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

STAFF SUMMARY REPORT (Adrienne Miller)
MEETING DATE: January 30, 2008

ITEM: 12 A & B

SUBJECT: **Contra Costa County Sanitation District No. 5, Port Costa Wastewater Treatment Plant, Port Costa, Contra Costa County** – Reissuance of NPDES Permit (12A) and Hearing to Consider Cease and Desist Order for Discharge in Violation of Waste Discharge Requirements (12B)

CHRONOLOGY: January 2003—NPDES Permit Reissued

DISCUSSION: This item would reissue the NPDES permit that covers the wastewater discharge for the town of Port Costa. The Contra Costa County Sanitation District No. 5 (District) owns and operates a wastewater treatment plant that provides secondary-level treatment of domestic and commercial wastewater from the Port Costa community. Port Costa has a population of about 250 people and is located about four miles northwest of Martinez. This results in a discharge of about 20,000 gallons per day to Carquinez Strait via a deepwater outfall. The reissued permit would establish more stringent mercury effluent limits with which the District cannot immediately comply. To address potential mercury violations, an accompanying Cease and Desist Order (CDO) establishes tasks and time schedules to ensure compliance.

The District and the Bay Area Clean Water Agencies (BACWA) commented (Appendix C) on the Tentative Order and Tentative CDO. We responded to these comments (Appendix D) and made appropriate changes, which are reflected in the attached Revised Tentative Order and the Revised Tentative Cease and Desist Order (Appendices A and B).

The Tentative Order's inclusion of final effluent limits for mercury, and the required tasks in the accompanying CDO for achieving compliance with mercury limits, are the most significant issues that the District and BACWA raised. In our view, final limits for mercury, and a CDO requiring a sequence of actions to achieve compliance with these limits, are necessary to comply with existing regulations. We anticipate that both the District and BACWA will reiterate their concerns at the Board meeting.

RECOMMEND-ATION:	Adoption of the Revised Tentative Order and Revised Cease and Desist Order
File Number:	2119.1034 (AM)
Appendices:	A. Revised Tentative Order B. Revised Cease and Desist Order C. Written Comments D. Response to Comments

APPENDIX A

Revised Tentative Order

California Regional Water Quality Control Board
San Francisco Bay Region

Linda S. Adams
Secretary for
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Arnold Schwarzenegger
Governor

REVISED TENTATIVE ORDER NO. R2-2008-XXXX
NPDES NO. CA0037885

WASTE DISCHARGE REQUIREMENTS FOR
CONTRA COSTA COUNTY SANITATION DISTRICT NO. 5
PORT COSTA, CONTRA COSTA COUNTY

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

Table 1. Discharger Information

Discharger	Contra Costa County Sanitation District No. 5
Name of Facility	Port Costa Wastewater Treatment Plant
Facility Address	End of Canyon Lake Drive
	Port Costa, CA 94569
	Contra Costa County

The discharge by Contra Costa County Sanitation District No. 5 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	Secondary treated POTW Effluent	38º, 02', 55" N	122º, 10', 56" W	Carquinez Strait

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**<Adoption Date>**
This Order shall become effective on:	**April 1, 2008**
This Order shall expire on:	**March 31, 2013**
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor 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.	

I, Bruce H. Wolfe, Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on **<Adoption Date>**.

_____

Bruce H. Wolfe, Executive Officer

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due to volume. They are available on the internet site at 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

I. FACILITY INFORMATION

The following Discharger is as authorized to discharge in accordance with the conditions set forth in this Order:

Table 4. Facility Information

Discharger	Contra Costa County Sanitation District No. 5
Name of Facility	Port Costa Wastewater Treatment Plant
Facility Address	End of Canyon Lake Drive Port Costa, California 94569 Contra Costa County
Facility Contact, Title, and Phone	Warren Lai, Associate Civil Engineer, (925) 313-2180
Mailing Address	255 Glacier Drive Martinez, CA 94553
Type of Facility	Publicly Owned Treatment Works
Facility Design Flow	0.033 million gallons per day (mgd, average dry weather capacity)

II. FINDINGS

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

A. Background. The Contra Costa County Sanitation District No. 5 (hereinafter the Discharger) is currently discharging pursuant to Order No. R2-2003-0009 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0037885. The Discharger submitted a Report of Waste Discharge, dated June 29, 2007, and applied for an NPDES permit reissuance to discharge up to 0.033 mgd of treated wastewater from the Port Costa Wastewater Treatment Plant (WWTP). The application was deemed complete on October 10, 2007. In addition, the Discharger is under Time Schedule Order R2-2005-0057, which requires treatment plant upgrades.

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

B. Facility Description. The Discharger owns the Port Costa WWTP and collection system, which is operated by a contract operating service (at this time, HS Operating Services, 3 Rolph Park Ct., Crockett, CA 94525). Attachment B provides a map of the area and the facility. The facility provides secondary treatment of wastewater from domestic and, to a lesser extent, commercial sources within the community of Port Costa. The Discharger owns the sewer collection system, which consists of a few miles of terra-cotta pipe, although the collection system is maintained by the operator.

The facility has a current dry weather design treatment capacity of 0.033 mgd. The Discharger reported a daily average flow of 0.02 mgd from April 2003 through April 2007 and a maximum daily flow rate of 0.14 mgd during that period.

Wastewater from the community of Port Costa is conveyed by gravity to an 86,000 gallon capacity, baffled septic tank where primary sedimentation occurs. From the septic tank, the primary-treated wastewater flows by gravity to a wet well where it mixes with treated wastewater from the sand/gravel filter beds at a ratio of approximately four or five parts of treated wastewater to one part primary-treated septic tank effluent. After mixing, the treated wastewater is pumped to a dosing structure, which distributes the treated wastewater to sand/gravel filter beds. From the sand/gravel beds, a portion of the treated wastewater is routed back to the wet well to mix with primary-treated septic tank effluent. The remaining treated wastewater flows over a V-notch weir into a contact chamber, where it is chlorinated and then dechlorinated with sulfur dioxide. The treatment facility flow schematic is shown in Attachment C.

