units	Final Effluent Limitations		Interim Effluent Limitations	
		Daily Maximum	Monthly Average	Daily Maximum	Monthly Average
Copper	µg/L	20	14	---	---
Lead	µg/L	8.2	3.5	---	---
Mercury <sup>[4]</sup>	µg/L	0.046	0.018	1.0 <sup>[1]</sup>	0.087 <sup>[1]</sup>
Cyanide <sup>[2]</sup>	µg/L	6.4	2.8	20	---
Acrylonitrile	µg/L	13	6.3	---	---
Dioxin-TEQ	µg/L	0.028x10 <sup>-6</sup>	0.014x10 <sup>-6</sup>	[3]	[3]

[1] Interim limitations for mercury shall remain effective through April 28, 2010. Final effluent limitations shall become effective after that date.

[2] Alternate Effluent Limits for Cyanide

(a) If a cyanide SSO for the receiving water becomes legally effective, resulting in adjusted saltwater criteria CCC of 2.9 µg/l (based on the assumptions in *Draft Staff Report on Proposed Site-Specific Water Quality Objectives and Effluent Limit Policy for Cyanide for San Francisco Bay*, dated November 10, 2005), upon its effective date, the following limitations shall supersede those cyanide limitations listed in Table 7.

MDEL of 45 µg/L, and AMEL of 20 µg/L.

(b) If a different cyanide SSO for the receiving water is adopted, the alternate WQBELs based on the SSO will be determined after the SSO effective date.

[3] The Order retains, from the previous permit, an interim, mass emission limitation for dioxin-TEQ of 0.836 mg/month, expressed as a running annual average. Interim limitation for dioxin-TEQ shall remain effective through June 30, 2011. Final effluent limitation shall become effective after that date.

[4] Alternate mercury effluent limits : When the mercury TMDL becomes legally effective, the TMDL limitations shall supersede the final effluent mercury limits.

- **Acute Toxicity.** The survival of organisms in undiluted combined effluent shall be an eleven (11) sample median value of not less than 90 percent survival, and an eleven (11) sample 90 percentile value of not less than 70 percent survival.
- **Chronic Toxicity.** Basin Plan's narrative toxicity objective.

2. Anti-Backsliding/Antidegradation.

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

- CBOD<sub>5</sub>
- TSS
- Oil and grease

- pH
- 85 % removal requirement for CBOD<sub>5</sub> and TSS
- Acute toxicity
- Final limitations for copper and lead

By retaining effluent limitations for these parameters in the Order, these limitations are at least as stringent as those in the previous permit, meeting applicable anti-backsliding requirements of the Clean Water Act. Retention of effluent limitations for these parameters also ensures that the existing quality of the receiving water will not be degraded (in terms of these parameters) as a result of the Order.

**b. More Stringent Effluent Limitations.** Limitations for the following parameters were established by the previous permit but are made more stringent by the tentative Order.

- Interim limitations for mercury are replaced by final limitations in the Order.
- Interim limitations for cyanide replaced, and final limitations become effective on April 28, 2010.
- Interim limitations for acrylonitrile are replaced by final limitations in the Order.

The establishment of more stringent limitations for these parameters in the Order satisfies applicable anti-backsliding requirements and ensures that the existing quality of the receiving water will not be degraded (in terms of these parameters) as a result of the Order.

**c. Effluent Limitations Not Retained from the Previous Permit.** Final effluent limitations for the following parameters are not retained by the Order.

- Settleable solids
- 4, 4-DDE
- Dieldrin

Effluent limitations for settleable solids have not been retained by this Order. For the Central Contra Costa Sanitary District's WWTP, like other facilities achieving secondary or more advanced levels of treatment, the Regional Water Board has determined that compliance with the requirements of 40 CFR 133 and of Table 4-2 of the Basin Plan will likewise assure removal of settleable solids to acceptably low levels - below 0.1 ml/L/hr (30 day average) and 0.2 ml/L/hr (daily maximum).

The previous permit included final effluent limitations for 4, 4-DDE and dieldrin; however, because the reasonable potential analysis showed that discharges from the facility no longer demonstrate a reasonable potential to cause or contribute to exceedances of applicable water quality criteria for these pollutants, limitations for 4,4-DDE and dieldrin from the previous permit are not retained, and new limitations are not included in the Order. Elimination of WQBELs for these pollutants is consistent with the exception to anti-backsliding requirements expressed at Section 402 (o) (2) (B) (i) of the Clean Water Act, which allows a

reissued permit to include less stringent limitations when “information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods), and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.” In these circumstances, less stringent limitations (here, the elimination of limitations) are based on new monitoring data, which was generated during the term of the previous permit, and which demonstrates no reasonable potential for discharges from the facility to cause or contribute to exceedances of applicable water quality standards for these pollutants.

**E. Interim Effluent Limitations and Compliance Schedules**

The following interim water quality based effluent limitations and compliance schedules are established by the Order.

**Table F-18. Summary of Interim Water Quality Based Effluent Limitations**

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Mercury	µg/L	0.087	---	1.0	---	---
Cyanide	µg/L	---	---	20	---	---

- Mass Emission Limit for Mercury. The total mass emissions of mercury in effluent shall not exceed 0.98 pounds per month (lbs/month).
- Mass Emission Limit for Dioxin-TEQ. The total mass emissions of dioxin-TEQ in effluent shall not exceed 0.836 milligrams per month (mgs/month).

Pursuant to Section 2.1.1 of the SIP, “the compliance schedule provisions for the development and adoption of a Total Maximum Daily Load (TMDL) only apply when first the Discharger requests and demonstrates that it is infeasible for the Discharger to achieve immediate compliance with a CTR criterion; and second the Discharger has made appropriate commitments to support and expedite the development of the TMDL. In determining appropriate commitments, the Regional Water Board should consider the Discharger’s contribution to current loadings and the Discharger’s ability to participate in TMDL development.”

The SIP and the Basin Plan authorize compliance schedules in a permit if an existing Discharger cannot immediately comply with a new and more stringent effluent limitation. Compliance schedules for limitations derived from CTR WQC are based on Section 2.2 of the SIP, and compliance schedules for limitations derived from the NTR or Basin Plan WQOs are based on the Basin Plan. Both the SIP and the Basin Plan require dischargers to demonstrate the infeasibility of achieving immediate compliance with the new limitation to qualify for a compliance schedule.

The SIP and Basin Plan require the following documentation to be submitted to the Regional Water Board to support a finding of infeasibility:

- Descriptions of diligent efforts the Discharger has made to quantify pollutant levels in the discharge, sources of the pollutant in the waste stream, and the results of those efforts.
- Descriptions of source control and/or pollutant minimization efforts currently under way or completed.
- A proposed schedule for additional or future source control measures, pollutant minimization, or waste treatment.
- A demonstration that the proposed schedule is as short as practicable.

The Basin Plan provides for a 10-year compliance schedule to implement measures to comply with new standards as of the effective date of those standards. This provision applies to the objectives adopted in the 2004 Basin Plan Amendment. Additionally, the provision authorizes compliance schedules for new interpretations of other existing standards if the new interpretation results in more stringent limitations.

### 1. Interim Limitations

On October 18, 2006, the Discharger submitted a feasibility study, asserting that it was infeasible to immediately comply with final WQBELs for mercury, cyanide and dioxin-TEQ, and identifying past and future source control measures for these pollutants. Based on these analyses and the Regional Water Board's own evaluation of feasibility to comply, Regional Water Board staff used the Discharger's self-monitoring data from May 2003 – April 2006 to confirm the Discharger's assertion of infeasibility.

- a. Statistical analysis of effluent data for cyanide from this period show that the 95th percentile (7.7  $\mu\text{g/L}$ ) is greater than the AMEL (2.8  $\mu\text{g/L}$ ) and the 99th percentile (12  $\mu\text{g/L}$ ) is greater than the MDEL (6.4  $\mu\text{g/L}$ ). The data also established the 99.87th percentile of the data set (20  $\mu\text{g/L}$ ) as a maximum daily interim (performance-based) effluent limitation, replacing the interim limitation of 18  $\mu\text{g/L}$  from the previous Order. Based on this analysis, the Regional Water Board concurs with the Discharger's assertion of infeasibility to comply with final WQBELs for cyanide.
- b. Statistical analysis of effluent data for mercury, show that the 95th percentile (0.064  $\mu\text{g/L}$ ) is greater than the AMEL (0.018  $\mu\text{g/L}$ ); the 99th percentile (0.094  $\mu\text{g/L}$ ) is greater than the MDEL (0.046  $\mu\text{g/L}$ ); and the mean (0.032  $\mu\text{g/L}$ ) is greater than the long term average of the projected lognormal distribution of the effluent data set after accounting for effluent variability (0.009  $\mu\text{g/L}$ ). Based on this analysis, the Regional Water Board concurs with the Discharger's assertion of infeasibility to comply with final WQBELs for mercury. The previous permit included interim effluent limitations for mercury of 0.087 and 1.0  $\mu\text{g/L}$  as average monthly and maximum daily limitations, respectively. These limitations were determined from pooled ultra-clean mercury data for POTWs throughout the Region using secondary treatment (Staff Report: Statistical Analysis of Pooled

Data from Region-wide Ultra-clean Sampling, 2000). These interim limitations have been retained in this Order.

- c. The previous permit included an interim mass-based effluent limitation for dioxin-TEQ of 0.836 mg/month. This interim limitation is being retained until final concentration-based limitations for dioxin-TEQ become effective on June 30, 2011.

## 2. Term of Compliance Schedules

The compliance schedules for mercury and cyanide extend until April 28, 2010, and for dioxin-TEQ until June 30, 2011.

The April 28, 2010, date is 10 years from the effective date of the SIP (April 28, 2010) and is based on the Basin Plan. The Basin Plan provides for a 10-year compliance schedule for implementation of measures to comply with new standards as of the effective date of those standards. This provision has been construed to authorize compliance schedules for new interpretations of existing standards, such as the numeric and narrative water quality objectives specified in the Basin Plan, if the new interpretations result in more stringent limits than in the previous permit. For the numeric standards and objectives in place prior to the SIP (these include mercury and cyanide), due to the adoption of the SIP, the Regional Water Board newly interpreted these objectives and standards. The effective date of this new interpretation is the effective date of the SIP (April 28, 2000) for implementation of these numeric Basin Plan objectives.

The June 30, 2011, date is also based on the Basin Plan's 10-year compliance schedule provision. But in the case of dioxin-TEQ, the effective date was when the Regional Water Board first newly interpreted narrative objectives using best professional judgment, as defined in the Basin Plan, for each permit. Therefore, the effective date of this new interpretation is the effective date of the previous permit (July 1, 2001).

## F. Land Discharge Specifications

N/A

## G. Reclamation Specifications

The Discharger is currently covered under the previous permit, *General Water Reuse Requirements for Municipal Wastewater and Water Agencies*.

## V. RATIONALE FOR RECEIVING WATER LIMITATIONS

### A. Surface Water

Receiving water limitations V.A.1 and V.A.2. (conditions to be avoided) are retained from the previous permit but edited to more closely reflect water quality objectives for the physical, chemical, and biological characteristics of receiving waters established in Chapter III of the Basin Plan.

## **B. Groundwater**

N/A

## **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 to
- 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, specifies general sampling and analytical protocols, and sets out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and policies of the Regional Water Board. 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 reasonable potential analyses.

### **A. Influent Monitoring**

The MRP retains, from the previous permit, influent monitoring requirements for flow, TSS, and CBOD<sub>5</sub>, which allow determination of compliance with the Order's 85 percent removal requirement for TSS and CBOD<sub>5</sub>.

Influent monitoring requirements for ammonia and toxic pollutants, including several metals, have not been retained from the previous permit. These influent monitoring requirements from the previous permit were previously established pursuant to the Discharger's pretreatment requirements; and are not retained in the Order, because compliance with the Discharger's approved pretreatment program is accomplished independently of the NPDES permit/Waste Discharge Requirements issued by the Regional Water Board.

### **B. Effluent Monitoring**

The MRP retains, from the previous permit, effluent monitoring requirements for flow, TSS, CBOD<sub>5</sub>, oil and grease, pH, enterococci bacteria, acute and chronic toxicity, ammonia, temperature, dissolved oxygen, and dissolved sulfides. These monitoring requirements

allow determination of compliance with corresponding effluent limitations established by the Order.

The MRP also requires monthly effluent monitoring for copper, lead, mercury, cyanide, quarterly monitoring for acrylonitrile, and monitoring two times per year for dioxin-TEQ – pollutants for which effluent limitations have been established by the Order.

Routine monitoring for arsenic, cadmium, chromium <sup>+3 and +6</sup>, nickel, selenium, silver, zinc, dieldrin, 4,4-DDE, tributyltin, diazinon, and chlorpyrifos in effluent is discontinued by this Order, as monitoring during the term of the previous permit did not show these pollutants in effluent at concentrations with a reasonable to cause or contribute to exceedances of applicable water quality objectives for the receiving water.

The MRP establishes monitoring requirements for all CTR toxic pollutants in accordance with the Regional Water Board's letter of August 6, 2001. The tentative Order requires monitoring only for the CTR toxic pollutants in effluent. Monitoring requirements for VOCs, BNAs, and organophosphorous pesticides are not retained as these requirements were previously established pursuant to the Discharger's pretreatment program requirements. Compliance with the Discharger's approved pretreatment program is accomplished independently of the NPDES permit/Waste Discharge Requirements issued by the Regional Water Board. Monitoring from the CTR pollutants in effluent will allow the Regional Water Board to perform on-going assessments of reasonable potential for discharges to cause or contribute to violations of applicable water quality criteria.

### C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity.** Monthly 96-hour bioassay testing is required to demonstrate compliance with the effluent limitation for acute toxicity.
2. **Chronic Toxicity.** Twice monthly whole effluent, chronic toxicity testing is required to demonstrate compliance with the Basin Plan's narrative toxicity objective.

With its Report of Waste Discharge of November 30, 2005, the Discharger submitted the *Final Report on Effluent Chronic Toxicity Screening Study*. Results of three tier screening phase tests indicated that both red abalone (*H. rufescens*) and mysid (*M. bahia*) exhibit higher chronic toxicity than Echinoderm, the species currently used for compliance monitoring. Based on conclusions of the Discharger's study that red abalone is the most appropriate specie for chronic toxicity monitoring, the Order is requiring red abalone for routine testing.

### D. Receiving Water Monitoring

#### 1. Surface Water

The MRP is consistent with receiving water monitoring requirements in the previous permit.

#### 2. Groundwater

Not Applicable

## **E. Other Monitoring Requirements**

### **1. Overflows and Bypasses**

Overflows and bypasses monitoring are required by this Order. The required overflows and bypasses monitoring under this Order is identical to the monitoring required by the previous permit.

## **VII. RATIONALE FOR PROVISIONS**

### **A. Standard Provisions**

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42.

40 CFR 122.41 (a) (1) and (b) - (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 CFR 123.25 (a) (12) allows the state to omit or modify conditions to impose more stringent requirements. 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 California Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387 (e).

### **B. Monitoring and Reporting Requirements**

The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are contained in the MRP (Attachment E), Standard Provisions and SMP, Part A (Attachment G) of the Permit.

This provision requires compliance with these documents, and is based on 40 CFR 122.63. The Standard Provisions and SMP, Part A are standard requirements in almost all NPDES permits issued by the Regional Water Board, including this Order. They contain definitions of terms, specify general sampling and analytical protocols, and set out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Regional Water Board's policies.

The MRP contains a sampling program specific for the facility. It defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents, for which no effluent limitations are established, is also required to provide data for future completion of RPAs for them.

## **C. Special Provisions**

### **1. Reopener Provisions**

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

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

- a. Effluent Characterization for Selected Constituents. This Order does not include effluent limitations for the selected constituents addressed in the August 6, 2001 Letter that do not demonstrate Reasonable Potential, but this provision requires the Discharger to continue monitoring for these pollutants as described in the August 6, 2001 Letter and as specified in the MRP of this Order. If concentrations of these constituents increase significantly, the Discharger will be required to investigate the source of the increases and establish remedial measures, if the increases result in reasonable potential to cause or contribute to an excursion above the applicable WQO/WQC. This provision is based on the Basin Plan and the SIP.
- b. Regional Monitoring Program. This provision is based on the Basin Plan, the SIP, and the August 6, 2001 Letter for priority pollutant monitoring. As indicated in the permit, this requirement may be met by participating in the collaborative BACWA study.
- c. Optional Mass Offset. This option is provided to encourage the Discharger to further implement aggressive reduction of mass loads to the Suisun Bay.