Treated, dechlorinated wastewater is discharged from Discharge Point 001 through a submerged outfall and diffuser to the Carquinez Strait, a water of the United States. The diffuser is located approximately 60 feet offshore, at a depth of about 17.5 feet below mean lower low water at 38^{o} 02' 55" N. Latitude, 122^{o} 10' 56" W. Longitude.

The Discharger removes solids from its septic tank for disposal at a septage tank receiving station (e.g., Central Contra Costa Sanitary District WWTP in Martinez, CA).

All storm water captured within the wastewater treatment plant storm drain system is directed to the headworks of the treatment plant and treated to the standards contained in this Order. The facility is therefore exempt from coverage under the Statewide Industrial Storm Water Permit (NPDES General Permit No. CAS000001).

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 CWC (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. Attachments A through G, which contains background information and rationale for Order requirements, are hereby incorporated into this Order and thus constitutes part of the Findings for 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, Public Resources Code sections 21100-21177.

F. Technology-Based Effluent Limitations. CWA section 301(b) and NPDES regulations at 40 CFR §122.44(a) require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR §133 and Table 4.2 of the Basin Plan. A detailed discussion of the development of technology-based effluent limitations is included in the Fact Sheet (Attachment F).

G. Water Quality-Based Effluent Limitations. CWA section 301(b) and NPDES regulations at 40 CFR §122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

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

H. Water Quality Control Plans. *The Water Quality Control Plan for the San Francisco Bay Basin* (the Basin Plan) is the Regional Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface

waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Regional Water Board and approved by the State Water Resources Control Board (State Water Board), USEPA, and the Office of Administrative Law, as required.

Beneficial uses applicable to Carquinez Strait are as follows.

Table 5. Basin Plan Beneficial Uses

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

Requirements of this Order specifically 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. The CTR promulgated new toxics criteria for California and, in addition, 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 (WQC) for priority pollutants.

J. State Implementation Policy. On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (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 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 one 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 new or revised WQOs. This Order does not include any compliance schedules or interim effluent limitations.

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

M. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on total suspended solids (TSS), biochemical oxygen demand (BOD_5), pH, and oil and grease. Establishment of these technology-based limitations is discussed in the Fact Sheet (Attachment F). This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the federal, technology based requirements that are necessary to meet water quality standards. These limitations are not 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 for priority pollutants 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 USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for the purposes of the CWA" pursuant to 40 CFR §131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

N. Antidegradation Policy. NPDES regulations at 40 CFR §131.12 require that the State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy 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 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. Endangered Species Act. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050

to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

P. Anti-Backsliding Requirements. CWA sections 402(o)(2) and 303(d)(4) of the CWA and federal 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. Some effluent limitations in this Order are less stringent that those in the previous Order. As discussed in the Fact Sheet this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

Q. 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 establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

R. Standard and Special Provisions. Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR §122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR §122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR §122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).

S. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections IV.C, IV.D, 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; and consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

T. Notification of Interested Parties. The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements (WDRs) 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.

U. 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 (Attachment F) of this Order.

IT IS HEREBY ORDERED, Order No. R2-2003-0009 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, and the provisions of the

federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

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

B. Following completion of all requirements of Time Schedule Order No. R2-2005-0057 and approval by the Executive Officer, the average dry weather flow shall not exceed 0.033 mgd. Until completion of these requirements, the dry weather flow shall not exceed 0.025 mgd. The average dry weather flow shall be determined for compliance with this prohibition over three consecutive dry weather months each year.

C. Discharge of treated wastewater into Carquinez Strait, at any point where it does not receive an initial dilution of at least 10:1, is prohibited.

D. The bypass of untreated or partially treated wastewater to waters of the United States is prohibited, except as provided for in the conditions stated in 40 CFR §122.41(m)(4) and in section A.13 of the *Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993* (Attachment G).

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

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Effluent Limitations for Conventional Pollutants

a. The discharge of secondary treated wastewater to Carquinez Strait shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location E-001, as described in the attached Monitoring and Reporting Program (Attachment E). The discharge from Discharge Point 001 shall not exceed the following limitations.

Table 6. Conventional Effluent Limitations for Discharge Point 001

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Oil and Grease	mg/L	10	---	20	---	---
pH [1]	Standard units	---	---	---	6.0	9.0
Total Suspended Solids (TSS)	mg/L	30	45	---	---	---
Biochemical Oxygen Demand, 5-day @ 20°C (BOD_5)	mg/L	30	45	---	---	---
Total Chlorine Residual [2]	mg/L	---	---	---	---	0.0

Footnotes for Table 6:

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

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

b. BOD and TSS 85% Percent Removal: The average monthly percent removal of BOD and TSS values, by concentration, shall not be less than 85 percent.

c. Total Coliform Bacteria: The five-sample median total coliform density shall not exceed 240 MPN/100 ml and the daily maximum value shall not exceed 10,000 MPN/100 ml at E-001.

2. Effluent Limitations for Toxic Substances

a. The Discharger shall maintain compliance with the effluent limitations listed in Table 7 for toxic pollutants, at Discharge Point 001, with compliance measured at Monitoring Location E-001 as described in the attached MRP (Attachment E).

Table 7. Effluent Limitations for Toxic Substances [(1)(3)]

Parameter	Units	Effluent Limits	
		Average Monthly	Maximum Daily
Cadmium	µg/L	6.7	18
Copper [(2)]	µg/L	73	150
Mercury	µg/L	0.020	0.041
Total Ammonia	mg/L N	13	33

Footnotes for Table 7:

(1) (a) All analysis shall be performed using current U.S. EPA approved methods, or equivalent methods approved in writing by the Executive Officer.
(b) Limitations apply to the average concentration of all samples collected during the averaging period (daily = 24-hour period; monthly = calendar month).
(c) All metals limitations are expressed as total recoverable metal.