### **3. Best Management Practices and Pollution Prevention**

This provision is based on Chapter 4 of the Basin Plan and Sections 2.4.5 of the SIP.

### **4. Requirement to Assure Compliance Schedules with Final Limits**

This provision is based on the Basin Plan at page 4-14 (Compliance Schedules) and 40 CFR 122.47(a)(3) Maximum allowable compliance schedules are granted to the Discharger for mercury, dioxin-TEQ, and cyanide because of the considerable uncertainty in determining an effective measure such as pollution prevention and treatment plant upgrades that should be implemented to ensure compliance with final limits. In our view, it is appropriate to allow the Discharger sufficient time to first explore source control measures before requiring it to propose further actions, such as treatment plant upgrades that are likely to be much more costly. This approach is supported by the Basin Plan (page 4-25) which states: "In general, it is often more economical to reduce overall pollutant loading into treatment systems than to install complex and expensive technology at the plant." Finally, because of the ubiquitous nature of the sources of dioxin-TEQ, this provision also allows the Discharger to

address compliance with calculated WQBELs through other strategies such as mass offset.

#### **5. Construction, Operation, and Maintenance Specifications**

- a. Wastewater Facilities, Review and Evaluation, Status Reports: This provision is based on the Basin Plan.
- b. Operations and Maintenance Manual, Review and Status Reports: This provision is based on the Basin Plan, the requirements of 40 CFR 122.
- c. Contingency Plan, Review and Status Reports: This provision is based on the Basin Plan, the requirements of 40 CFR 122.

#### **6. Special Provisions for Municipal Facilities (POTWs Only)**

- a. Pretreatment Program: This provision requires the Discharger to implement and enforce its approved pretreatment program in accordance with Federal pretreatment regulations (40 CFR Part 403).
- b. Sludge Management Practices Requirements: This provision is based on the Basin Plan (Chapter IV) 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 adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Overflow (SSO WDRs) and a related Monitoring and Reporting Program (Order No. 2006-0003-DWQ). The bases for these requirements are described elsewhere in this Fact Sheet for those requirements.

#### **7. Other Special Provisions**

N/A

### **VIII. PUBLIC PARTICIPATION**

The Regional Water Board is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Central Contra Costa Wastewater Treatment Facility. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

#### **A. Notification of Interested Parties**

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and provided them with an opportunity to submit their written comments and

recommendations. Notification was provided through the following newspaper publication in the Contra Costa Times, December 1, 2006.

## **B. Written Comments**

The staff determinations were tentative. Interested persons were invited to submit written comments concerning the tentative WDRs. Comments were to 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.

To receive a full response from the Regional Water Board staff and to be considered by the Regional Water Board, written comments were to be received at the Regional Water Board offices by 5:00 p.m. on December 30, 2006.

## **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 23, 2007  
Time: 9:00 a.m.  
Location: Elihu Harris State Office Building  
1515 Clay Street, 1<sup>st</sup> Floor Auditorium  
Oakland, CA 94612

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 where you can access the current agenda for changes in dates and locations is <http://www.waterboards.ca.gov/sanfranciscobay>.

## **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 (RWD), 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., 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 this facility, and provide a name, address, and phone number.

**G. Additional Information**

Requests for additional information or questions regarding this order should be directed to Derek Whitworth at 510-622-2349 ([DWhitworth@waterboards.ca.gov](mailto:DWhitworth@waterboards.ca.gov)).

## **FACT SHEET**

### **APPENDICES**

- Appendix 0 Data used in RPA Calculations (Effluent data Electronic version only)
- Appendix 1 Applicable Water Quality Objectives/Criteria
- Appendix 2 Data Input for RPA
- Appendix 3 Reasonable Potential Analysis Results
- Appendix 4 Calculations of Coefficients of Variation
- Appendix 5 Probability Plots
- Appendix 6 WQBEL Calculations
- Appendix 7 Compliance Feasibility Analysis
- Appendix 8 Tributyltin data
- Appendix 9 Dioxin data
- Appendix 10 Hardness data
- Appendix 11 Flow data (Only with PDF version)
- Appendix 12 Mercury mass limit

Central Contra Costa Sanitary District  
Applicable Water Quality Objectives/Criteria

# in CTR	PRIORITY POLLUTANTS	Y 03 7.7	Is it a RB2 facility (Y/N)? Hardness (mg/L CaCO3) pH (6.0-9.0)	Most Stringent Criteria		Basin Plan Criteria				CTR Water Quality Criteria (ug/L)				Factors for Metals				Conversion Factor (CF)		Site-Specific Translators	
				Human Health Criterion ug/L	Lowest Chronic Criterion ug/L	Lowest Acute Criterion ug/L	Deep Water (24-hr) ug/L	Freshwater	Saline	Freshwater	Saline	Human Health for consumption of	ma	ba	mc	bc	freshwater chronic (AMEL)	freshwater acute (AMEL)	saline chronic (AMEL)	saline acute (AMEL)	Acute
1	Arsenic	4,300		36,000,000	69,000,000	150	340	150	69	36	69										
2	Beryllium	No Criteria		0.78914	2,329.04	0.78	2.3	0.78	1.7	4.2	9.4	4.2	9.4								
3	Cadmium	0.72		141,730.2	189,427.6	11	16	11	1.08	50	108										
4	Chromium (III)	14.2		8,157.89	7,164.18	16	13	16	7.2	8.2	7.2	9.2	9.2								
5	Chromium (VI)	11		1,766.87	45,340.95	1.8	4.5	1.8	2.1	8.5	2.1	8.5	2.1								
6	Copper	7.2		0.025	2,100.00	0.025	2.4	0.025	2.1	0.025	2.1										
7	Lead	1.6		30,370.37	129,824.56	130	555	130	30	30	130										
8	Mercury (total)	0.025		1,833.44		1.8	1.8	1.8	2.2	2.2	2.2										
9	Nickel (total)	30		81,002.24	81,002.24	81	81	81	95	95	95										
10	Selenium (total)	5		1,000,000	1,000,000																
11	Silver	1.8		0.00000014	0.00000014																
12	Thallium	6.3		0.00000014	0.00000014																
13	Zinc	81		220,000	220,000	22	22	22	5.2	1.0	1.0										
14	Cyanide	1		0.00000014	0.00000014																
15	Asbestos	No Criteria		0.00000014	0.00000014																
16	2,3,7,8-TCDF (Dioxin) (3034 listed)	0.00000014		0.00000014	0.00000014																
17	Acetamin	760		760	760																
18	Acrylonitrile	0.66		0.66	0.66																
19	Benzene	71		360	360																
20	Bromofom	360		4,400.00	4,400.00																
21	Carbon Tetrachloride	4.4		21,000	21,000																
22	Chlorobenzene	2,100		No Criteria	No Criteria																
23	Chlorobromomethane	34		No Criteria	No Criteria																
24	Chloroethane	No Criteria		No Criteria	No Criteria																
25	2-Chloroethyl Vinyl Ether	No Criteria		No Criteria	No Criteria																
26	Chloroform	46		46	46																
27	Dichlorobromomethane	46		46	46																
28	1,1-Dichloroethane	99		99	99																
29	1,2-Dichloroethane	3.2		3,200.00	3,200.00																
30	1,1-Dichloroethylene	39		39	39																
31	1,2-Dichloropropane	39		39	39																
32	1,3-Dichloropropane	1,700		1,700	1,700																
33	Ethylbenzene	29,000		29,000	29,000																
34	Methyl Bromide	4,000		4,000	4,000																
35	Methylene Chloride	1,600		1,600	1,600																
36	Methylene Chloride	11		11	11																
37	1,1,2,2-Tetrachloroethane	8,850		8,850	8,850																
38	Tetrachloroethers	200,000		200,000	200,000																
39	Toluene	140,000		140,000	140,000																
40	1,2-Trans-Dichloroethylene	42		42	42																
41	1,1-Trichloroethane	81		81	81																
42	1,1,2-Trichloroethane	525		525	525																
43	Trichloroethylene	400		400	400																
44	Vinyl Chloride	790		790	790																
45	Chlorophenol	2,300		2,300	2,300																
46	2,4-Dichlorophenol	765		765	765																
47	2,4-Dimethylphenol	14,000		14,000	14,000																
48	2-Methyl-4,6-Dinitrophenol	No Criteria		No Criteria	No Criteria																
49	2,4-Dinitrophenol	No Criteria		No Criteria	No Criteria																
50	Nitrophenol	No Criteria		No Criteria	No Criteria																
51	4-Nitrophenol	No Criteria		No Criteria	No Criteria																
52	3-Methyl-4-Chlorophenol	7.9		7,900.00	13,000.00																
53	Pentachlorophenol	4,600,000		4,600,000	4,600,000																
54	Phenol	6.5		6,500.00	6,500.00																
55	2,4,6-Trichlorophenol	2,700		2,700	2,700																
56	Acenaphthene	No Criteria		No Criteria	No Criteria																
57	Acenaphthylene	110,000		110,000	110,000																
58	Anthrone	0.00054		0.00054	0.00054																
59	Benzo(a)anthracene	0.049		0.049	0.049																
60	Benzo(a)fluoranthene	0.049		0.049	0.049																
61	Benzo(a)pyrene	0.049		0.049	0.049																
62	Benzo(b)fluoranthene	0.049		0.049	0.049																



Central Contra Costa Sanitary District  
NPDES Permit Reissuance  
Data Input for RPA

CTR No.	Constituent name	EFFLUENT DATA				Input Check	BACKGROUND DATA (B)				Input Check	7) Review other information in the SIP page 4. If information is unavailable or insufficient: 8) the RWQCB shall establish interim monitoring requirements.
		Effluent Data Available (Y/N)?	Are all data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL) (µg/L)	Enter the pollutant effluent detected max conc (µg/L)		B Available (Y/N)?	Are all B non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL) (µg/L)	Enter the Detected Maximum Background Conc		
1	Antimony	Y	N		1.1		Y	N		1.8		
2	Arsenic	Y	N		2.3		Y	N		2.46		
3	Beryllium	Y	N		0.04		Y	N		0.215		No Criteria
4	Cadmium	Y	N		0.2		Y	N		0.1268		
5a	Chromium (III)	Y	N		2.7		Y	N				
5b	Chromium (VI)	Y	N		2.7		Y	N		4.4		
6	Copper	Y	N		14.9		Y	N		2.45		
7	Lead	Y	N		3.6		Y	N		0.3040		
8	Mercury (303d listed)	Y	N		0.205		Y	N		0.0086		
9	Nickel (303d listed)	Y	N		8.4		Y	N		3.73		
10	Selenium (303d listed)	Y	N		0.45		Y	N		0.26		
11	Silver	Y	N		0.8		Y	N		0.052		
12	Thallium	Y	Y	1			Y	N		0.21		
13	Zinc	Y	N		52.5		Y	N		5.1		
14	Cyanide	Y	N		9.9		Y	Y	0.4			
15	Asbestos	N					N					No Criteria
16	2,3,7,8-TCDD (303d listed)	Y	Y	6.53E-07			N					
16-TEQ	Dioxin TEQ (303d listed)	Y	N		1.71E-06		Y	N		7.10E-06		
17	Acrolein	Y	Y	0.4			Y	Y	0.5			
18	Acrylonitrile	Y	N		1.1		Y	N		0.03		
19	Benzene	Y	Y	0.2			Y	Y	0.05			
20	Bromoform	Y	N		0.1		Y	Y	0.5			
21	Carbon Tetrachloride	Y	Y	0.2			Y	N		0.06		
22	Chlorobenzene	Y	Y	0.2			Y	Y	0.5			
23	Chlorobromomethane	Y	N		0.2		Y	Y	0.05			
24	Chloroethane	Y	Y	0.5			Y	Y	0.5			No Criteria
25	2-Chloroethylvinyl ether	Y	Y	0.3			Y	Y	0.5			No Criteria
26	Chloroform	Y	N		1.8		Y	Y	0.5			No Criteria
27	Dichlorobromomethane	Y	N		0.1		Y	Y	0.05			
28	1,1-Dichloroethane	Y	Y	0.2			Y	Y	0.05			No Criteria
29	1,2-Dichloroethane	Y	Y	0.2			Y	N		0.04		
30	1,1-Dichloroethylene	Y	Y	0.2			Y	Y	0.5			
31	1,2-Dichloropropane	Y	Y	0.2			Y	Y	0.05			
32	1,3-Dichloropropylene	Y	Y	0.2			N					
33	Ethylbenzene	Y	Y	0.2			Y	Y	0.5			
34	Methyl Bromide	Y	Y	0.2			Y	Y	0.5			
35	Methyl Chloride	Y	Y	0.4			Y	Y	0.5			No Criteria
36	Methylene Chloride	Y	N		0.7		Y	N		0.5		
37	1,1,2,2-Tetrachloroethane	Y	Y	0.3			Y	Y	0.05			
38	Tetrachloroethylene	Y	Y	0.2			Y	Y	0.05			
39	Toluene	Y	N		1.2		Y	Y	0.3			
40	1,2-Trans-Dichloroethylene	Y	Y	0.2			Y	Y	0.5			
41	1,1,1-Trichloroethane	Y	Y	0.2			Y	Y	0.5			No Criteria
42	1,1,2-Trichloroethane	Y	Y	0.3			Y	Y	0.05			
43	Trichloroethylene	Y	Y	0.1			Y	Y	0.5			
44	Vinyl Chloride	Y	Y	0.4			Y	Y	0.5			
45	2-Chlorophenol	Y	Y	0.8			Y	Y	1.2			
46	2,4-Dichlorophenol	Y	Y	0.9			Y	Y	1.3			
47	2,4-Dimethylphenol	Y	Y	0.9			Y	Y	1.3			
48	2-Methyl-4,6-Dinitrophenol	Y	Y	1.2			Y	Y	1.2			
49	2,4-Dinitrophenol	Y	Y	0.6			Y	Y	0.7			
50	2-Nitrophenol	Y	Y	1			Y	Y	1.3			No Criteria
51	4-Nitrophenol	Y	Y	1.4			Y	Y	1.6			No Criteria
52	3-Methyl 4-Chlorophenol	Y	Y	1.1			Y	Y	1.1			No Criteria
53	Pentachlorophenol	Y	N		3.3		Y	Y	1			
54	Phenol	Y	Y	0.8			Y	Y	1.3			
55	2,4,6-Trichlorophenol	Y	Y	1			Y	Y	1.3			
56	Acenaphthene	Y	Y	0.03			Y	N		0.0015		
57	Acenaphthylene	Y	Y	0.02			Y	N		0.00053		No Criteria
58	Anthracene	Y	Y	0.03			Y	N		0.0005		
59	Benzidine	Y	Y	11			Y	Y	0.0015			
60	Benzo(a)Anthracene	Y	Y	0.02			Y	N		0.0053		
61	Benzo(a)Pyrene	Y	Y	0.02			Y	N		0.00029		
62	Benzo(b)Fluoranthene	Y	Y	0.02			Y	N		0.0046		
63	Benzo(ghi)Perylene	Y	Y	0.02			Y	N		0.0027		No Criteria
64	Benzo(k)Fluoranthene	Y	Y	0.02			Y	N		0.0015		
65	Bis(2-Chloroethoxy)Methane	Y	Y	0.3			Y	Y	0.3			No Criteria
66	Bis(2-Chloroethyl)Ether	Y	Y	0.3			Y	Y	0.3			
67	Bis(2-Chloroisopropyl)Ether	Y	Y	0.3			N					
68	Bis(2-Ethylhexyl)Phthalate	Y	N		1.56		Y	Y	0.5			
69	4-Bromophenyl Phenyl Ether	Y	Y	0.3			Y	Y	0.23			No Criteria
70	Butylbenzyl Phthalate	Y	N		2		Y	Y	0.52			
71	2-Chloronaphthalene	Y	Y	0.3			Y	Y	0.3			
72	4-Chlorophenyl Phenyl Ether	Y	Y	0.3			Y	Y	0.3			No Criteria
73	Chrysene	Y	Y	0.02			Y	N		0.0024		
74	Dibenzo(a,h)Anthracene	Y	Y	0.03			Y	N		0.00064		
75	1,2-Dichlorobenzene	Y	Y	0.2			Y	Y	0.8			
76	1,3-Dichlorobenzene	Y	Y	0.2			Y	Y	0.8			
77	1,4-Dichlorobenzene	Y	N		0.3		Y	Y	0.8			
78	3,3-Dichlorobenzidine	Y	Y	0.9			Y	Y	0.001			
79	Diethyl Phthalate	Y	N		1.1		Y	Y	0.24			
80	Dimethyl Phthalate	Y	Y	0.2			Y	Y	0.24			
81	Di-n-Butyl Phthalate	Y	N		0.8		Y	Y	0.5			
82	2,4-Dinitrotoluene	Y	Y	0.4			Y	Y	0.27			
83	2,6-Dinitrotoluene	Y	Y	0.3			Y	Y	0.29			No Criteria
84	Di-n-Octyl Phthalate	Y	Y	0.5			Y	Y	0.38			No Criteria
85	1,2-Diphenylhydrazine	Y	Y	0.3			Y	N		0.0037		
86	Fluoranthene	Y	Y	0.03			Y	N		0.011		
87	Fluorene	Y	Y	0.02			Y	N		0.00208		
88	Hexachlorobenzene	Y	Y	0.3			Y	N		0.0000202		
89	Hexachlorobutadiene	Y	Y	0.3			Y	Y	0.3			
90	Hexachlorocyclopentadiene	Y	Y	0.5			Y	Y	0.31			
91	Hexachloroethane	Y	Y	0.2			Y	Y	0.2			
92	Indeno(1,2,3-cd)Pyrene	Y	Y	0.02			Y	N		0.004		
93	Isophorone	Y	Y	0.3			Y	Y	0.3			
94	Naphthalene	Y	Y	0.02			Y	N		0.0023		No Criteria
95	Nitrobenzene	Y	Y	0.3			Y	Y	0.25			
96	N-Nitrosodimethylamine	Y	Y	0.3			Y	Y	0.3			
97	N-Nitrosodi-n-Propylamine	Y	Y	0.3			Y	Y	0.001			
98	N-Nitrosodiphenylamine	Y	Y	0.3			Y	Y	0.001			
99	Phenanthrene	Y	Y	0.02			Y	N		0.0061		No Criteria