(2) Alternate Effluent Limits for Copper:
(a) If a copper Site Specific Objective (SSO) for the receiving water becomes legally effective, resulting in an adjusted saltwater Criterion Continuous Concentration (CCC) of 2.5 µg/l and a Criterion Maximum Concentration (CMC) of 3.9 µg/l as documented in *North of Dumbarton Bridge Copper and Nickel Site-Specific Objective (SSO) Derivation* (Clean Estuary Partnership, December 2004), upon its effective date, the following limitations shall supersede those copper limitations listed in Table 7 (the rationale for these effluent limitations can be found in the Fact Sheet (Attachment F)).

MDEL = 120 µg/L, and AMEL = 58 µg/L.

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

(3) Minimum Levels. The Discharger shall achieve the following minimum levels for compliance determination purposes as defined in Section VII of this Order.

Table 8. Minimum Levels for Pollutants with Effluent Limitations

Parameter	Units	Minimum Level
Cadmium	µg/L	0.25 or 0.5
Copper	µg/L	0.5 or 2
Mercury	µg/L	0.0005

b. Acute Toxicity:

(1) Representative samples of the effluent at Discharge Point 001 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 effluent shall be a three (3) sample median value of not less than 90 percent survival, and a single (1) sample value of not less than 70 percent survival.

(2) These acute toxicity limitations are further defined as follows:

3 sample median: Any bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if one of the past two or less bioassay tests also shows less than 90 percent survival.

1 sample limit: A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit.

(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 exceeding effluent limitations, then such toxicity does not constitute a violation of this effluent limitation.

B. Interim Effluent Limitations

Not Applicable

C. Land Discharge Specifications

Not Applicable

D. Reclamation Specifications

Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

1. 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 the Carquinez Strait:

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

   b. Suspended sediment, dissolved solids, settleable material that results in bottom deposition 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. Concentrations of taste- or odor-producing substances that impart undesirable tastes or odors to fish flesh or other edible products of aquatic organisms, or otherwise adversely affect beneficial use;

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

f. 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, the discharge shall not cause further reduction in ambient dissolved oxygen concentrations
b. Dissolved Sulfide	Not to exceed natural background levels
c. pH	Within 6.5 and 8.5
d. Nutrients:	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

B. Groundwater Limitations

Not Applicable

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* (Attachment G), including any amendments thereto. Where provisions or reporting requirements specified in this Order are different from equivalent or related provisions or reporting requirements given in the Standard Provisions in

Attachment D, the specifications of this Order and/or Attachment G shall apply in areas where those provisions are more stringent. Duplicative requirements in the federal Standard Provisions in VI.A.1, 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 (MRP) Requirements

The Discharger shall comply with the MRP and future revisions thereto, in Attachment E of this Order. This Discharger shall also comply with the requirements contained in *Self Monitoring Programs, 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 have, or will cease to have, a reasonable potential to cause or contribute to 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 antibacksliding analysis.

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 (measured at E-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 Minor Dischargers.

The Discharger shall summarize the analytical results of the data collected to date and describe future monitoring to take place, based upon these results, in the annual report required by Part A of the Self-Monitoring Program (Attachment G). The first annual report under this Order is due with the annual Self-Monitoring Report, due February 1st of each year.

A final report that presents all the data shall be submitted to the Regional Water Board no later than 180 days prior to the expiration date of this Order. This final report shall be submitted with the application for permit reissuance. Reporting requirements under this section may be satisfied by: (a) monthly reporting using the electronic reporting system (ERS) or an equivalent electronic system required by the Regional Water Board or State Water Board, and (b) submittal of a complete application for permit reissuance no later than 180 days prior to the permit expiration date.

b. 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 Pollution Minimization Program

a. Pollutant Minimization Program

The Discharger shall develop and implement, in a manner acceptable to the Executive Officer, a Pollutant Minimization Program (PMP) to reduce pollutant loadings to the treatment plant and therefore to the receiving waters. In addition, the Discharger shall implement any applicable pollutant minimization measures described by Basin Plan implementation requirements associated with site specific objectives (SSOs) for copper, if and when each of those SSOs become effective and alternate limitations take effect.

b. Annual Pollution Prevention Report

The Discharger shall submit an annual report, acceptable to the Executive Officer, no later than February 28th of each calendar year. The annual report shall cover January through December of the preceding year. 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 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 pollutant sources. 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 the tasks themselves or participate in group, regional, or national tasks that will address its pollutants of concern whenever it is efficient and appropriate to do so. A time line shall be included for the implementation of each task.

(5) *Outreach to employees.* The Discharger shall inform its employees about the pollutants of concern, potential sources, and how they might be able to help reduce the discharge of these pollutants. 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 minimization measures 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 various media. Information shall be specific to 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 discussion shall include 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.* The Discharger shall use 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 to more effectively reduce the amount of pollutants to the treatment plant and subsequently its effluent.

c. Pollutant Minimization Program for Reportable Priority Pollutants

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 RL; or

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

d. If triggered by the reasons in Provision C.3.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 Provision C.3.b. above, shall specifically address the following items:

(a) All PMP monitoring results for the previous year;

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

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

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

4. 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 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) to ensure 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 90 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.

5. Special Provisions for POTWs

a. Sludge Management Practices Requirements

(1) All sludge generated by the Discharger must be disposed of in municipal solid waste landfill, reused by land application, or disposed of in a sludge-only landfill 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) Sludge storage, treatment, and handling 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 into waters of the State.

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

(6) For 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 requirements as specified by 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 or disposal activities are not authorized by this Order. A Report of Waste Discharge shall be filed and the site brought into compliance with all applicable regulations prior to commencement of any such activity 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 Order prior to expiration if changes occur in applicable state and federal sludge regulations.

b. Sanitary Sewer Overflows and Sewer System Management Plan

The Discharger's collection system is part of the facility that is subject to this Order. As such, the Discharger must properly operate and maintain its collection system (Attachment D, Standard Provisions – Permit Compliance, subsection I.D). The Discharger must report any non-compliance (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 State Water Board's 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.

6. Other Special Provisions

Not Applicable

7. Compliance Schedules

Not Applicable

8. Implementation Plan for Copper

Upon the effective date of the alternate effluent limitations for copper, as described in section IV.A.2 of the Order, the Discharger shall initiate an implementation plan for copper in accordance with the Basin Plan Amendment addressing site specific objectives for copper.