Central Contra Costa Sanitary District  
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		Effluent Data Available (Y/N)?	Are all data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL) (ug/L)	Enter the pollutant effluent detected max conc (ug/L)		B Available (Y/N)?	Are all B non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL) (ug/L)	Enter the Detected Maximum Background Conc		
100	Pyrene	Y	Y	0.02		Y	N		0.0051			
101	1,2,4-Trichlorobenzene	Y	Y	0.3		Y	Y	0.3			No Criteria	
102	Aldrin	Y	Y	0.002		N						
103	alpha-BHC	Y	Y	0.003		Y	N		0.000496			
104	beta-BHC	Y	Y	0.003		Y	N		0.000413			
105	gamma-BHC	Y	Y	0.002		Y	N		0.0007034			
106	delta-BHC	Y	Y	0.002		Y	N		0.000042		No Criteria	
107	Chlordane (303d listed)	Y	Y	0.003		Y	N		0.00018			
108	4,4'-DDT (303d listed)	Y	Y	0.002		Y	N		0.000066			
109	4,4'-DDE	Y	Y	0.002		Y	N		0.000693			
110	4,4'-DDD	Y	Y	0.002		Y	N		0.000313			
111	Dieldrin (303d listed)	Y	Y	0.002		Y	N		0.000264			
112	alpha-Endosulfan	Y	Y	0.002		Y	N		0.000031			
113	beta-Endosulfan	Y	Y	0.002		Y	N		0.000069			
114	Endosulfan Sulfate	Y	N		0.003	Y	N		0.0000819			
115	Endrin	Y	Y	0.002		Y	N		0.000036			
116	Endrin Aldehyde	Y	Y	0.002		N						
117	Heptachlor	Y	Y	0.003		Y	N		0.000019			
118	Heptachlor Epoxide	Y	Y	0.002		Y	N		0.00002458			
119-125	PCBs sum (303d listed)	Y	Y	0.003		N						
126	Toxaphene	Y	Y	0.04		N						
	Tributyltin	Y	N		0.006	Y	Y	0.001				
	Total PAHs	N	N			Y	N		0.26			

Notes:  
 1) Background data used for toxics is from monitoring location BC10.

Central Contra Costa Sanitary District  
Reasonable Potential Analysis Results

Beginning	Constituent name	C (ug/L)	Step 2		Step 3		Step 4		Step 5		Step 6		Step 7 & 8		Reason
			Effluent Date	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	
1	Antimony	4300	Y	N	1.1	MEC-C, go to Step 5	Y	N	1.9	B-C, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
2	Arsenic	36	Y	N	2.3	MEC-C, go to Step 5	Y	N	2.46	B-C, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
3	Beryllium	No Criteria	Y	N	0.04	No Criteria	Y	N	0.215	No Criteria	Y	No Criteria	Y	No Criteria	U - No Criteria
4	Boron	0.2	Y	N	0.2	MEC-C, go to Step 5	Y	N	0.758	B-C, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
5a	Chromium (III)	14,177,000	Y	N	0.2	MEC-C, go to Step 5	Y	N	0.2	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
5b	Chromium (VI)	11,434,513	Y	N	2.7	MEC-C, go to Step 5	Y	N	4.4	B-C, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
6	Copper	7,164	Y	N	14.9	MEC-C, go to Step 5	Y	N	2.45	B-C, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
7	Lead	1,766,715	Y	N	3.6	MEC-C, go to Step 5	Y	N	0.004	B-C, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
8	Mercury (Total)	0.025	Y	N	0.205	MEC-C, go to Step 5	Y	N	0.0065	B-C, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
9	Nickel (Total)	30,370,707	Y	N	8.4	MEC-C, go to Step 5	Y	N	0.37	B-C, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
10	Selenium (Total)	5	Y	N	0.48	MEC-C, go to Step 5	Y	N	0.92	B-C, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
11	Thallium	1,834,556	Y	N	0.8	MEC-C, go to Step 5	Y	N	0.21	B-C, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
12	Vanadium	12	Y	N	52.5	MEC-C, go to Step 5	Y	N	0.31	B-C, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
13	Zinc	81,002,406	Y	N	9.9	MEC-C, go to Step 5	Y	N	0.4	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
14	Acetone	No Criteria	Y	N	0	No Criteria	Y	N	7,10E-08	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
15	Acetone	0.00000014	Y	Y	6,53E-07	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
16	2,3,7,8-TCDF (Total)	0.00000014	Y	Y	1,707E-08	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
17	Acrolein	780	Y	Y	0.4	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
18	Acrylonitrile	0.08	Y	Y	1.1	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
19	Benzene	360	Y	Y	0.2	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
20	Benzonitrile	360	Y	Y	0.1	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
21	Carbon tetrachloride	4.4	Y	Y	0.2	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
22	Chlorobenzene	21000	Y	Y	0.2	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
23	Chloroethane	34	Y	Y	0.5	No Criteria	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
24	Chloroform	No Criteria	Y	Y	0.3	No Criteria	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
25	2-Chlorophenyl ether	No Criteria	Y	Y	1.8	No Criteria	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
26	Chloromethane	45	Y	Y	0.1	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
27	Dichlorobenzene	96	Y	Y	0.2	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
28	1,2-Dichloroethane	3.2	Y	Y	0.2	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
29	1,1-Dichloroethane	39	Y	Y	0.2	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
30	1,2-Dichloropropane	1700	Y	Y	0.2	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
31	1,2-Dichloropropane	29000	Y	Y	0.2	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
32	Ethylbenzene	4000	Y	Y	0.4	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
33	Methyl Bromide	4000	Y	Y	0.4	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
34	Methyl Chloride	11	Y	Y	0.7	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
35	1,1,1,2-Tetrachloroethane	85	Y	Y	0.2	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
36	Tetrachloroethene	20000	Y	Y	1.2	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
37	1,1,1-Trichloroethane	40000	Y	Y	0.2	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
38	1,1,2-Trichloroethane	42	Y	Y	0.3	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
39	1,1,2-Trichloroethane	42	Y	Y	0.1	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
40	Trichloroethylene	81	Y	Y	0.1	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
41	Trichloroethylene	26	Y	Y	0.1	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
42	Trichloroethylene	26	Y	Y	0.1	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
43	Trichloroethylene	26	Y	Y	0.1	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
44	Trichloroethylene	26	Y	Y	0.1	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
45	Trichloroethylene	26	Y	Y	0.1	MDL = C, Interim Member, Go To 5	Y	Y	0.5	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
46	2,4-Dichlorophenol	2800	Y	Y	0.9	MDL = C, Interim Member, Go To 5	Y	Y	1.3	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
47	2,4-Dichlorophenol	785	Y	Y	1.2	MDL = C, Interim Member, Go To 5	Y	Y	0.7	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
48	2,4-Dichlorophenol	14000	Y	Y	1	No Criteria	Y	Y	1.3	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
49	2,4-Dichlorophenol	No Criteria	Y	Y	1.4	No Criteria	Y	Y	1.1	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
50	4-Nitrophenol	No Criteria	Y	Y	1.1	No Criteria	Y	Y	1.1	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
51	4-Nitrophenol	No Criteria	Y	Y	1.1	No Criteria	Y	Y	1.1	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
52	3-Methyl-4-Chlorophenol	No Criteria	Y	Y	3.3	MDL = C, Interim Member, Go To 5	Y	Y	1.3	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
53	4-Nitrophenol	No Criteria	Y	Y	1.1	No Criteria	Y	Y	1.3	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
54	4-Nitrophenol	460000	Y	Y	0.8	MDL = C, Interim Member, Go To 5	Y	Y	1.3	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
55	2,4,6-Trichlorophenol	6.5	Y	Y	0.8	MDL = C, Interim Member, Go To 5	Y	Y	1.3	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
56	Acenaphthene	2700	Y	Y	0.3	MDL = C, Interim Member, Go To 5	Y	Y	0.0015	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
57	Acenaphthene	No Criteria	Y	Y	0.02	MDL = C, Interim Member, Go To 5	Y	Y	0.0053	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
58	Acenaphthene	110000	Y	Y	0.02	MDL = C, Interim Member, Go To 5	Y	Y	0.0053	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
59	Acenaphthene	0.00054	Y	Y	0.02	MDL = C, Interim Member, Go To 5	Y	Y	0.0053	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
60	Benzo(a)Anthracene	0.049	Y	Y	0.02	MDL = C, Interim Member, Go To 5	Y	Y	0.0029	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
61	Benzo(b)Fluoranthene	0.049	Y	Y	0.02	MDL = C, Interim Member, Go To 5	Y	Y	0.0048	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
62	Benzo(k)Fluoranthene	0.049	Y	Y	0.02	MDL = C, Interim Member, Go To 5	Y	Y	0.0048	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
63	Benzo(a)Fluoranthene	0.049	Y	Y	0.02	MDL = C, Interim Member, Go To 5	Y	Y	0.0048	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
64	Benzo(a)Fluoranthene	0.049	Y	Y	0.02	MDL = C, Interim Member, Go To 5	Y	Y	0.0015	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
65	Benzo(a)Fluoranthene	No Criteria	Y	Y	0.02	MDL = C, Interim Member, Go To 5	Y	Y	0.0015	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
66	Benzo(a)Fluoranthene	1.4	Y	Y	0.3	MDL = C, Interim Member, Go To 5	Y	Y	0.3	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
67	Benzo(a)Fluoranthene	17000	Y	Y	0.3	MDL = C, Interim Member, Go To 5	Y	Y	0.3	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
68	Benzo(a)Fluoranthene	5.9	Y	Y	0.3	MDL = C, Interim Member, Go To 5	Y	Y	0.23	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
69	Benzo(a)Fluoranthene	No Criteria	Y	Y	0.3	MDL = C, Interim Member, Go To 5	Y	Y	0.32	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
70	Benzo(a)Fluoranthene	4300	Y	Y	0.3	MDL = C, Interim Member, Go To 5	Y	Y	0.3	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
71	2-Chlorophenyl Ether	4300	Y	Y	0.3	MDL = C, Interim Member, Go To 5	Y	Y	0.3	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
72	4-Chlorophenyl Ether	4300	Y	Y	0.3	MDL = C, Interim Member, Go To 5	Y	Y	0.3	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
73	Chrysene	0.049	Y	Y	0.02	MDL = C, Interim Member, Go To 5	Y	Y	0.0024	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
74	Diene(a)Anthracene	0.049	Y	Y	0.02	MDL = C, Interim Member, Go To 5	Y	Y	0.0064	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
75	1,2-Dichlorobenzene	17000	Y	Y	0.3	MDL = C, Interim Member, Go To 5	Y	Y	0.8	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
76	1,2-Dichlorobenzene	2900	Y	Y	0.2	MDL = C, Interim Member, Go To 5	Y	Y	0.8	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
77	1,3-Dichlorobenzene	2900	Y	Y	0.2	MDL = C, Interim Member, Go To 5	Y	Y	0.8	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
78	1,4-Dichlorobenzene	2900	Y	Y	0.3	MDL = C, Interim Member, Go To 5	Y	Y	0.8	No detected value of B, Step 7	Y	No Criteria	Y	No Criteria	U - No Criteria
79															

Central Contra Costa Sanitary District  
Reasonable Potential Analysis Results

Beginning	C (log/L) Lowest (most stringent) Criteria for No Criteria	Effluent Data Available?	Are all data points non-detects?	Minimum MDL (log/L) all data detected max conc (log/L)	Enter the pollutant detected max conc (log/L)	All data points on MDL-MEC, down monitoring to MDL-C, down monitoring to MEC-C, required	Step 2		Step 3		Step 4		Background Data Available?	Are all background data points non-detects?	Enter the background pollutant conc (log/L)	# all data points MDL-MEC, down monitoring to MDL-C, down monitoring to MEC-C, required	# all MDL-MEC, down monitoring to MDL-C, down monitoring to MEC-C, required	MEC vs C	Step 5	Step 6	Step 7 & 8	Reason	
							MEC vs C	MEC vs C	MEC vs C	MEC vs C	MEC vs C	MEC vs C											
79	120000	Y	N	0.2	1.1	AI ND MDL-C, MDL-MEC	Y	Y	0.24	N	No detected value of B, Step 7												
80	2900000	Y	N	0.2	0.8	AI ND MDL-C, MDL-MEC	Y	Y	0.5	N	No detected value of B, Step 7												
81	12000	Y	N	0.4	0.4	AI ND MDL-C, MDL-MEC	Y	Y	0.27	N	No detected value of B, Step 7												
82	9.1	Y	Y	0.3	0.3	No Criteria	Y	Y	0.29	N	No Criteria												
83	No Criteria	Y	Y	0.3	0.3	No Criteria	Y	Y	0.28	N	No Criteria												
84	No Criteria	Y	Y	0.3	0.3	No Criteria	Y	Y	0.29	N	No Criteria												
85	0.144	Y	Y	0.3	0.3	AI ND MDL-C, MDL-MEC	Y	Y	0.0937	N	No detected value of B, Step 7												
86	370	Y	Y	0.03	0.03	AI ND MDL-C, MDL-MEC	Y	Y	0.011	N	No detected value of B, Step 7												
87	14000	Y	Y	0.02	0.02	MDL-C, Go to Step 5	Y	Y	0.00208	N	No detected value of B, Step 7												
88	0.00077	Y	Y	0.3	0.3	AI ND MDL-C, MDL-MEC	Y	Y	0.0000202	N	No detected value of B, Step 7												
89	Hexachlorobenzene	50	Y	0.3	0.3	AI ND MDL-C, MDL-MEC	Y	Y	0.31	N	No detected value of B, Step 7												
90	Heptachlorocyclopentadiene	17000	Y	0.5	0.5	AI ND MDL-C, MDL-MEC	Y	Y	0.2	N	No detected value of B, Step 7												
91	Heptachlorobenzene	8.9	Y	0.2	0.2	AI ND MDL-C, MDL-MEC	Y	Y	0.004	N	No detected value of B, Step 7												
92	Heptachlorocyclopentadiene	0.049	Y	0.02	0.02	AI ND MDL-C, MDL-MEC	Y	Y	0.0023	N	No detected value of B, Step 7												
93	Heptachlorocyclopentadiene	No Criteria	Y	0.02	0.02	AI ND MDL-C, MDL-MEC	Y	Y	0.3	N	No detected value of B, Step 7												
94	No Criteria	Y	Y	0.02	0.02	No Criteria	Y	Y	0.3	N	No detected value of B, Step 7												
95	Nitrobenzene	19000	Y	0.3	0.3	AI ND MDL-C, MDL-MEC	Y	Y	0.25	N	No detected value of B, Step 7												
96	N-Nitrosodimethylamine	8.1	Y	0.3	0.3	AI ND MDL-C, MDL-MEC	Y	Y	0.001	N	No detected value of B, Step 7												
97	N-Nitrosodipropylamine	1.4	Y	0.3	0.3	AI ND MDL-C, MDL-MEC	Y	Y	0.001	N	No detected value of B, Step 7												
98	N-Nitrosodipropylamine	16	Y	0.3	0.3	AI ND MDL-C, MDL-MEC	Y	Y	0.001	N	No detected value of B, Step 7												
99	Phenanthrene	No Criteria	Y	0.02	0.02	No Criteria	Y	Y	0.0081	N	No detected value of B, Step 7												
100	Pyrene	11000	Y	0.02	0.02	AI ND MDL-C, MDL-MEC	Y	Y	0.3	N	No detected value of B, Step 7												
101	No Criteria	Y	Y	0.02	0.02	No Criteria	Y	Y	0.00048	N	No detected value of B, Step 7												
102	No Criteria	Y	Y	0.02	0.02	AI ND MDL-C, MDL-MEC	Y	Y	0.000413	N	No detected value of B, Step 7												
103	alpha-BHC	0.013	Y	0.003	0.003	AI ND MDL-C, MDL-MEC	Y	Y	0.00044	N	No detected value of B, Step 7												
104	beta-BHC	0.046	Y	0.003	0.003	AI ND MDL-C, MDL-MEC	Y	Y	0.00042	N	No detected value of B, Step 7												
105	gamma-BHC	0.063	Y	0.002	0.002	AI ND MDL-C, MDL-MEC	Y	Y	0.00042	N	No detected value of B, Step 7												
106	delta-BHC	0.0059	Y	0.002	0.002	AI ND MDL-C, MDL-MEC	Y	Y	0.00042	N	No detected value of B, Step 7												
107	Chlordane (303 listed)	0.00059	Y	0.003	0.003	MDL-C, Go to Step 5	Y	Y	0.00018	N	No detected value of B, Step 7												
108	4,4'-DDE (303 listed)	0.00059	Y	0.002	0.002	MDL-C, Go to Step 5	Y	Y	0.000096	N	No detected value of B, Step 7												
109	4,4'-DDD	0.00059	Y	0.002	0.002	MDL-C, Go to Step 5	Y	Y	0.000093	N	No detected value of B, Step 7												
110	4,4'-DDE	0.00059	Y	0.002	0.002	MDL-C, Go to Step 5	Y	Y	0.000093	N	No detected value of B, Step 7												
111	4,4'-DDD	0.00059	Y	0.002	0.002	MDL-C, Go to Step 5	Y	Y	0.000093	N	No detected value of B, Step 7												
112	alpha-Endosulfan	0.0007	Y	0.002	0.002	AI ND MDL-C, MDL-MEC	Y	Y	0.000031	N	No detected value of B, Step 7												
113	beta-Endosulfan	0.00087	Y	0.002	0.002	AI ND MDL-C, MDL-MEC	Y	Y	0.000069	N	No detected value of B, Step 7												
114	Endosulfan Sulfate	240	Y	N	0.003	AI ND MDL-C, MDL-MEC	Y	Y	0.0000819	N	No detected value of B, Step 7												
115	Erdin	0.0023	Y	0.002	0.002	AI ND MDL-C, MDL-MEC	Y	Y	0.000038	N	No detected value of B, Step 7												
116	Erdin Aldehyde	0.81	Y	0.002	0.002	AI ND MDL-C, MDL-MEC	Y	Y	0.000019	N	No detected value of B, Step 7												
117	Heptachlor	0.00021	Y	0.003	0.003	MDL-C, Go to Step 5	Y	Y	0.00002453	N	No detected value of B, Step 7												
118	Heptachlor Epoxide	0.00021	Y	0.002	0.002	MDL-C, Go to Step 5	Y	Y	0.00002453	N	No detected value of B, Step 7												
119	PCB#1 (303 listed)	0.00017	Y	0.004	0.004	MDL-C, Go to Step 5	Y	Y	0.001	N	No detected value of B, Step 7												
120	Toxaphene	0.0002	Y	0.04	0.04	MDL-C, Go to Step 5	Y	Y	0.001	N	No detected value of B, Step 7												
121	Tributyltin	0.01	Y	N	0.006	MEC-C, go to Step 5	Y	Y	0.26	N	No detected value of B, Step 7												
122	Total PAHs	15	N	N	0	No Effluent Data	Y	Y															

a. The most stringent of all end fresh water criteria were selected for this analysis.  
 b. Acronyms in the "Final Result" column:  
 U: No criteria available  
 N: No Criteria  
 AI: Interim monitoring is required  
 U: No Criteria

Central Contra Costa Sanitary District  
Calculation of Coefficient of Variation

Copper					Lead				
Date	Qual	Value	Calc Value	LN Value	Date	Qual	Value	Calc Value	LN Value
5/7/2003		6.7	6.7	1.902108	11/4/2003	ND	0.3	0.15	-1.89712
6/3/2003		7.7	7.7	2.04122	5/4/2004	nd	0.4	0.2	-1.60944
7/2/2003		6.3	6.3	1.84055	1/11/2005	ND	0.4	0.2	-1.60944
8/18/2003		7.1	7.1	1.960095	4/6/2005	ND	0.4	0.2	-1.60944
8/19/2003		7.1	7.1	1.960095	5/4/2005	ND	0.4	0.2	-1.60944
9/9/2003		7.8	7.8	2.054124	6/2/2005	ND	0.4	0.2	-1.60944
10/7/2003		11.3	11.3	2.424803	9/7/2005	ND	0.4	0.2	-1.60944
11/4/2003		7.4	7.4	2.00148	11/2/2005	nd	0.4	0.2	-1.60944
12/2/2003		12.5	12.5	2.525729	12/2/2005	ND	0.4	0.2	-1.60944
1/7/2004		7.7	7.7	2.04122	12/2/2003	ND	0.6	0.3	-1.20397
2/5/2004		7.9	7.9	2.066863	1/5/2006	ND	0.6	0.3	-1.20397
3/4/2004		12	12	2.484907	2/21/2006	ND	0.6	0.3	-1.20397
4/15/2004		10.6	10.6	2.360854	3/3/2006	ND	0.6	0.3	-1.20397
5/4/2004		10	10	2.302585	4/5/2006	ND	0.6	0.3	-1.20397
6/2/2004		9.1	9.1	2.208274	6/2/2004	dnq	0.4	0.4	-0.91629
7/7/2004		6	6	1.791759	10/8/2004	dnq	0.41	0.41	-0.8916
8/13/2004		11.5	11.5	2.442347	8/2/2005	dnq	0.55	0.55	-0.59784
9/2/2004		9.7	9.7	2.272126	9/2/2004	dnq	0.56	0.56	-0.57982
10/8/2004		6.5	6.5	1.871802	8/13/2004	dnq	0.6	0.6	-0.51083
11/4/2004		8.8	8.8	2.174752	12/2/2004	dnq	0.6	0.6	-0.51083
12/2/2004		8.8	8.8	2.174752	3/2/2005	dnq	0.6	0.6	-0.51083
1/11/2005		6.2	6.2	1.824549	10/7/2003	dnq	0.7	0.7	-0.35667
2/2/2005		12	12	2.484907	2/5/2004	dnq	0.7	0.7	-0.35667
3/2/2005		5.6	5.6	1.722767	4/15/2004	dnq	0.7	0.7	-0.35667
4/6/2005		9.5	9.5	2.251292	1/7/2004	dnq	0.8	0.8	-0.22314
5/4/2005		9.3	9.3	2.230014	7/7/2004	dnq	0.8	0.8	-0.22314
6/2/2005		6	6	1.791759	2/2/2005	dnq	0.8	0.8	-0.22314
7/6/2005		14.9	14.9	2.701361	3/4/2004	dnq	0.9	0.9	-0.10536
7/11/2005		10.5	10.5	2.351375	10/4/2005	dnq	0.94	0.94	-0.06188
8/2/2005		11.5	11.5	2.442347	11/4/2004	dnq	1	1	0
9/7/2005		11.7	11.7	2.459589	7/6/2005	dnq	1.3	1.3	0.262364
10/4/2005		11.6	11.6	2.451005	7/2/2003	dnq	1.6	1.6	0.470004
10/26/2005		8.13	8.13	2.095561	8/18/2003	dnq	2.2	2.2	0.788457
10/28/2005		7.86	7.86	2.061787	8/19/2003	dnq	2.2	2.2	0.788457
11/2/2005		8.8	8.8	2.174752	9/9/2003	dnq	2.3	2.3	0.832909
12/2/2005		7.3	7.3	1.987874	6/3/2003	dnq	2.4	2.4	0.875469
1/5/2006		6.2	6.2	1.824549	5/7/2003	dnq	3.6	3.6	1.280934
2/21/2006		11.9	11.9	2.476538					
3/3/2006		7.8	7.8	2.054124					
4/5/2006		6.8	6.8	1.916923					

% ND  
Mean  
St Dev  
CV

0%  
8.90  
2.280  
0.256

2.16  
0.252

% ND  
Mean  
St Dev  
CV

0.81  
0.793  
0.981

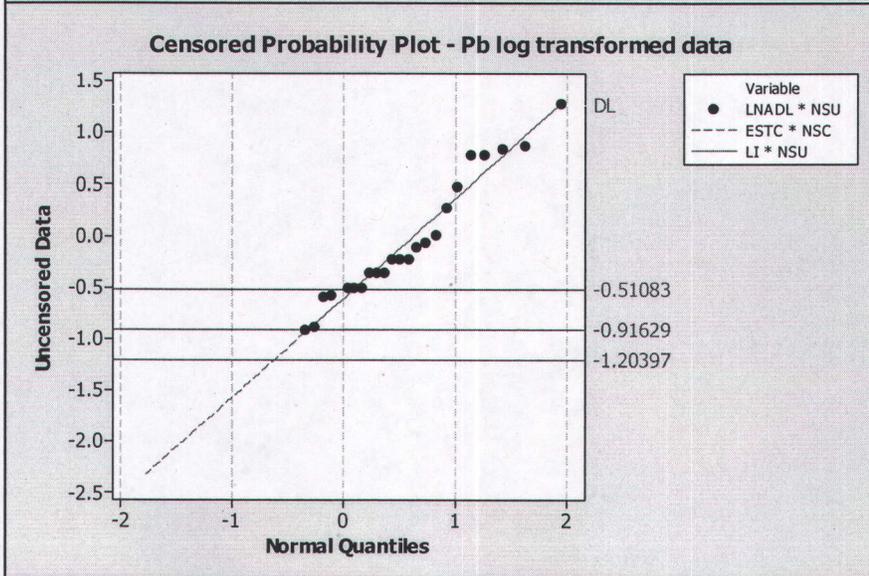
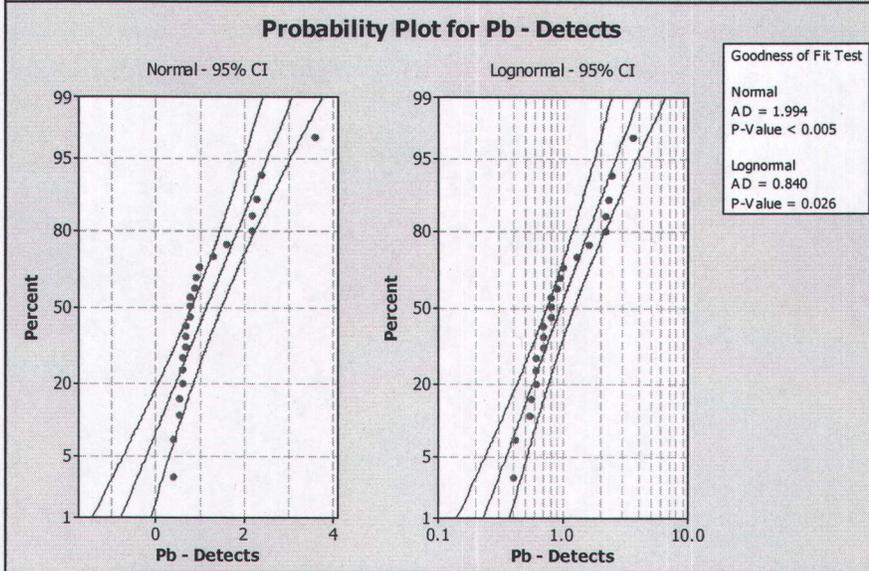
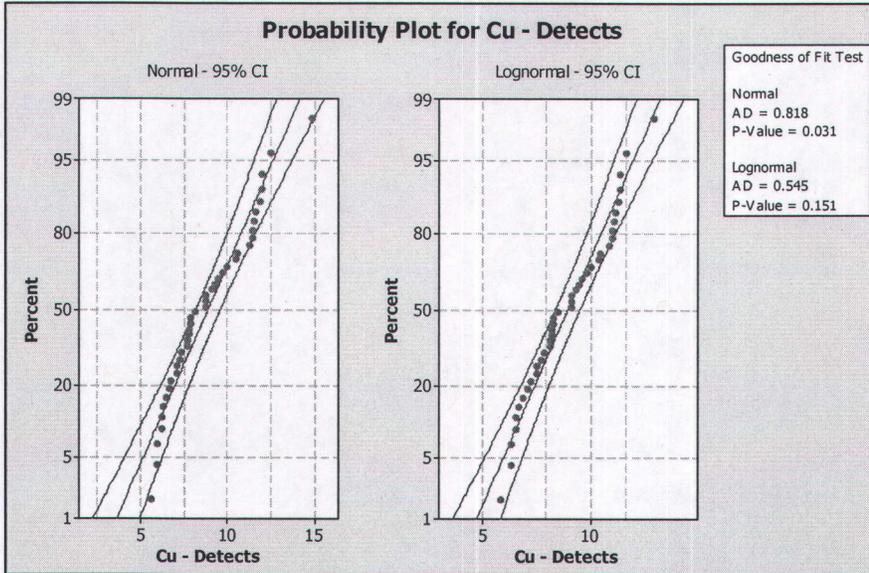
**Central Contra Costa Sanitary District  
Calculation of Coefficient of Variation**