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, Attachment A, and Section VI of the Fact Sheet 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 reporting level (RL).

B. Multiple Sample Data.

When determining compliance with an AMEL and MDEL 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 (μ), also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

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

where:

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

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

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

Bioaccumulative pollutants are those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the 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 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 RL, but greater than or equal to the laboratory's MDL.

Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the

dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

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

Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of 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 include~~d~~, 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 is the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

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

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

Median is the middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number

of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

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

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

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

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

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

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

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

Reporting Level (RL) is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or

established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

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

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

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

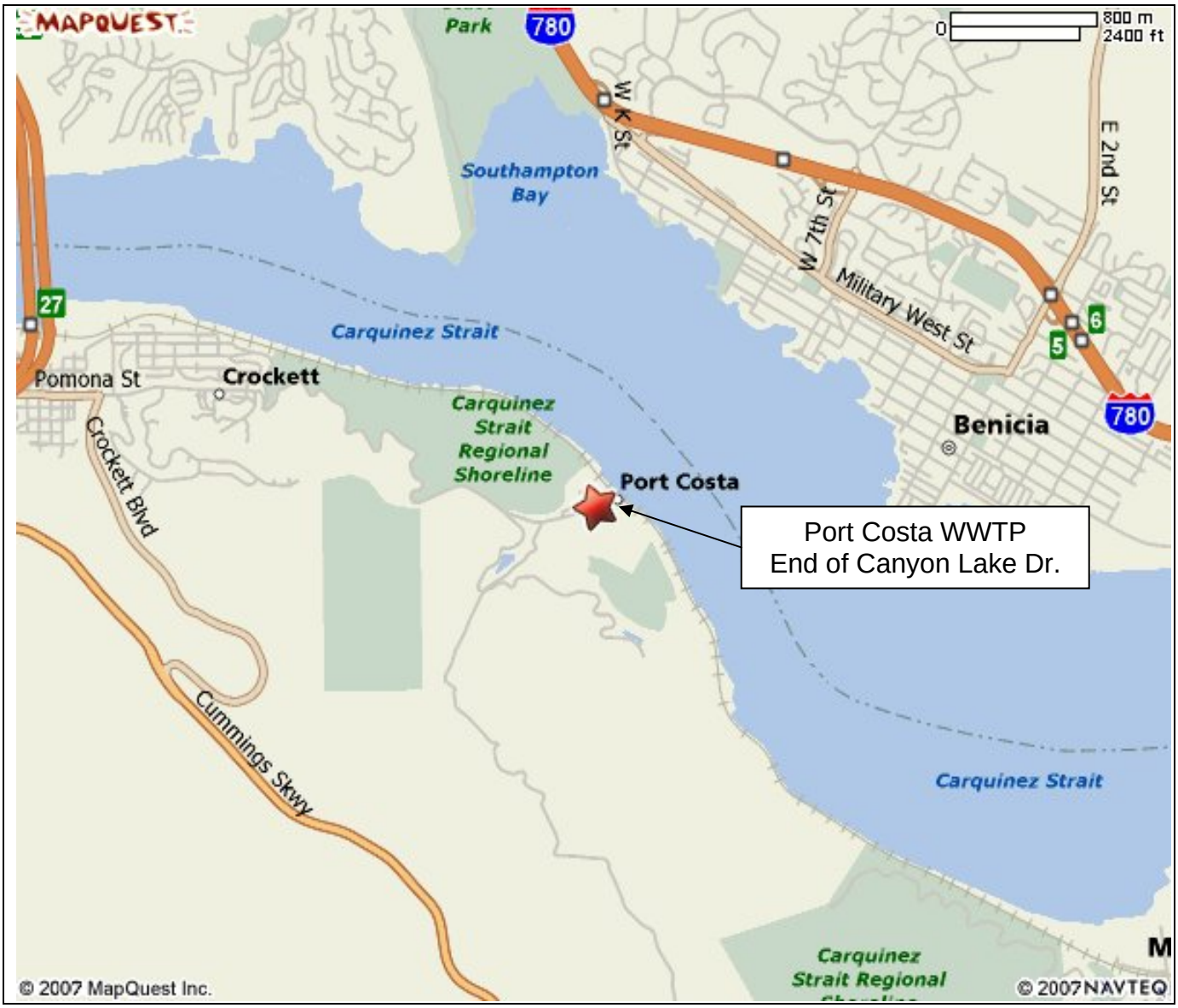
$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:

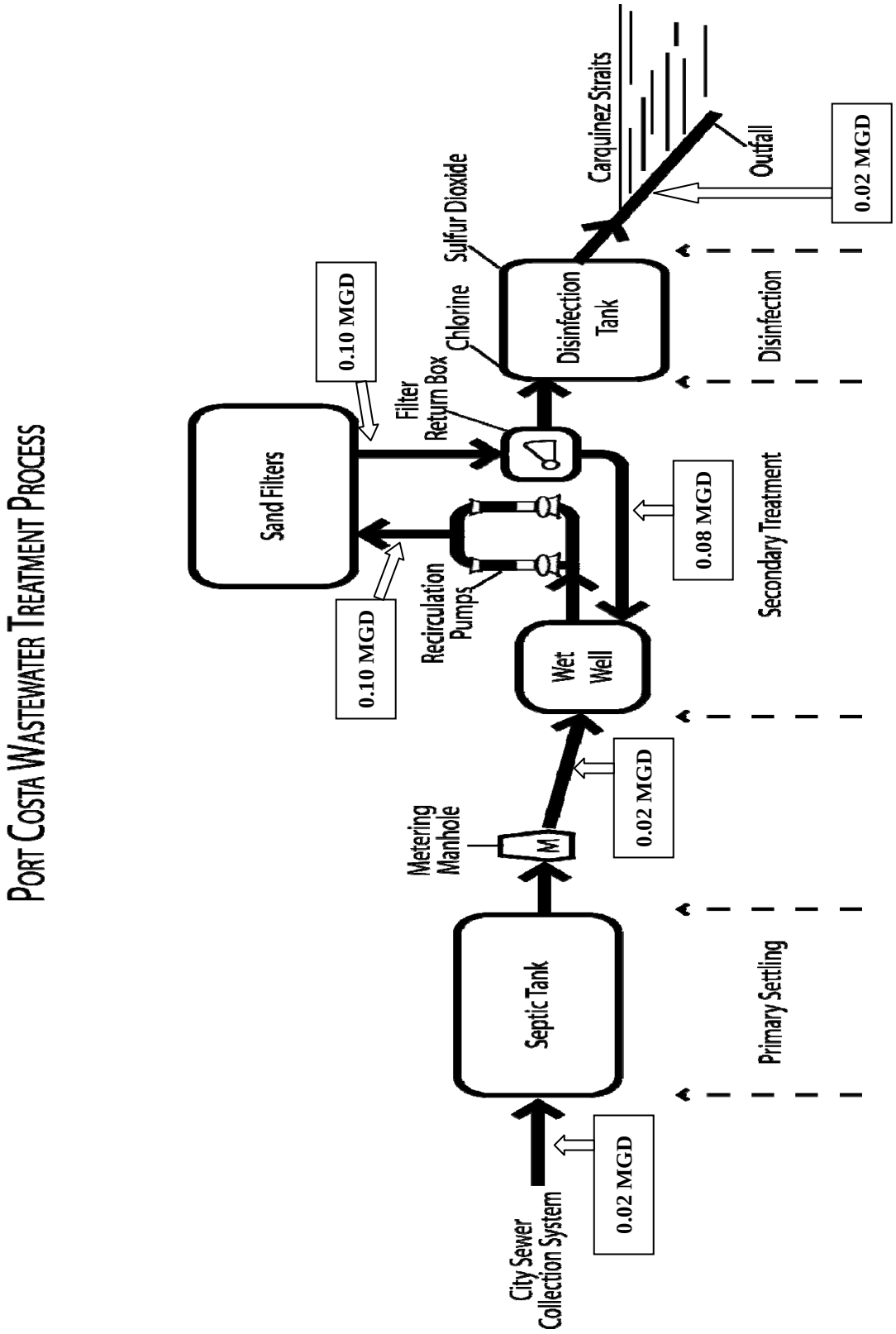
x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

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

ATTACHMENT B – MAP



ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – FEDERAL 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); Water Code, §13383):

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

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

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

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

G. Bypass

1. Definitions

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

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

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

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

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

   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of

equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. §122.41(m)(4)(i)(B)); and

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

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

5. Notice

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

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

H. Upset

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

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

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

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

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

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

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

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

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

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

IV. STANDARD PROVISIONS – RECORDS

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

B. Records of monitoring information shall include:

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

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA

may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 C.F.R. §122.41(h); 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 not subject to effluent limitations in this Order. (40 C.F.R. §122.41(l)(1)(ii).)

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

G. Anticipated Noncompliance

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

H. Other Noncompliance

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

I. Other Information

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

VI. STANDARD PROVISIONS – ENFORCEMENT

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. 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. Water Code sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, 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). The MRP and SMP may be amended by the Executive Officer pursuant to USEPA regulations 40 CFR122.62, 122.63, and 124.5. If any discrepancies exist between the MRP and SMP, the MRP prevails.

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 analyses. Equivalent methods must be more sensitive than those specified in 40 CFR §136, must be specified in the permit, and must be approved for use by the Executive Officer, following consultation with the State Water 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.* For compliance and reasonable potential monitoring, analyses shall be conducted using the commercially available and reasonably achievable detection levels that are lower than applicable water quality objectives or criteria, 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 (MLs) given below. All Minimum Levels are expressed in µg/L, approximately equal to parts per billion (ppb).

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

Table E-1. Test Methods and Minimum Levels for Pollutants with Reasonable Potential

CTR #	Constituent	Types of Analytical Methods [1] Minimum Levels (µg/L)											
		GC	GC-MS	LC	Color	FAA	GFAA	ICP	ICPMS	SPGFAA	HYDRIDE	CVAF	DCP
4	Cadmium					10	0.5	10	0.25	0.5			1,000
6	Copper					25	5	10	0.5	2			1,000
8	Mercury[2]											0.0005	

Footnotes for Table E-1:

(1) Analytical Methods / Laboratory techniques are defined as follows:

Color	=	Colorimetric;
CVAF	=	Cold Vapor Atomic Fluorescence.
DCP	=	Direct Current Plasma
FAA	=	Furnace Atomic Absorption;
GC	=	Gas Chromatography
GCMS	=	Gas Chromatography Mass Spectroscopy
GFAA	=	Graphite Furnace Atomic Absorption;
ICP	=	Inductively Coupled Plasma
ICPMS	=	Inductively Coupled Plasma/Mass Spectrometry;
LC	=	Liquid Chromatography
SPGFAA	=	Stabilized Platform Graphite Furnace Atomic Absorption (i.e. EPA 200.9)

(2) The Discharger shall 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, which specifies a ML of 0.5 ng/L or 0.0005 µg/L.

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

Wastestream	Monitoring Location Name	Monitoring Location Description
Influent	A-001	At a point in the treatment facility's headworks preceding any phase of treatment and preceding introduction of recycle streams.
Effluent	E-001	At a point after full treatment and before contact with receiving water of the Carquinez Strait.
Effluent	E-001-D	At any point in the disinfection facilities where adequate contact with the disinfectant is assured.
Land Observations	P-1 through P-*n*	Located at the corners and midpoints of the perimeter fence line surrounding the treatment facilities. (A sketch showing the locations of these stations shall accompany each report.)
Receiving Water	C-001	At a point in Carquinez Strait located in the vicinity of the discharge point, and accessible from the shoreline.
Receiving Water	C-002	At a point in Carquinez Strait located approximately 50 feet down current from the point of discharge, and accessible from the shoreline.
Receiving Water	C-003	At a point in Carquinez Strait located approximately 1,000 feet up current from the point of discharge, and accessible from the shoreline.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location A-001

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

Table E-3. Influent Monitoring Requirements for Conventional Pollutants(1)

Parameter	Units	Sample Type	Minimum Sampling Frequency
BOD_5	mg/L	Grab	M
TSS	mg/L	Grab	W