Mercury					Cyanide				
Date	Qual	Value	Calc Value	LN Value	Date	Qual	Value	Calc Value	LN Value
5/7/2003		0.023	0.023	-3.772261	3/1/2005	ND	1.3	0.65	-0.430783
6/3/2003		0.0336	0.0336	-3.393229	6/1/2005	ND	1.3	0.65	-0.430783
7/2/2003		0.03	0.03	-3.506558	11/1/2005	ND	1.3	0.65	-0.430783
8/18/2003		0.029	0.029	-3.540459	1/4/2006	ND	1.3	0.65	-0.430783
8/19/2003		0.029	0.029	-3.540459	8/18/2003	ND	2	1	0
9/9/2003		0.0312	0.0312	-3.467337	9/9/2003	ND	2	1	0
10/7/2003		0.032	0.032	-3.442019	10/6/2003	ND	2	1	0
11/4/2003		0.018	0.018	-4.017384	11/3/2003	ND	2.5	1.25	0.2231436
12/2/2003		0.013	0.013	-4.342806	3/3/2004	ND	2.5	1.25	0.2231436
1/7/2004		0.02	0.02	-3.912023	6/1/2004	ND	2.5	1.25	0.2231436
2/5/2004		0.041	0.041	-3.194183	7/6/2004	ND	2.5	1.25	0.2231436
3/4/2004		0.027	0.027	-3.611918	11/3/2004	ND	2.5	1.25	0.2231436
4/15/2004		0.013	0.013	-4.342806	1/10/2005	ND	2.5	1.25	0.2231436
5/4/2004		0.205	0.205	-1.584745	8/1/2005	dnq	1.7	1.7	0.5306283
5/25/2004		0.0201	0.0201	-3.907035	5/3/2005	dnq	1.8	1.8	0.5877867
5/28/2004		0.0264	0.0264	-3.634391	10/3/2005	dnq	2	2	0.6931472
5/29/2004		0.0236	0.0236	-3.746509	12/16/2004	dnq	2.7	2.7	0.9932518
6/2/2004		0.022	0.022	-3.816713	12/1/2005	DNQ	2.7	2.7	0.9932518
7/7/2004		0.016	0.016	-4.135167	2/1/2005	dnq	2.8	2.8	1.0296194
8/13/2004		0.017	0.017	-4.074542	7/2/2003	dnq	3	3	1.0986123
9/2/2004		0.028	0.028	-3.575551	5/3/2004	dnq	3	3	1.0986123
10/8/2004		0.016	0.016	-4.135167	4/4/2006	DNQ	3.1	3.1	1.1314021
11/4/2004		0.019	0.019	-3.963316	4/5/2005	dnq	3.4	3.4	1.2237754
12/2/2004		0.02	0.02	-3.912023	3/2/2006	DNQ	3.4	3.4	1.2237754
1/11/2005		0.015	0.015	-4.199705	7/5/2005	dnq	3.5	3.5	1.252763
2/2/2005		0.036	0.036	-3.324236	5/6/2003	dnq	3.8	3.8	1.3350011
3/2/2005		0.016	0.016	-4.135167	6/3/2003	dnq	3.9	3.9	1.3609766
4/6/2005		0.022	0.022	-3.816713	2/20/2006	DNQ	3.9	3.9	1.3609766
5/4/2005		0.016	0.016	-4.135167	9/1/2004	dnq	4.6	4.6	1.5260563
6/2/2005		0.021	0.021	-3.863233	1/5/2004		2.5	2.5	0.9162907
7/6/2005		0.074	0.074	-2.60369	4/14/2004		3.6	3.6	1.2809338
7/26/2005		0.048	0.048	-3.036554	10/7/2004		5.6	5.6	1.7227666
8/2/2005		0.034	0.034	-3.381395	2/4/2004		6.4	6.4	1.856298
9/2/2005		0.076	0.076	-2.577022	8/12/2004		9	9	2.1972246
9/7/2005		0.066	0.066	-2.718101	9/6/2005		9.5	9.5	2.2512918
10/4/2005		0.056	0.056	-2.882404	12/1/2003		9.9	9.9	2.2925348
11/2/2005		0.032	0.032	-3.442019					
12/2/2005		0.024	0.024	-3.729701					
12/9/2005		0.022	0.022	-3.816713					
1/5/2006		0.015	0.015	-4.199705					
2/7/2006		0.02	0.02	-3.912023					
2/21/2006		0.016	0.016	-4.135167					
3/3/2006		0.018	0.018	-4.017384					
4/5/2006		0.012	0.012	-4.422849					
<b>% ND</b>		<b>0%</b>			<b>% ND</b>				
<b>Mean</b>			<b>0.03</b>	<b>-3.66</b>	<b>Mean</b>		<b>3.025</b>		
<b>St Dev</b>			<b>0.031</b>	<b>0.556</b>	<b>St Dev</b>		<b>2.432</b>		
<b>CV</b>			<b>0.974</b>		<b>CV</b>		<b>0.804</b>		

Central Contra Costa Sanitary District  
 Calculation of Coefficient of Variation

Dioxin -TEQ					Acrylonitrile				
Date	Qual	Value	Calc Value	LN Value	Date	Qual	Value	Calc Value	Ln Value
2/10/2002	ND	4.78E-07		2.39E-07	12/5/2005	ND	0.4		
2/27/2003	ND	4.86E-07		2.43E-07	2/20/2006	ND	0.4		
2/20/2006	ND	4.86E-07		2.43E-07	5/3/2004	ND	0.6		
8/7/2002	ND	6.37E-07		3.19E-07	9/1/2004	ND	0.6		
8/1/2005		3.55E-10		3.55E-10	11/3/2004	ND	0.6		
2/1/2005		5.15E-10		5.15E-10	8/5/2005	nd	0.6		
8/18/2003		1.04E-09		1.04E-09	11/3/2003	ND	1		
2/4/2004		1.68E-09		1.68E-09	2/4/2004	ND	1		
9/1/2004		1.71E-08		1.71E-08	2/1/2005	ND	2.6		
					5/3/2005	ND	2.6		
					8/18/2003	dnq	1.1		
% ND Mean St Dev CV					% ND Mean St Dev CV				
0%					90.9%				

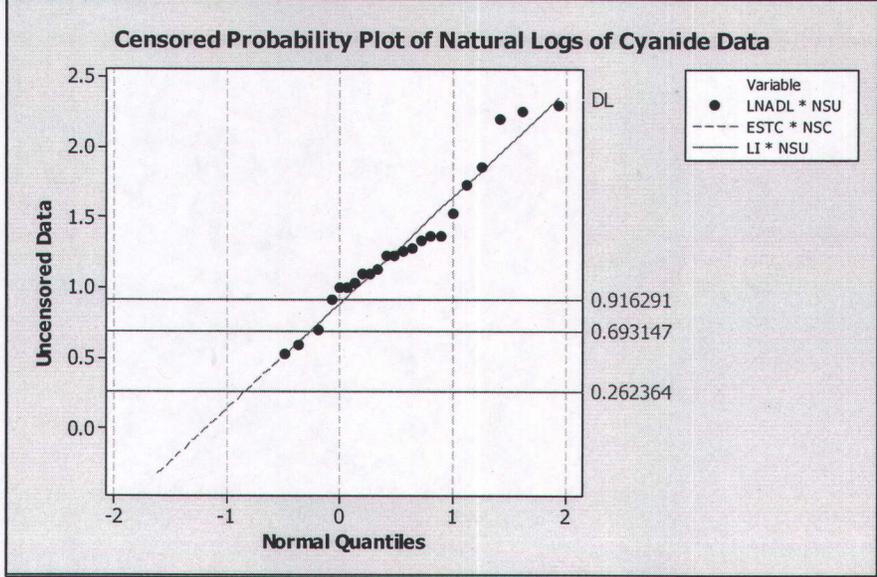
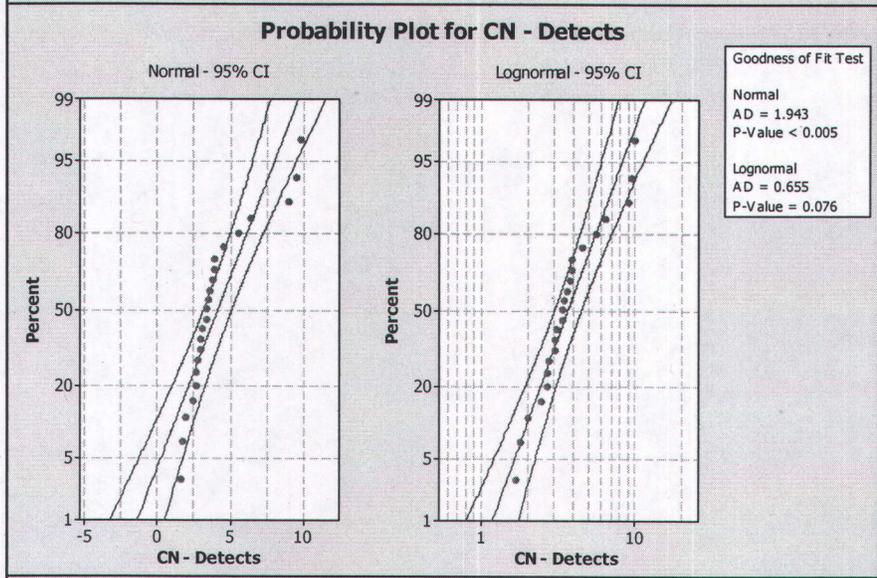
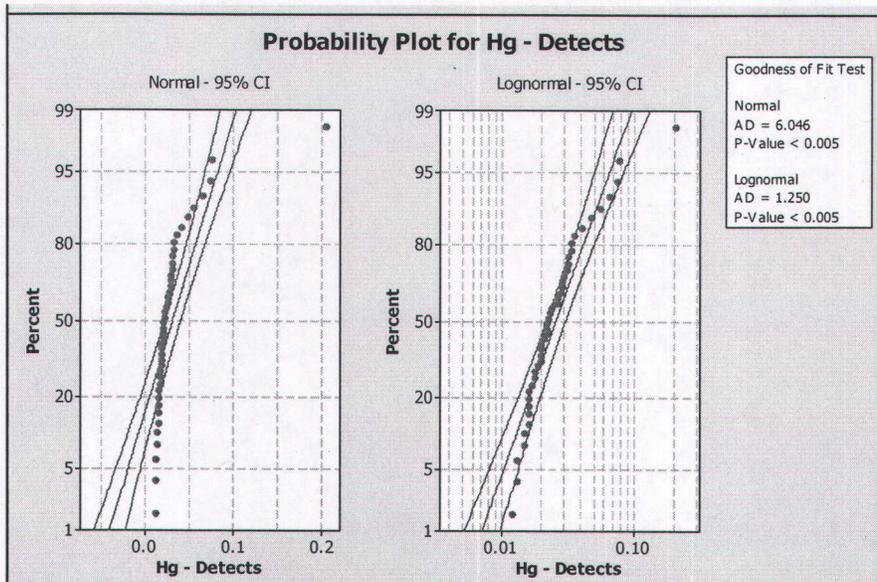
Pinole-Hercules Water Pollution Control Plant  
Probability Charts and Minitab Output



**Descriptive Statistics: Natural Logs of Lea**

Variable	N	N*	Mean	SE Mean	StDev	Mi
ESTIMATE	37	0	-0.600	0.147	0.896	-2.

Pinole-Hercules Water Pollution Control Plant  
Probability Charts and Minitab Output



**Descriptive Statistics: Natural logs of cyan**

Variable	N	N*	Mean	SE Mean	StDev	Min
ESTIMATE	36	0	0.897	0.115	0.693	-0.1

**Central Contra Costa Sanitary District  
WQBEL Calculations**

FS-APP 6

PRIORITY POLLUTANTS Units	Copper ug/L		Lead ug/L	Mercury ug/L	Cyanide ug/L		Dioxin TEQ ug/L	Acrylonitrile ug/L
	BP & CTR SW Aq Life	Alternate limits using SSOs (December 2004)	BP & CTR FW Aq Life	BP SW Aq Life	NTR Criterion for the Bay	Alternate Limits Using Proposed SSOs	BP HH	CTR HH
Basis and Criteria type								
CTR Criteria -Acute	7.16	-----	45	2.1	1.0	9.4		
CTR Criteria -Chronic	8.16	-----	1.8	0.025	1.0	2.9		
SSO Criteria -Acute (December 2004) (Diss.)		3.9						
SSO Criteria -Chronic (December 2004) (Diss.)		2.5						
Water Effects ratio (WER)	2.4	2.4	1	1	1	1	1	1
Lowest WQO			1.77	0.025	1.0	1.0	1.40E-08	0.66
Site Specific Translator - MDEL	0.67	0.67						
Site Specific Translator - AMEL	0.38	0.38						
Dilution Factor (D) (if applicable)	9	9	9	0	9	9	0	9
No. of samples per month	4	4	4	4	4	4	4	4
Aquatic life criteria analysis required? (Y/N)	Y	Y	Y	Y	Y	Y	N	N
HH criteria analysis required? (Y/N)	N	N	N	Y	Y	Y	Y	Y
Applicable Acute WQO	17.18	13.97	45.34	2.10	1	9.4		
Applicable Chronic WQO	19.58	15.79	1.77	0.025	1	2.9		
HH criteria	-----	-----	-----	0.05	220,000	220,000	1.40E-08	0.66
Background (Maximum Conc for Aquatic Life calc)	2.45	2.45	0.804	0.0086	0.4	0.4	7.10E-08	0.03
Background (Average Conc for Human Health calc)	-----	-----	-----	0.0022	0.4	0.4	5.00E-08	0.03
Is the pollutant Bioaccumulative(Y/N)? (e.g., Hg)	N	N	N	Y	N	N	Y	N
ECA acute	149.8	117.7	446.2	2.1	6.4	90.4		
ECA chronic	173.8	135.8	10.433	0.025	6.400	25.400		
ECA HH	-----	-----	-----	0.051	2199996.4	2199996.4	1.40E-08	6.33
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	N	N	N	N	N	N	Y	Y
Avg of effluent data points	8.90	8.90	0.81	0.032	3.03	3.03		
Std Dev of effluent data points	2.28	2.28	0.79	0.031	2.43	2.43		
CV calculated	0.26	0.26	0.98	0.97	0.80	0.80	N/A	N/A
CV (Selected) - Final	0.26	0.26	0.98	0.97	0.80	0.80	0.60	0.60
ECA acute mult99	0.57	0.57	0.21	0.209	0.25	0.25		
ECA chronic mult99	0.75	0.75	0.38	0.380	0.44	0.44		
LTA acute	86.02	67.57	92.53	0.439	1.59	22.45		
LTA chronic	130.23	101.79	3.94	0.010	2.80	11.13		
minimum of LTAs	86.02	67.57	3.94	0.010	1.59	11.13		
AMEL mult95	1.22	1.22	1.93	1.92	1.75	1.75	1.55	1.55
MDEL mult99	1.74	1.74	4.82	4.79	4.03	4.03	3.11	3.11
AMEL (aq life)	105.25	82.67	7.60	0.02	2.79	19.52		
MDEL(aq life)	149.79	117.65	19.02	0.05	6.40	44.81		
MDEL/AMEL Multiplier	1.42	1.42	2.50	2.49	2.30	2.30	2.01	2.01
AMEL (human hlth)	-----	-----	-----	0.051	2199996.4	2199996.4	1.4E-08	6.33
MDEL (human hlth)				0.127	5051820.8	5051820.8	2.8E-08	12.7
minimum of AMEL for Aq. life vs HH	105	83	7.6	0.018	2.8	20	1.4E-08	6.3
minimum of MDEL for Aq. Life vs HH	150	118	19	0.046	6.4	45	2.8E-08	13
Current limit in permit (30-day average)	14.2	14.2	3.5	0.087(interim)(1)	-----	-----	(2)	-----
Current limit in permit (daily)	19.5	19.5	8.2	1.0 (interim)	18 (interim)	18 (interim)	-----	7 (interim)
Final limit - AMEL	14	14	3.5	0.018	2.8	20	(3)	6.3
Final limit - MDEL	20	20	8.2	0.046	6.4	45	(3)	13
Max Effl Conc (MEC)	14.9	14.9	3.6	0.205	9.9	9.9	1.71E-08	1.1

**Notes:**

- (1) Order No. 01-068 included an interim mass emission limitation for mercury of 0.98 lb/month (0.45 kg/month).
- (2) Order No. 01-068 included an interim mass emission limitation for TCDD equivalent of 0.836 mg/month.
- (3) Because the Order establishes a compliance schedule that exceeds the term of the Order, final effluent limitations are not established.