Footnotes for Table E-3:

(1) Pollutants shall be analyzed using the analytical methods described in 40 CFR §136.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Effluent Monitoring Requirements - Monitoring Location E-001

1. The Discharger shall monitor the treated effluent from the facility at E-001

Table E-4. Schedule of Sampling, Measurement, and Analysis (1) – E-001

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow Rate (2)	mgd	Continuous	3/W
Oil and Grease	mg/L	Grab	M
pH(3)	Standard units	Grab	3/W
BOD_5 (4),(5)	mg/L	Grab	M
TSS (4)	mg/L	Grab	W
Cadmium	µg/L	Grab	Q
Copper	µg/L	Grab	Q
Mercury(6)	µg/L	Grab	1/Y
Total Ammonia (total as N)	mg/L	Grab	Q
Remaining Priority Pollutants(7)	µg/L	Grab	1/5Y

Footnotes for Table E-4:

(1) Pollutants and pollutant parameters shall be analyzed using the analytical methods described in 40 CFR §136. For priority pollutants, the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP. Where no methods are specified for a given pollutant, the methods must be approved by this Regional Water Board or the State Board. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level.

(2) Flow Monitoring: Effluent flow shall be monitored at a location, prior to discharge, to be representative of actual discharge rates. Flows shall be measured continuously and recorded at least three times a week. For effluent flows, the following information shall also be reported monthly:
Average Daily Flow (mgd)
Monthly Average Flow (mgd)

(3) pH shall be monitored and recorded at least three times per week.

(4) The percent removal for BOD and TSS shall be reported for each calendar month. Samples for BOD and TSS shall be collected simultaneously with influent samples.

(5) In the event that sampling once every month shows an apparent violation of the waste discharge permit monthly average limitation (considering the result of one day's sampling as a monthly average), then the sampling frequency shall be increased to weekly, so that a true monthly average can be computed and compliance can be determined. Monthly monitoring can be resumed following four consecutive weeks of monitoring which show compliance with the Order's average monthly and average weekly effluent limitations for BOD.

(6) 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.

(7) Sampling methods for all priority pollutants in the SIP is addressed in a letter dated August 6, 2001, from the Regional Water Board Staff: "Requirements for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy" (not attached but available for review or download on the Regional Water Board's website at http://www.waterboards.ca.gov/sanfranciscobay/).

B. Monitoring Location E-001-D

1. The Discharger shall monitor effluent at E-001-D as follows:

Table E-5. Schedule of Sampling, Measurement, and Analysis (1) – E-001-D

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total Coliform Bacteria	MPN/100 ml	Grab	W
Chlorine, Total Residual (2)	mg/L	Grab	3/W
Acute Toxicity (3)	% survival	Grab	Q

Footnotes for Table E-5:

(1) Pollutants and pollutant parameters shall be analyzed using the analytical methods described in 40 CFR §136.

(2) Chlorine residual: During all times when chlorination is used for disinfection of the effluent, effluent chlorine residual concentrations shall be monitored and reported for sampling points both prior to and following dechlorination. Total chlorine dosage (kg/day) shall be recorded on a daily basis. Samples for this parameter may be collected at Monitoring Location E-001.

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

C. Monitoring Location – P-1 through P-*n*

1. The Discharger shall monitor the perimeter of the fence line surrounding the treatment facilities at the corners and midpoints for standard observations weekly. Perimeter observations shall include only E.5.a (odors) of Part A (August 1993) of the Self-Monitoring Program.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

The Discharger shall monitor acute 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 parallel 96-hour static-renewal bioassays using grab samples representative of the discharged effluent.

2. Test organisms shall be rainbow trout or fathead minnow.

3. All bioassays shall be performed according to the most up-to-date protocols in 40 CFR 136, currently in "*Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms*,"5th Edition.

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 undiluted, disinfected, and dechlorinated prior to testing. Monitoring of the bioassay water shall include, on a daily basis, the following parameters: pH, dissolved oxygen, ammonia (if toxicity is observed), temperature, hardness, and alkalinity. These results shall be reported. If 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.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

Not Applicable

VII. RECLAMATION MONITORING REQUIREMENTS

Not Applicable

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Monitoring Locations - C-001, C-002, C-003

The Discharger shall monitor for standard observations at receiving water monitoring locations C-001, C-002, and C-003. Receiving water observations shall include those contained in Items E.1.a, E.1.b, E.1.c, and E.3 of Part A (August 1993) of the Self-Monitoring Program.

IX. LEGEND FOR MRP TABLES

Types of Samples

C-24	=	composite sample, 24 hours (includes continuous sampling, such as for flows)
C-X	=	composite sample, X hours
G	=	grab sample

Frequency of Sampling

Cont.	=	Continuous
Cont/D	=	Continuous monitoring & daily reporting
H	=	once each hour (at about hourly intervals)
W	=	once each week
2/W	=	Twice each week
4/W	=	four times each week
M	=	once each month
Q	=	once each calendar quarter (at about three month intervals)
1/2h	=	once every 2 hours
1/Y	=	once each calendar year

2/Y = twice each calendar year (at about 6 months intervals, once during dry season, once during wet season)

Parameter and Unit Abbreviations

BOD	=	Biochemical Oxygen Demand
CBOD	=	Carbonaceous Biological Oxygen Demand
D.O.	=	Dissolved Oxygen
Est V	=	Estimated Volume (gallons)
Metals	=	multiple metals; See SMP Section VI.G.
PAHs	=	Polycyclic Aromatic Hydrocarbons; See SMP Section VI.H.
TSS	=	Total Suspended Solids
mgd	=	million gallons per day
mg/L	=	milligrams per liter
ml/L-hr	=	milliliters per liter, per hour
µg/L	=	Micrograms per liter
kg/d	=	kilograms per day
kg/mo	=	kilograms per month
MPN/100 ml	=	Most Probable Number per 100 milliliters

X. MODIFICATIONS TO PART A OF SELF-MONITORING PROGRAM (ATTACHMENT G)

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 identification of the measurement suspected to be invalid and notification of intent to submit, within 60 days, 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.

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 submittal.

(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.

XI. OTHER MONITORING REQUIREMENTS

A. Sludge Monitoring

Not Applicable

XII. 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.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this Order, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs). Until such notification is given, the Discharger shall submit hard copy SMRs, except as described in Section X. above.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through XI. The Discharger shall submit monthly and annual SMRs

including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR. Monthly SMRs are due 30 days after the end of the calendar sampling month. Annual SMRs are due on February 1st covering information from the previous calendar year.

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

Table E-6. Monitoring Periods and Reporting Schedule

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

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

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

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

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

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

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

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

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

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

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

C. Discharge Monitoring Reports (DMRs)

1. As described in Section XII.B.1 above, at any time during the term of this Order, the State or Regional Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the Discharger 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 one of the addresses listed below:

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

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

D. Other Reports

1. Annually, no later than February 1st, the Discharger shall report the results of any special studies, monitoring, and reporting required by section VI. C. 2 (Special Studies, Technical Reports, and Additional Monitoring Requirements) of this Order.

ATTACHMENT F – FACT SHEET

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List of Tables

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

WDID	2 071034001
Discharger	Contra Costa County Sanitation District No. 5
Name of Facility	Port Costa Wastewater Treatment Plant (WWTP)
Facility Address	End of Canyon Lake Drive Port Costa, CA 94569 Contra Costa County
Facility Contact, Title and Phone	Warren Lai, Assistant Civil Engineer, (925) 313-2180
Authorized Person to Sign and Submit Reports	Warren Lai, Assistant Civil Engineer, (925) 313-2180
Mailing Address	255 Glacier Drive Martinez, CA 94553
Billing Address	SAME
Type of Facility	Publicly Owned Treatment Works
Major or Minor Facility	Minor
Threat to Water Quality	3
Complexity	B
Pretreatment Program	No
Reclamation Requirements	No
Facility Permitted Flow	0.025 million gallons per day (mgd) (average dry weather)[1]
Facility Design Flow	0.033 mgd (average dry weather treatment capacity)
Watershed	Suisun Basin Watershed
Receiving Water	Carquinez Strait
Receiving Water Type	San Francisco Bay Estuary

Footnotes for Table F-1:
(1) Following completion of all requirements of Time Schedule Order No. R2-2005-0057 and approval by the Executive Officer, the average dry weather flow limitation shall increase to 0.033 mgd.

A. Contra Costa County Sanitation District No. 5 (hereinafter the Discharger) owns the Port Costa Wastewater Treatment Plant (WWTP), a publicly owned treatment works. The facility is currently operated by HS Operating Services (3 Rolph Park Ct., Crockett, CA 94525). The Discharger owns the property at Canyon Lake Drive, Port Costa, CA 94569 on which the facility is located.

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 treated wastewater to the Carquinez Strait, a water of the United States, and is currently regulated by Order No. R2-2003-0009 which was adopted on January 22, 2003 and expired on December 31, 2007. The terms and conditions of the current Order have been automatically continued and remain in effect until new Waste Discharge Requirements and NPDES permit requirements are adopted pursuant to this Order. In addition, the Discharger is under Time Schedule Order R2-2005-0057, which requires treatment plant upgrades.

C. The Discharger filed a Report of Waste Discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and NPDES permit on June 29, 2007. The application was deemed complete on October 10, 2007.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment or Controls

The Discharger owns the Port Costa WWTP and collection system, which is operated by a contract operating service (at this time, HS Operating Services, 3 Rolph Park Ct., Crockett, CA 94525). The facility provides secondary treatment of wastewater from domestic and, to a lesser extent, commercial sources within the community of Port Costa. The Discharger owns the sewer collection system, which consists of a few miles of terra-cotta pipe and is maintained by the operator.

The facility has a current dry weather design treatment capacity of 0.033 mgd. The Discharger reported a daily average flow of 0.02 mgd from April 2003 through April 2007 and a maximum daily flow rate of 0.14 mgd during that period.

Wastewater from the community of Port Costa is conveyed by gravity to an 86,000 gallon capacity, baffled septic tank where primary sedimentation occurs. From the septic tank, the primary-treated wastewater flows by gravity to a wet well where it mixes with treated wastewater from the sand/gravel filter beds at a ratio of approximately four or five parts of treated wastewater to one part primary-treated septic tank effluent. After mixing, the treated wastewater is pumped to a dosing structure, which distributes the treated wastewater to sand/gravel filter beds. From the sand/gravel beds, a portion of the treated wastewater is routed back to the wet well to mix with primary-treated septic tank effluent. The remaining treated wastewater flows over a V-notch weir into a contact chamber, where it is chlorinated, and then dechlorinated with sulfur dioxide.

Treated, dechlorinated wastewater is discharged from Discharge Point 001 through a submerged outfall and diffuser to Carquinez Strait, a water of the United States. The diffuser is located approximately 60 feet offshore, at a depth of about 17.5 feet below mean lower low water at 38^{o}, 02', 55" N. Latitude; 122^{o}, 10', 56" W. Longitude.

The Discharger removes solids from its septic tank for disposal at a septage tank receiving station (e.g., Central Contra Costa Sanitary District WWTP in Martinez, CA).

All storm water captured within the wastewater treatment plant storm drain system is directed to the headworks of the treatment plant and treated to the standards contained in this Order. The facility is

therefore exempt from coverage under the Statewide Industrial Storm Water Permit (NPDES General Permit No. CAS000001).

B. Discharge Points and Receiving Waters

The location of the Port Costa WWTP outfall and its receiving water are shown in Table F-2 below.

Table F-2. Outfall Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Secondary treated POTW Effluent	38 º, 02', 55" N	122º, 10', 56" W	Carquinez Strait

Carquinez Strait is located between San Pablo Bay and Suisun Bay within the Suisun Basin watershed.