RS-App. 7

Central Contra Costa Sanitary District  
Feasibility Analysis

CTR No.	Analyte	Number of Samples	Number of NDs	Percent ND	Lowest Criteria (ug/L)	MEC (ug/L)	Background Maximum Concentration (ug/L)	Reason	Best Fit Distribution	Sample Mean	Sample Standard Deviation	95 <sup>th</sup> / AMEL	99 <sup>th</sup> / MDEL	Mean / LTA	Feasible to Comply?	Previous Limit	Interim Limit (PBEL), if Necessary (3)
6	Copper	40	0	0%	7.2	15	2.45	MEC => C [14.9 ug/l vs 7.16 ug/l]	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)	(6)
7	Lead	37	14	38%	1.8	3.6	0.80	MEC => C [3.800 ug/l vs 1.767 ug/l]	Lognormal	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
8	Mercury	44	0	0%	0.025	0.205	0.0086	MEC => C [0.21 ug/l vs 0.03 ug/l]	Lognormal	-3.66	0.556	0.064 > 0.018	0.094 > 0.046	0.032 > 0.010	No	1.0-MDEL (interim) 0.087-AMEL (interim)	0.14
14	Cyanide	36	13	36%	1.0	9.9	<0.4	MEC => C [9.9 ug/l vs 1.0 ug/l]	Lognormal	0.897	0.693	7.7 > 2.8	12 > 6.4	3.0 > 1.6	No	18.0-MDEL (interim)	20
16-TEQ	Dioxin-TEQ	9	4	44%	1.40E-08	1.71E-08	7.10E-08	MEC => C [1.7E-08 ug/l vs 1.4E-08 ug/l]	(2)	(2)	(2)	(1)	(1)	(1)	No	(5)	(4)
18	Acrylonitrile	11	10	91%	0.66	1.1	0.03	MEC => C [1.100000 ug/l vs 0.660000 ug/l]	(2)	(2)	(2)	(1)	(1)	(1)	Yes (8)	7.0-MDEL (interim)	

Notes:  
Effluent data for this RPA is from May 2003 to April 2006. Background data for toxics is generated by the San Francisco Estuary Institute's Regional Monitoring Program (RMP). For this RPA, background data for toxics was from the Yerba Buena Island RMP station (BC10) from March 1993 to August 2003.

Qualified Data Handling - "J" or "DNQ" qualified data are used at the estimated value for determining MEC and for calculating mean and standard deviation. The mean and standard deviation are then used to calculate the coefficient of variation and 95th, 99th, and 99.87th percentile concentrations.

All values in ug/L.

When results for an analyte are found to be log-normally distributed, the sample mean and standard deviation are expressed using transformed (natural log conversion) data. The 95th, 99th, and PBEL values have been converted back into real concentrations.

ND= Not detected in background data

- (1) No comparison possible. Not enough data.
- (2) Not enough data to determine distribution or to calculate mean and standard deviation.
- (3) Based on the 99.87 percentile performance level (i.e., the 99.87 percentile of observed effluent concentrations)
- (4) Because there is insufficient data to calculate a performance based interim limit, a compliance schedule will be established and the final limit will become effective 10 years following adoption of the Order.
- (5) No previous effluent limit for this analyte.
- (6) Because final effluent limitations for copper from Order No. 01-068 are being retained, a feasibility-to-comply analysis is not appropriate.
- (7) Because final effluent limitations for lead from Order No. 01-068 are being retained, a feasibility-to-comply analysis is not appropriate.
- (8) It is feasible to comply with the effluent limitations for acrylonitrile because the MEC is less than the new AMEL and the new MDEL, and the new AMEL and MDEL are less stringent than the interim limit the Discharger has been subject to during the term of the previous Order.

<u>PermitTitle</u>	<u>Description</u>	<u>Pollutant</u>	<u>Date</u>	<u>GTLT</u>	<u>Value</u>	<u>Unit</u>
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	1/9/2002		0.016	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	2/10/2002		0.011	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	3/6/2002	n	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	4/11/2002	n	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	5/2/2002	n	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	6/3/2002	n	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	7/1/2002	n	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	8/7/2002	nd	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	9/4/2002	nd	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	10/2/2002	nd	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	11/5/2002	nd	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	12/3/2002	nd	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	1/7/2003	nd	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	3/4/2003	nd	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	4/1/2003	nd	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	5/6/2003	nd	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	6/2/2003	nd	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	7/1/2003	nd	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	9/9/2003	nd	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	10/6/2003	nd	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	11/3/2003	nd	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	12/1/2003	nd	0.005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	1/5/2004		0.003	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	2/4/2004		0.003	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	3/3/2004		0.002	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	4/14/2004		0.003	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	5/3/2004		0.001	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	6/1/2004		0.002	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	7/6/2004		0.003	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	8/12/2004		0.003	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	9/1/2004		0.004	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	10/7/2004		0.003	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	11/3/2004		0.003	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	12/1/2004		0.002	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	1/10/2005		0.003	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	2/1/2005		0.004	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	3/1/2005	nd	0.0005	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	4/5/2005		0.002	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	5/3/2005		0.002	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	6/1/2005		0.002	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	7/5/2005		0.003	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	8/1/2005		0.002	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	9/6/2005		0.004	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	10/3/2005		0.002	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	11/1/2005		0.003	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	12/1/2005		0.002	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	1/4/2006		0.002	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	2/20/2006		0.006	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	3/2/2006		0.002	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	4/4/2006		0.001	ug/l
Central Contra Costa	E-001 Eff Daily Maximum	TRIBUTYLTIN	5/1/2006		0.002	ug/l



Permit Title	Description	Pollutant	Date	GT/LT	Value (pg/L)	Value (ug/L)	ML (ug/L)	MDL (pg/L)	MDL (ug/L)	RDL	CTR	Comment
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,4,6,7,8-HpCDD	2/10/2002	ND	4.42	4.42E-06	0.00000442	2.37	0.00000237		16f	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,4,6,7,8-HpCDF	2/10/2002	ND	2.27	2.27E-06	0.00000227	2.57	0.00000257		16o	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,4,7,8,9-HpCDF	2/10/2002	ND	3.05	3.05E-06	0.00000305	2.38	0.00000238		16p	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,4,7,8-HxCDD	2/10/2002	ND	3.22	3.22E-06	0.00000322	2.01	0.00000201		16c	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,4,7,8-HxCDF	2/10/2002	ND	1.14	1.14E-06	0.00000114	2.06	0.00000206		16k	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,6,7,8-HxCDD	2/10/2002	ND	3.44	3.44E-06	0.00000344	1.75	0.00000175		16d	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,6,7,8-HxCDF	2/10/2002	ND	1.18	1.18E-06	0.00000118	2.57	0.00000257		16l	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,7,8,9-HxCDD	2/10/2002	ND	3.19	3.19E-06	0.00000319	3.95	0.00000395		16e	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,7,8,9-HxCDF	2/10/2002	ND	1.69	1.69E-06	0.00000169	2.04	0.00000204		16n	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,7,8-PeCDD	2/10/2002	ND	4	4.00E-06	0.000004	1.39	0.00000139		16b	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,7,8-PeCDF	2/10/2002	ND	2.74	2.74E-06	0.00000274	3.06	0.00000306		16i	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	2,3,4,6,7,8-HxCDF	2/10/2002	ND	1.21	1.21E-06	0.00000121	2.48	0.00000248		16m	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	2,3,4,7,8-PeCDF	2/10/2002	ND	2.12	2.12E-06	0.00000212	1.84	0.00000184		16j	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	2,3,7,8-TCDD	2/10/2002	ND	1.4	1.40E-06	0.0000014	0.847	0.000000847		16a	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	2,3,7,8-TCDF	2/10/2002	ND	1.18	1.18E-06	0.00000118	0.478	0.000000478		16h	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	OCDD	2/10/2002	ND	9.67	9.67E-06	0.00000967	9.67	0.00000967		16g	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	OCDF	2/10/2002	ND	6	6.00E-06	0.000006	4.26	0.00000426		16q	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,4,6,7,8-HpCDD	8/7/2002	ND	5.820	5.82E-06	0.00000582				16f	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,4,6,7,8-HpCDF	8/7/2002	ND	4.020	4.02E-06	0.00000402				16o	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,4,7,8,9-HpCDF	8/7/2002	ND	4.650	4.65E-06	0.00000465				16p	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,4,7,8-HxCDD	8/7/2002	ND	6.740	6.74E-06	0.00000674				16c	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,4,7,8-HxCDF	8/7/2002	ND	1.600	1.60E-06	0.0000016				16k	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,6,7,8-HxCDD	8/7/2002	ND	7.520	7.52E-06	0.00000752				16d	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,6,7,8-HxCDF	8/7/2002	ND	2.070	2.07E-06	0.00000207				16l	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,7,8,9-HxCDD	8/7/2002	ND	6.690	6.69E-06	0.00000669				16e	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,7,8,9-HxCDF	8/7/2002	ND	3.020	3.02E-06	0.00000302				16n	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,7,8-PeCDF	8/7/2002	ND	3.940	3.94E-06	0.00000394				16b	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,7,8-PeCDD	8/7/2002	ND	4.410	4.41E-06	0.00000441				16i	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	2,3,4,6,7,8-HxCDF	8/7/2002	ND	2.000	2.00E-06	0.000002				16m	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	2,3,4,7,8-PeCDF	8/7/2002	ND	456.000	4.56E-04	0.000456				16j	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	2,3,7,8-TCDD	8/7/2002	ND	2.830	2.83E-06	0.00000283				16a	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	2,3,7,8-TCDF	8/7/2002	ND	2.590	2.59E-06	0.00000259				16h	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	OCDD	8/7/2002	ND	7.570	7.57E-06	0.00000757				16g	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	OCDF	8/7/2002	ND	5.160	5.16E-06	0.00000516				16q	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,4,6,7,8-HpCDD	2/27/2003	ND	2.420	2.42E-06	0.00000242				16f	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,4,6,7,8-HpCDF	2/27/2003	ND	0.825	8.25E-07	0.000000825				16o	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,4,7,8,9-HpCDF	2/27/2003	ND	1.710	1.71E-06	0.00000171				16p	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,4,7,8-HxCDD	2/27/2003	ND	3.070	3.07E-06	0.00000307				16c	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,4,7,8-HxCDF	2/27/2003	ND	1.190	1.19E-06	0.00000119				16k	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,6,7,8-HxCDD	2/27/2003	ND	3.010	3.01E-06	0.00000301				16d	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,6,7,8-HxCDF	2/27/2003	ND	1.540	1.54E-06	0.00000154				16l	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,7,8,9-HxCDD	2/27/2003	ND	2.840	2.84E-06	0.00000284				16e	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,7,8,9-HxCDF	2/27/2003	ND	1.590	1.59E-06	0.00000159				16n	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,7,8-PeCDD	2/27/2003	ND	3.530	3.53E-06	0.00000353				16b	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	1,2,3,7,8-PeCDF	2/27/2003	ND	2.040	2.04E-06	0.00000204				16i	
Central Contra Costa	E-001 (13267 Study) EPA 1613 Eff/Daily Maximum	2,3,4,6,7,8-HxCDF	2/27/2003	ND	1.480	1.48E-06	0.00000148				16m	

Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,4,7,8-PeCDF	2/27/2003	ND	1.720	1.72E-06	0.00000172			16j
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,4,7,8-TCDD	2/27/2003	ND	1.000	1.00E-06	0.000001			16a
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,7,8-TCDF	2/27/2003	ND	1.190	1.19E-06	0.00000119			16h
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	OCDD	2/27/2003	ND	6.610	6.61E-06	0.00000661			16g
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	OCDF	2/27/2003	ND	3.670	3.67E-06	0.00000367			16q
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,6,7,8-HpCDD	8/18/2003	ND	3.05	3.05E-06	0.00000305	3	0.000003	16f
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,6,7,8-HpCDF	8/18/2003	ND	0.772	7.72E-07	0.000000772	3.57	0.00000357	16o
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,7,8,9-HpCDF	8/18/2003	ND	0.745	7.45E-07	0.000000745	3.13	0.00000313	16p
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,7,8-HxCDD	8/18/2003	ND	1.69	1.69E-06	0.00000169	1.75	0.00000175	16c
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,7,8-HxCDF	8/18/2003	ND	0.383	3.83E-07	0.000000383	2.38	0.00000238	16k
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,6,7,8-HxCDD	8/18/2003	ND	1.7	1.70E-06	0.0000017	1.87	0.00000187	16d
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,6,7,8-HxCDF	8/18/2003	ND	0.403	4.03E-07	0.000000403	2.44	0.00000244	16l
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,7,8,9-HxCDD	8/18/2003	ND	1.64	1.64E-06	0.00000164	2.71	0.00000271	16e
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,7,8,9-HxCDF	8/18/2003	ND	0.613	6.13E-07	0.000000613	2.3	0.0000023	16n
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,7,8-PeCDF	8/18/2003	ND	1.55	1.55E-06	0.00000155	2.8	0.0000028	16b
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,7,8-PeCDD	8/18/2003	ND	1	1.00E-06	0.000001	2.25	0.00000225	16i
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,4,6,7,8-HxCDF	8/18/2003	ND	0.469	4.69E-07	0.000000469	3.1	0.0000031	16m
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,4,7,8-PeCDF	8/18/2003	ND	0.915	9.15E-07	0.000000915	2.38	0.00000238	16j
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,7,8-TCDD	8/18/2003	ND	0.814	8.14E-07	0.000000814	0.637	0.000000637	16a
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,7,8-TCDF	8/18/2003	ND	0.824	8.24E-07	0.000000824	1	0.000001	16h
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	OCDD	8/18/2003	ND	10.400	1.04E-05	0.00000696	6.96	0.00000696	16g
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	OCDF	8/18/2003	ND	6.170	6.17E-06	0.00000617	6.17	0.00000617	16q
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	TCDD-TEQ	8/18/2003	ND	0.001	1.04E-09	0.00000001			16-TEQ
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,6,7,8-HpCDD	2/4/2004	ND	2.370	2.37E-06	0.00000237	3.05	0.00000305	16f
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,6,7,8-HpCDF	2/4/2004	ND	3.57	3.57E-06	0.00000357	3.57	0.00000357	16o
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,7,8,9-HpCDF	2/4/2004	ND	1.62	1.62E-06	0.00000162	3.13	0.00000313	16p
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,7,8-HxCDD	2/4/2004	ND	2.010	2.01E-06	0.00000201	1.75	0.00000175	16c
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,7,8-HxCDF	2/4/2004	ND	1.04	1.04E-06	0.00000104	2.38	0.00000238	16k
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,6,7,8-HxCDD	2/4/2004	ND	1.750	1.75E-06	0.00000175	1.87	0.00000187	16d
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,6,7,8-HxCDF	2/4/2004	ND	0.957	9.57E-07	0.000000957	2.44	0.00000244	16l
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,7,8,9-HxCDD	2/4/2004	ND	3.950	3.95E-06	0.00000395	2.71	0.00000271	16e
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,7,8,9-HxCDF	2/4/2004	ND	1.57	1.57E-06	0.00000157	2.31	0.00000231	16m
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,7,8-PeCDF	2/4/2004	ND	1.390	1.39E-06	0.00000139	2.81	0.00000281	16b
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,7,8-PeCDD	2/4/2004	ND	3.09	3.09E-06	0.00000309	2.25	0.00000225	16i
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,4,6,7,8-HpCDF	2/4/2004	ND	1.11	1.11E-06	0.00000111	3.06	0.00000306	16n
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,4,7,8-PeCDF	2/4/2004	ND	2.72	2.72E-06	0.00000272	2.38	0.00000238	16j
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,7,8-TCDD	2/4/2004	ND	0.847	8.47E-07	0.000000847	0.637	0.000000637	16a
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,7,8-TCDF	2/4/2004	ND	2.56	2.56E-06	0.00000256	1.03	0.00000103	16h
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	OCDD	2/4/2004	ND	16.800	1.68E-05	0.00000696	6.96	0.00000696	16g
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	OCDF	2/4/2004	A	3.670	3.67E-06	0.00000367	6.17	6.17E-06	16q
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	TCDD-TEQ	2/4/2004	ND	0.002	2.05E-09	0.00000002			16-TEQ
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,6,7,8-HpCDD	9/1/2004	ND	1.620	1.62E-06	0.00000162	0.826	0.000000826	16f
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,6,7,8-HpCDF	9/1/2004	ND	1.210	1.21E-06	0.00000121	1.21	0.00000121	16o
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,7,8,9-HpCDF	9/1/2004	ND	1.520	1.52E-06	0.00000152	1.52	0.00000152	16p
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,7,8-HxCDD	9/1/2004	ND	0.727	7.27E-07	0.000000727	0.727	0.000000727	16c
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,7,8-HxCDF	9/1/2004	ND	0.930	9.30E-07	0.00000093	0.932	0.000000932	16k
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,6,7,8-HxCDD	9/1/2004	ND	0.729	7.29E-07	0.000000729	0.729	0.000000729	16d

Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,6,7,8-HxCDF	9/1/2004	ND	0.937	9.37E-07	0.000000937	0.937	0.000000937	161
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,7,8,9-HxCDD	9/1/2004	ND	2.220	2.22E-06	0.00000222	2.22	0.00000222	16c
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,7,8,9-HxCDF	9/1/2004	ND	1.650	1.65E-06	0.00000165	1.65	0.00000165	16n
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,7,8-PeCDF	9/1/2004	ND	1.120	1.12E-06	0.00000112	1.12	0.00000112	16b
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,7,8-PeCDD	9/1/2004	ND	1.260	1.26E-06	0.00000126	1.26	0.00000126	16i
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,4,6,7,8-HxCDF	9/1/2004	ND	0.932	9.32E-07	0.000000932	0.932	0.000000932	16m
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,4,7,8-PeCDF	9/1/2004	ND	0.707	7.07E-07	0.000000707	0.707	0.000000707	16j
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,7,8-TCDF	9/1/2004	ND	0.700	7.00E-07	0.000000700	0.699	0.000000699	16a
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,7,8-TCDD	9/1/2004	ND	0.486	4.86E-07	0.000000486	0.486	0.000000486	16h
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	OCDD	9/1/2004	ND	8.700	8.70E-06	0.000000870	2.43	0.00000243	16g
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	OCDF	9/1/2004	ND	1.780	1.78E-06	0.00000178	1.78	0.00000178	16q
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	TCDD-TEQ	9/1/2004	0.017	1.70E-08					16-TEQ
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,6,7,8-HpCDD	2/1/2005	ND	2.450	2.45E-06	0.00000245			16f
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,6,7,8-HpCDF	2/1/2005	ND	1.100	1.10E-06	0.00000110			16o
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,7,8,9-HpCDD	2/1/2005	ND	1.340	1.34E-06	0.00000134			16p
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,7,8,9-HpCDF	2/1/2005	ND	3.150	3.15E-06	0.00000315			16c
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,7,8-HxCDF	2/1/2005	ND	0.946	9.46E-07	0.000000946			16k
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,6,7,8-HxCDD	2/1/2005	ND	3.000	3.00E-06	0.00000300			16d
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,6,7,8-HxCDF	2/1/2005	ND	1.320	1.32E-06	0.00000132			16l
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,7,8-HxCDF	2/1/2005	ND	3.060	3.06E-06	0.00000306			16e
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,7,8,9-HxCDD	2/1/2005	ND	1.970	1.97E-06	0.00000197			16n
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,7,8,9-HpCDD	2/1/2005	ND	1.400	1.40E-06	0.00000140			16b
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,7,8-PeCDF	2/1/2005	ND	2.350	2.35E-06	0.00000235			16i
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,6,7,8-HxCDF	2/1/2005	ND	1.150	1.15E-06	0.00000115			16m
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,4,7,8-PeCDD	2/1/2005	ND	2.210	2.21E-06	0.00000221			16j
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,7,8-TCDD	2/1/2005	ND	1.910	1.91E-06	0.00000191			16a
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,7,8-TCDF	2/1/2005	ND	2.260	2.26E-06	0.00000226			16h
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	OCDD	2/1/2005	J	5.150	5.15E-06				16g
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	OCDF	2/1/2005	ND	4.500	4.50E-06	0.00000450			16q
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	TCDD-TEQ	2/1/2005	0.000	0.00E+00					16-TEQ
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,6,7,8-HpCDD	8/1/2005	ND	0.826	8.26E-07	0.000000826	0.826	0.000000826	16f
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,6,7,8-HpCDF	8/1/2005	ND	1.210	1.21E-06	0.00000121	1.21	0.00000121	16o
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,7,8,9-HpCDD	8/1/2005	ND	1.520	1.52E-06	0.00000152	1.52	0.00000152	16p
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,7,8-HxCDD	8/1/2005	ND	0.727	7.27E-07	0.000000727	0.727	0.000000727	16c
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,4,7,8-HxCDF	8/1/2005	ND	0.932	9.32E-07	0.000000932	0.932	0.000000932	16k
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,6,7,8-HxCDD	8/1/2005	ND	0.729	7.29E-07	0.000000729	0.729	0.000000729	16d
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,6,7,8-HxCDF	8/1/2005	ND	0.937	9.37E-07	0.000000937	0.937	0.000000937	16l
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,7,8,9-HpCDD	8/1/2005	ND	2.220	2.22E-06	0.00000222	2.22	0.00000222	16e
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,7,8,9-HpCDF	8/1/2005	ND	1.650	1.65E-06	0.00000165	1.65	0.00000165	16n
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,7,8-PeCDD	8/1/2005	ND	1.120	1.12E-06	0.00000112	1.12	0.00000112	16b
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	1,2,3,7,8-PeCDF	8/1/2005	ND	1.260	1.26E-06	0.00000126	1.26	0.00000126	16i
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,4,6,7,8-HxCDF	8/1/2005	ND	0.932	9.32E-07	0.000000932	0.932	0.000000932	16m
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,4,7,8-PeCDD	8/1/2005	ND	0.707	7.07E-07	0.000000707	0.707	0.000000707	16j
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,7,8-TCDD	8/1/2005	ND	0.690	6.90E-07	0.000000690	0.69	0.000000690	16a
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	2,3,7,8-TCDF	8/1/2005	ND	0.486	4.86E-07	0.000000486	0.486	0.000000486	16h
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	OCDD	8/1/2005	J	3.550	3.55E-06		2.43	0.00000243	16g
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	OCDF	8/1/2005	ND	1.780	1.78E-06	0.00000178	1.87	0.00000187	16q
Central Contra Costa	E-001 (13267 Study) EPA 1613 EffDaily Maximum	TCDD-TEQ	8/1/2005	0.000	0.00E+00					16-TEQ



PermitTitle	Description	Pollutant	Date	GTLT	Value	Unit	Salinity	Unit
Central Contra Costa	Receiving Water RW2 Instant --	Hardness	5/24/2005		45	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW5 Instant --	Hardness	5/24/2005		46	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW1 Instant --	Hardness	5/24/2005		44	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW4 Instant --	Hardness	5/24/2005		45	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW3 Instant --	Hardness	5/24/2005		45	mg/l	0.1	ppt
Central Contra Costa	Receiving Water CR1 Instant --	Hardness	5/24/2005		45	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW1 Instant --	Hardness	6/20/2005		210	mg/l	1	ppt
Central Contra Costa	Receiving Water RW4 Instant --	Hardness	6/20/2005		220	mg/l	1	ppt
Central Contra Costa	Receiving Water RW3 Instant --	Hardness	6/20/2005		210	mg/l	1	ppt
Central Contra Costa	Receiving Water RW5 Instant --	Hardness	6/20/2005		190	mg/l	1	ppt
Central Contra Costa	Receiving Water CR1 Instant --	Hardness	1/17/2006		56	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW1 Instant --	Hardness	1/17/2006		68	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW4 Instant --	Hardness	1/17/2006		52	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW2 Instant --	Hardness	1/17/2006		52	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW3 Instant --	Hardness	1/17/2006		56	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW5 Instant --	Hardness	1/17/2006		56	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW1 Instant --	Hardness	2/14/2006		68	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW4 Instant --	Hardness	2/14/2006		64	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW5 Instant --	Hardness	2/14/2006		72	mg/l	0.1	ppt
Central Contra Costa	Receiving Water CR1 Instant --	Hardness	2/14/2006		72	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW2 Instant --	Hardness	2/14/2006		64	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW3 Instant --	Hardness	2/14/2006		72	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW1 Instant --	Hardness	3/14/2006		52	mg/l	0.1	ppt
Central Contra Costa	Receiving Water CR1 Instant --	Hardness	3/14/2006		52	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW5 Instant --	Hardness	3/14/2006		52	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW3 Instant --	Hardness	3/14/2006		52	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW2 Instant --	Hardness	3/14/2006		52	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW4 Instant --	Hardness	3/14/2006		48	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW1 Instant --	Hardness	4/13/2006		50	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW4 Instant --	Hardness	4/13/2006		55	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW5 Instant --	Hardness	4/13/2006		85	mg/l	0.1	ppt
Central Contra Costa	Receiving Water CR1 Instant --	Hardness	4/13/2006		105	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW2 Instant --	Hardness	4/13/2006		50	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW3 Instant --	Hardness	4/13/2006		55	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW4 Instant --	Hardness	5/10/2006		44	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW2 Instant --	Hardness	5/10/2006		52	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW3 Instant --	Hardness	5/10/2006		48	mg/l	0.1	ppt
Central Contra Costa	Receiving Water CR1 Instant --	Hardness	5/10/2006		48	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW5 Instant --	Hardness	5/10/2006		48	mg/l	0.1	ppt
Central Contra Costa	Receiving Water RW1 Instant --	Hardness	5/10/2006		48	mg/l	0.1	ppt
Hardness Geomean					62.68149556			

LOG

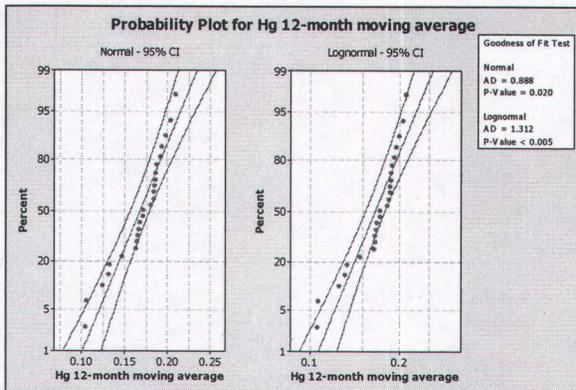
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44	1.6434527
45	1.6532125
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210	2.3222193
190	2.2787536
56	1.748188
68	1.8325089
52	1.7160033
52	1.7160033
56	1.748188
56	1.748188
68	1.8325089
64	1.80618
72	1.8573325
72	1.8573325
64	1.80618
72	1.8573325
52	1.7160033
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52	1.7160033
52	1.7160033
52	1.7160033
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50	1.69897
55	1.7403627
85	1.9294189
105	2.0211893
50	1.69897
55	1.7403627
44	1.6434527
52	1.7160033
48	1.6812412
48	1.6812412
48	1.6812412
48	1.6812412
Mean	1.7971
SD	0.1937
SE	0.0306
A	1.7897
Antilog of A	61.6

Mercury Mass Limit Calculation

Date	Flow (MGD)	Hg (ug/L)	Monthly mass loading (kg/mo)	12-month MA (kg/mo)	ln(MA)
5/7/2003	48.2	0.023	0.1276		
6/3/2003	42.8	0.0336	0.1655		
7/2/2003	40.7	0.03	0.1405		
8/18/2003	42.2	0.029	0.1409		
9/9/2003	40.5	0.0312	0.1454		
10/7/2003	42.1	0.032	0.1551		
11/4/2003	48.1	0.018	0.0997		
12/2/2003	41.3	0.013	0.0618		
1/7/2004	50.3	0.02	0.1158		
2/5/2004	47.1	0.041	0.2223		
3/4/2004	51.5	0.027	0.1600		
4/15/2004	38.9	0.013	0.0582	0.1327	-2.0194
5/4/2004	44.2	0.205	1.0429	0.2090	-1.5654
6/2/2004	42.1	0.022	0.1066	0.2041	-1.5891
7/7/2004	38.8	0.016	0.0715	0.1983	-1.6178
8/13/2004	39.7	0.017	0.0777	0.1931	-1.6447
9/2/2004	38.9	0.028	0.1254	0.1914	-1.6534
10/8/2004	40.5	0.016	0.0746	0.1847	-1.6890
11/4/2004	41.6	0.019	0.0910	0.1840	-1.6930
12/2/2004	38.6	0.02	0.0889	0.1862	-1.6808
1/11/2005	75.8	0.015	0.1309	0.1875	-1.6740
2/2/2005	44.4	0.036	0.1840	0.1843	-1.6912
3/2/2005	61	0.016	0.1123	0.1803	-1.7130
4/6/2005	50.3	0.022	0.1274	0.1861	-1.6816
5/4/2005	44.6	0.016	0.0821	0.1080	-2.2441
6/2/2005	39.8	0.021	0.0962	0.1052	-2.2524
7/6/2005	36.4	0.074	0.3100	0.1250	-2.0792
8/2/2005	38.3	0.034	0.1499	0.1310	-2.0322
9/2/2005	36.4	0.076	0.3184	0.1471	-1.9164
10/4/2005	41.2	0.056	0.2656	0.1631	-1.8137
11/2/2005	37.9	0.032	0.1396	0.1671	-1.7891
12/2/2005	48.8	0.024	0.1348	0.1709	-1.7665
1/5/2006	73.6	0.015	0.1271	0.1706	-1.7683
2/7/2006	48.5	0.02	0.1116	0.1646	-1.8043
3/3/2006	62	0.018	0.1285	0.1659	-1.7962
4/5/2006	81.2	0.012	0.1122	0.1647	-1.8039

	Normal distribution	Lognormal distribution
Average	0.168	-1.799
Stdev	0.029	0.190
99.87th % (Mass Limit)	0.25	0.29

Normal distribution is used to calculate the mass limit.



1/9/2002	0.018
2/15/2002	0.032
3/14/2002	0.046
4/11/2002	0.019
5/9/2002	0.016
6/6/2002	0.0069
7/18/2002	0.03
8/6/2002	0.021
9/13/2002	0.0068
10/10/2002	0.0034
11/7/2002	0.0031
12/10/2002	0.0077
1/7/2003	0.013
2/13/2003	0.0068
3/13/2003	0.008
4/10/2003	0.0077
5/8/2003	0.01
6/6/2003	0.008
7/2/2003	0.0071
7/31/2003	0.013
8/28/2003	0.0046
9/11/2003	0.017
10/9/2003	0.0063
11/6/2003	0.005
12/4/2003	0.0073
1/15/2004	0.011
2/12/2004	0.02
3/11/2004	0.045
4/22/2004	0.022
5/7/2004	0.082
6/4/2004	0.061
7/16/2004	0.026

## **ATTACHMENT G – REGIONAL WATER BOARD ATTACHMENTS**

The following documents are part of this Order but are not physically attached due to volume. They are available on the Internet at:  
<http://www.waterboards.ca.gov/sanfranciscobay/Download.htm>.

- Self-Monitoring Program, Part A (August 1993)
- Standard Provisions and Reporting Requirements, August 1993
- Regional Water Board Resolution No. 74-10
- August 6, 2001 Regional Water Board staff letter, "Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy"

## ATTACHMENT H – PRETREATMENT REQUIREMENTS

### Pretreatment Program Provisions

1. The Discharger shall implement all pretreatment requirements contained in 40 CFR §403, as amended. The Discharger shall be subject to enforcement actions, penalties, and fines as provided in the Clean Water Act (33 USC 1351 *et seq.*), as amended. The Discharger shall implement and enforce its Approved Pretreatment Program or modified Pretreatment Program as directed by the Regional Water Board's Executive Officer or the EPA. The EPA and/or the State may initiate enforcement action against an industrial user for noncompliance with applicable standards and requirements as provided in the Clean Water Act.
2. The Discharger shall enforce the requirements promulgated under Sections 307(b), 307(c), 307(d) and 402(b) of the Clean Water Act. The Discharger shall cause industrial 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 industrial user, upon commencement of the discharge.
3. The Discharger shall perform the pretreatment functions as required in 40 CFR §403 and amendments or modifications thereto including, but not limited to:
4. Implement the necessary legal authorities to fully implement the pretreatment regulations as provided in 40 CFR §403.8(f)(1);
  - a. Implement the programmatic functions as provided in 40 CFR §403.8(f)(2);
  - b. Publish an annual list of industrial users in significant noncompliance as provided per 40 CFR §403.8(f)(2)(vii);
  - c. Provide for the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR §403.8(f)(3); and
  - d. Enforce the national pretreatment standards for prohibited discharges and categorical standards as provided in 40 CFR §§403.5 and 403.6, respectively.
5. The Discharger shall submit annually a report to the EPA Region 9, the State Water Board and the Regional Water Board describing its pretreatment program activities over the previous twelve months. 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 A entitled, "Requirements for Pretreatment Annual Reports," which is made a part of this Order. The annual report is due on the last day of February each year.
6. The Discharger shall submit semiannual pretreatment reports to the EPA 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, the information specified in Appendix B entitled, "Requirements for Semiannual Pretreatment Reports,"

which is made part of this Order. The semiannual reports are due July 31<sup>st</sup> (for the period January through June) and January 31<sup>st</sup> (for the period July through December) of each year. The Executive Officer may exempt a Discharger from the semiannual reporting requirements on a case by case basis subject to State Water Board and EPA's comment and approval.

7. The Discharger may combine the annual pretreatment report with the semiannual pretreatment report (for the July through December reporting period). The combined report shall contain all of the information requested in Appendices A and B and will be due on January 31<sup>st</sup> of each year.
8. The Discharger shall conduct the monitoring of its treatment plant's influent, effluent, and sludge as described in Appendix C entitled, "Requirements for Influent, Effluent and Sludge Monitoring," which is made part of this Order. The results of the sampling and analysis, along with a discussion of any trends, shall be submitted in the semiannual reports. A tabulation of the data shall be included in the annual pretreatment report. The Executive Officer may require more or less frequent monitoring on a case by case basis.

## **APPENDIX A REQUIREMENTS FOR PRETREATMENT ANNUAL REPORTS**

The Pretreatment Annual Report is due each year on the last day of February. [If the annual report is combined with the semiannual report (for the July through December period) the submittal deadline is January 31<sup>st</sup> of each year.] The purpose of the Annual Report is 1) to describe the status of the Publicly Owned Treatment Works (POTW) pretreatment program and 2) to 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, but is not limited to, the following information:

### **1. Cover Sheet**

The cover sheet must contain the name(s) and National Pollutant Discharge Elimination Discharge System (NPDES) permit number(s) of those POTWs that are part of the Pretreatment Program. Additionally, the cover sheet must include the name, address and telephone number of a pretreatment contact person; the period covered in the report; a statement of truthfulness; and the dated signature of a principal executive officer, ranking elected official, or other duly authorized employee who is responsible for overall operation of the POTW (40 CFR §403.12(j)).

### **2. Introduction**

The Introduction shall include any pertinent background information related to the Discharger, the POTW and/or the industrial user base of the area. Also, this section shall include an update on the status of any Pretreatment Compliance Inspection (PCI) tasks, Pretreatment Performance Evaluation tasks, Pretreatment Compliance Audit (PCA) tasks, Cleanup and Abatement Order (CAO) tasks, or other pretreatment-related enforcement actions required by the Regional Water Board or the EPA. A more specific discussion shall be included in the section entitled, "Program Changes."

### **3. Definitions**

This section shall contain a list of key terms and their definitions that the Discharger uses to describe or characterize elements of its pretreatment program.

### **4. Discussion of Upset, Interference and Pass Through**

This section shall include a discussion of Upset, Interference or Pass Through incidents, if any, at the POTW(s) that the Discharger knows of or suspects were caused by industrial discharges. Each incident shall be described, at a minimum, consisting of the following information:

- a. a description of what occurred;
- b. a description of what was done to identify the source;
- c. the name and address of the industrial user (IU) responsible

- d. the reason(s) why the incident occurred;
- e. a description of the corrective actions taken; and
- f. 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.

## **5. Influent, Effluent and Sludge Monitoring Results**

This section shall provide a summary of the analytical results from the "Influent, Effluent and Sludge Monitoring" as specified in Appendix C. The results should be reported in a summary matrix that lists monthly influent and effluent metal results for the reporting year.

A graphical representation of the influent and effluent metal monitoring data for the past five years shall also be provided with a discussion of any trends.

## **6. Inspection and Sampling Program**

This section shall contain at a minimum, but is not limited to, the following information:

- a. Inspections: the number of inspections performed for each type of IU; the criteria for determining the frequency of inspections; the inspection format procedures;
- b. Sampling Events: the number of sampling events performed for each type of IU; the criteria for determining the frequency of sampling; the chain of custody procedures.

## **7. Enforcement Procedures**

This section shall provide information as to when the approved Enforcement Response Plan (ERP) had been formally adopted or last revised. In addition, the date the finalized ERP was submitted to the Regional Water Board shall also be given.

## **8. Federal Categories**

This section shall contain a list of all of the federal categories that apply to the Discharger. The specific category shall be listed including the subpart and 40 CFR section that applies. The maximum and average limits for the each category shall be provided. This list shall indicate the number of Categorical Industrial Users (CIUs) per category and the CIUs that are being regulated pursuant to the category. The information and data used to determine the limits for those CIUs for which a combined waste stream formula is applied shall also be provided.

## **9. Local Standards**

This section shall include a table presenting the local limits.

## 10. Updated List of Regulated SIUs

This section shall contain a complete and updated list of the Discharger's Significant Industrial Users (SIUs), including their names, addresses, and a brief description of the individual SIU's type of business. The list shall include all deletions and additions keyed to the list as submitted in the previous annual report. All deletions shall be briefly explained.

## 11. Compliance Activities

**a. Inspection and Sampling Summary:** This section shall contain a summary of all the inspections and sampling activities conducted by the Discharger over the past year to gather information and data regarding the SIUs. The summary shall include:

- (1) the number of inspections and sampling events conducted for each SIU;
- (2) the quarters in which these activities were conducted; and
- (3) the compliance status of each SIU, delineated by quarter, and characterized using all applicable descriptions as given below:
  - (a) in consistent compliance;
  - (b) in inconsistent compliance;
  - (c) in significant noncompliance;
  - (d) on a compliance schedule to achieve compliance, (include the date final compliance is required);
  - (e) not in compliance and not on a compliance schedule;
  - (f) compliance status unknown, and why not.

**b. Enforcement Summary:** This section shall contain a summary of the compliance and enforcement activities during the past year. The summary shall include the names of all the SIUs affected by the following actions:

- (1) 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. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.
- (2) 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. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.
- (3) 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. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.

- (4) 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. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.
- (5) Assessment of monetary penalties. Identify the amount of penalty in each case and reason for assessing the penalty.
- (6) Order to restrict/suspend discharge to the POTW.
- (7) Order to disconnect the discharge from entering the POTW.

## **12. Baseline Monitoring Report Update**

This section shall provide a list of CIUs that have been 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 all of the information specified in 40 CFR §403.12(b). For each of the new CIUs, the summary shall indicate when the BMR was due; when the CIU was notified by the POTW of this requirement; when the CIU submitted the report; and/or when the report is due.

## **13. 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, legal authority, local limits, monitoring/ inspection program and frequency, enforcement protocol, program's administrative structure, staffing level, resource requirements and funding mechanism. If the manager of the pretreatment program changes, a revised organizational chart shall be included. If any element(s) of the program is in the process of being modified, this intention shall also be indicated.

## **14. 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 amounts spent on personnel, equipment, chemical analyses and any other appropriate categories. A brief discussion of the source(s) of funding shall be provided.

## **15. Public Participation Summary**

This section shall include a copy of the public notice as required in 40 CFR §403.8(f)(2)(vii). If a notice was not published, the reason shall be stated.

## **16. Sludge Storage and Disposal Practice**

This section shall have a description of how the treated sludge is stored and ultimately disposed. The sludge storage area, if one is used, shall be described in detail. Its location,

a description of the containment features and the sludge handling procedures shall be included.

### **17. 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: the POTW name, NPDES Permit number, period covered by the report, the number of SIUs in significant noncompliance (SNC) that are on a pretreatment compliance schedule, the number of notices of violation and administrative orders issued against SIUs, the number of civil and criminal judicial actions against SIUs, the number of SIUs that have been published as a result of being in SNC, and the number of SIUs from which penalties have been collected.

### **18. Other Subjects**

Other information related to the Pretreatment Program that does not fit into one of the above categories should be included in this section.

Signed copies of the reports shall be submitted to the Regional Administrator at U.S. EPA, the State Water Board and the Regional Water Board at the following addresses:

Regional Administrator  
United States Environmental Protection Agency  
Region 9, Mail Code: WTR-7  
Clean Water Act Compliance Office  
Water Division  
75 Hawthorne Street  
San Francisco, CA 94105

Pretreatment Program Manager  
Regulatory Unit  
State Water Resources Control Board  
Division of Water Quality  
1001 I Street  
Sacramento, CA 95814

Pretreatment Coordinator  
NPDES Permits Division  
SF Bay Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

## **APPENDIX B REQUIREMENTS FOR SEMIANNUAL PRETREATMENT REPORTS**

The semiannual pretreatment reports are due on July 31<sup>st</sup> (for pretreatment program activities conducted from January through June) and January 31<sup>st</sup> (for pretreatment activities conducted from July through December) of each year, unless an exception has been granted by the Regional Water Board's Executive Officer. The semiannual reports shall contain, at a minimum, but is not limited to, the following information:

### **1. Influent, Effluent and Sludge Monitoring**

The influent, effluent and sludge monitoring results shall be included in the report. The analytical laboratory report shall also be included, with the QA/QC data validation provided upon request. A description of the sampling procedures and a discussion of the results shall be given. (Please see Appendix C for specific detailed requirements.) The contributing source(s) of the parameters that exceed NPDES limits shall be investigated and discussed. In addition, a brief discussion of the contributing source(s) of all organic compounds identified shall be provided.

The Discharger has the option to submit all monitoring results via an electronic reporting format approved by the Executive Officer. The procedures for submitting the data will be similar to the electronic submittal of the NPDES self-monitoring reports as outlined in the December 17, 1999 Regional Water Board letter, Official Implementation of Electronic Reporting System (ERS). The Discharger shall contact the Regional Water Board's ERS Project Manager for specific details in submitting the monitoring data.

If the monitoring results are submitted electronically, the analytical laboratory reports (along with the QA/QC data validation) should be kept at the discharger's facility.

### **2. 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. The compliance status for the previous reporting period shall also be included. Once the SIU has determined to be out of compliance, the SIU shall be included in the report 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:

- a. Indicate if the SIU is subject to Federal categorical standards; if so, specify the category including the subpart that applies.
- b. For SIUs subject to Federal Categorical Standards, indicate if the violation is of a categorical or local standard.
- c. Indicate the compliance status of the SIU for the two quarters of the reporting period.

- d. For violations/noncompliance occurring 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.

### **3. POTW'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, Pretreatment Compliance Inspection (PCI) Report or Pretreatment Performance Evaluation (PPE) Report. It shall contain a summary of the following information:

- a. Date of latest PCA, PCI or PPE and report.
- b. Date of the Discharger's response.
- c. List of unresolved issues.
- d. Plan and schedule for resolving the remaining issues.

The 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 Publicly Owned Treatment Works (POTW) (40 CFR §403.12(j)). Signed copies of the reports shall be submitted to the Regional Administrator at U.S. EPA, the State Water Resources Control Board and the Regional Water Board at the following addresses:

Regional Administrator  
United States Environmental Protection Agency  
Region 9, Mail Code: WTR-7  
Clean Water Act Compliance Office  
Water Division  
75 Hawthorne Street  
San Francisco, CA 94105

Pretreatment Program Manager  
Regulatory Unit  
State Water Resources Control Board  
Division of Water Quality  
1001 I Street  
Sacramento, CA 95814

Pretreatment Coordinator  
NPDES Permits Division  
SF Bay Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

## **APPENDIX C REQUIREMENTS FOR INFLUENT, EFFLUENT AND SLUDGE MONITORING**

The Discharger shall conduct influent, effluent and sludge sampling semi-annually.

The monitoring and reporting requirements of the POTW's Pretreatment Program are in addition to those specified the Monitoring and Reporting Program. Any subsequent modifications of the specified requirements shall be adhered to and shall not affect the requirements described in this Appendix unless written notice from the Regional Water Board is received. 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 Monitoring and Reporting Program and the Pretreatment Program. The Pretreatment Program monitoring reports shall be sent to the Pretreatment Program Coordinator.

### **1. Influent and Effluent Monitoring**

The Discharger shall monitor for the parameters using the required test methods listed in the Monitoring and Reporting Program. Any test method substitutions must have received prior written Regional Water Board approval. Influent and effluent sampling locations shall be the same as those sites specified in the Monitoring and Reporting Program.

The influent and effluent sampled should be taken during the same 24-hour period. All samples must be representative of daily operations. A grab sample shall be used for volatile organic compounds, cyanide and phenol. In addition, any samples for oil and grease, polychlorinated biphenyls, dioxins/furans, and polynuclear aromatic hydrocarbons shall be grab samples. For all other pollutants, 24-hour composite samples must be obtained through flow-proportioned composite sampling. 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 a commercially available method with reasonably achievable detections limits that has been approved by the USEPA or by the SFBRWQCB Executive Officer. .

The following standardized report format should be used for submittal of the influent and effluent monitoring report. A similar structured format may be used but will be subject to Regional Water Board approval. The monitoring reports shall be submitted with the Semiannual Reports.

- a. Sampling Procedures – This section shall include a brief discussion of the sample locations, collection times, how the sample was collected (i.e., direct collection using vials or bottles, or other types of collection using devices such as automatic samplers, buckets, or beakers), types of containers used, storage procedures and holding times. Include description of pre-chlorination and chlorination/dechlorination practices during the sampling periods.

- b. Method of Sampling Dechlorination – A brief description of the sample dechlorination method prior to analysis shall be provided.
- c. Sample Compositing – The manner in which samples are composited shall be described. If the compositing procedure is different from the test method specifications, a reason for the variation shall be provided.
- d. Data Validation – All quality assurance/quality control (QA/QC) methods to be used shall be discussed and summarized. These methods include, but are not limited to, spike samples, split samples, blanks and standards. Ways in which the QA/QC data will be used to qualify the analytical test results shall be identified. A certification statement shall be submitted with this discussion stating that the laboratory QA/QC validation data has been reviewed and has met the laboratory acceptance criteria. The QA/QC validation data shall be submitted to the Regional Water Board upon request.
- e. A tabulation of the test results shall be provided.
- f. Discussion of Results – The report shall include a complete discussion of the test results. 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.

## 2. Sludge Monitoring

Sludge should be sampled in the same 24-hour period during which the influent and effluent are sampled except as noted in (C) below. The same parameters required for influent and effluent analysis shall be included in the sludge analysis. The sludge analyzed shall be a composite sample of the sludge for final disposal consisting of:

- a. Sludge lagoons – 20 grab samples collected at representative equidistant intervals (grid pattern) and composited as a single grab, or
- b. Dried stockpile – 20 grab samples collected at various representative locations and depths and composited as a single grab, or
- c. Dewatered sludge- 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 U.S. EPA manual, POTW Sludge Sampling and Analysis Guidance Document, August 1989, containing detailed sampling protocols specific to sludge is recommended as a guidance for sampling procedures. The U.S. EPA manual Analytical Methods of the National Sewage Sludge Survey, September 1990, containing detailed analytical protocols specific to sludge, is recommended as a guidance for analytical methods.

In determining if the sludge is a hazardous waste, the Dischargers 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.

Sludge monitoring reports shall be submitted with the appropriate Semiannual Report. The following standardized report format should be used for submittal of the report. A similarly structured form may be used but will be subject to Regional Water Board approval.

- a. Sampling procedures – Include sample locations, collection procedures, types of containers used, storage/refrigeration methods, compositing techniques and holding times. Enclose a map of sample locations if sludge lagoons or stockpiled sludge is sampled.
- b. Data Validation – All quality assurance/quality control (QA/QC) methods to be used shall be discussed and summarized. These methods include, but are not limited to, spike samples, split samples, blanks and standards. Ways in which the QA/QC data will be used to qualify the analytical test results shall be identified. A certification statement shall be submitted with this discussion stating that the laboratory QA/QC validation data has been reviewed and has met the laboratory acceptance criteria. The QA/QC validation data shall be submitted to the Regional Water Board upon request.
- c. Test Results – Tabulate the test results and include the percent solids.
- d. Discussion of Results – The report shall include a complete discussion of test results. If the detected pollutant(s) is reasonably deemed to have an adverse effect on sludge 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 any influent, effluent or sludge monitoring data for non-priority pollutants that the permittee believes may be causing or contributing to Interference, Pass Through or adversely impacting sludge quality.