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

Effluent limitations contained in the previous Order (Order No. R2-2003-0009) for discharges to Carquinez Strait and representative monitoring data from the term of the previous Order are as follows:

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

Parameter	Units	Effluent Limitations			Monitoring Data (From January 2002 To April 2007)
		Monthly Average	Weekly Average	Daily Maximum	Highest Monthly Discharge
Oil and Grease	mg/L	10	---	20	13.6
pH	standard units	---	---	6.0 – 9.0	6.0 – 9.0
TSS	mg/L	30	45	---	20
Acute Toxicity	% survival	(1)	(1)	(1)	(1)
BOD_5	mg/L	30	45	---	31
Total Coliform Bacteria	MPN/ 100 mL	(2)	(2)	(2)	500
Total Residual Chlorine	mg/L	---	---	0.0	2.6

Footnotes for Table F-3:

(1) Acute Toxicity Effluent Limits and Monitoring Data:
  (a) Effluent Limitations: The survival of bioassay test organisms in 96-hour bioassays of undiluted effluent shall be:
    (i) A 3-sample median value of not less than 90 percent survival (b(1)) ; and
    (ii) A 1-sample 90th value of not less than 70 percent survival.
  (b) Monitoring Data: Acute toxicity monitoring conducted during the term of the previous permit showed:
    (i) Nineteen acute toxicity tests were conducted from June 2002 to March 2007
    (ii) Seventeen tests resulted in survival rates greater than 90%.
    (iii) Two tests resulted in survival rates less than 90% and greater than 70%.
    (iv) No tests resulted in survival rates less than 70%.

(2) The treated wastewater, at some point in the treatment process prior to discharge, shall meet the following bacteriological limits: The moving median value of most probable number (MPN) of total coliform bacteria in any five (5) consecutive samples shall not exceed 240 MPN/100 mL; and, any single sample shall not exceed 10,000 MPN/mL.

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

Parameter	Units	Effluent Limitations		Monitoring Data (From June 2002 To April 2007)
		Monthly Average	Daily Maximum	Daily Maximum
Copper	µg/L	---	37 (1)	23

Footnotes for Table F-4:

(1) Interim limit

D. Compliance Summary

1. **Compliance with Numeric Effluent Limits.** Exceedances of numeric effluent limits were observed during the permit term for acute toxicity and total residual chlorine. The exceedances are summarized in Table F-5 below:

Table F-5. Exceedances of Numeric Effluent Limits

Date of Violation	Exceeded Parameter	Units	Effluent Limitation	Reported Concentration
March 18, 2003	3-sample median toxicity	% survival	90	85
April 30, 2003	Chlorine Residual – Instantaneous Maximum	mg/L	0.0	1.0
June 9, 2003	Chlorine Residual – Instantaneous Maximum	mg/L	0.0	2.6

E. Planned Changes

1. Time Schedule Order No. R2-2005-0057 limits the WWTP's average dry weather flow to 0.025 mgd until the Discharger certifies that it has made the necessary repairs to the sand filter beds. The following tasks are required by TSO No. R2-2005-0057; and, in accordance with the TSO, must be completed by November 30, 2007. To meet this deadline, the Discharger has received a loan from the Contra Costa County Board of Supervisors.

Tasks

(1) Removal and replacement of the impacted sand filter in beds No. 1, 2 and 3
(2) Repair of filter bed No. 4
(3) Remove and replace liner in filter bed No. 2
(4) Obtain temporary railroad crossing permit
(5) Build temporary railroad crossing structure and hire flagman
(6) Install new chemical feed equipment
(7) Install standby generator for emergency power
(8) Install auto-dialer alarm for equipment
(9) Install redundancy pumps
(10) Fix siphons on the dosing structure
(11) Replace piping for No. 3 and 4 disinfection pumps

2. The Discharger will transfer ownership of this facility to Crockett Community Services District after all of the requirements of TSO No. R2-2005-0057, as described above, are fulfilled.

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 section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (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).

B. California Environmental Quality Act (CEQA)

Under 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 Water Quality Control Plan for the San Francisco Bay Basin* (the Basin Plan) is the Regional Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Regional Water Board and approved by the State Water Resources Control Board, USEPA, and the Office of Administrative Law, as required. The latest version of the Basin Plan became effective on December 22, 2006. Requirements of this Order implement the Basin Plan.

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and 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. The CTR promulgated new toxics criteria for California and, in addition, 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, which are applicable to Carquinez Strait.

3. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria 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 (WQS) become effective for CWA purposes [65 Fed. Reg. 24641 (April 27, 2000)(codified at 40 CFR §131.21)]. Under the

revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

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. The technology-based effluent limitations consist of restriction on BOD_5, TSS, oil and grease, pH and chlorine residual. Restrictions on these pollutants are specified in federal regulations and in the Basin Plan. 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. Most 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). The remaining water quality objectives and beneficial uses implemented by this Order were approved by USEPA on January 5, 2005, and are applicable water quality standards pursuant to 40 CFR §131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and are the applicable water quality standards for purposes of the CWA.

6. **Antidegradation Policy.** 40 CFR §131.12 requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution 68-16 requires that existing water quality is maintained unless degradation is justified based on specific findings.

   The permitted discharge is consistent with the antidegradation provision of 40 CFR §131.12 and State Water Board Resolution No. 68-16, and the final limitations in this Order are in compliance with antidegradation requirements and meet the requirements of the SIP because these limits hold the Discharger to performance levels that will not cause or contribute to water quality impairment or further water quality degradation. This is because this Order does not provide for an increase in the permitted design flow, allow for a reduction in the level of treatment, or increase effluent limitations with the exception of copper.

   For copper, this Order establishes final WQBELs, whereas the previous permit included an interim limit. Although the final WQBELs are above the previous interim limitation, the

concentration of copper discharges is unlikely to change because the Discharger proposes no changes to its treatment process. The Discharger will maintain current treatment performance for copper because it cannot manipulate its process to adjust effluent copper levels independently of other treatment parameters. To maintain compliance with other effluent limits, the Discharger will maintain its current performance with respect to copper. Moreover, pollution minimization requirements are designed to maintain current performance.

Additionally, this Order established alternate limits for copper based on site-specific objectives developed since the previous permit. These limits will become effective if the site-specific objective is adopted and becomes legally effective during the permit term. The standards-setting process for copper addressed antidegradation, and therefore, an analysis in this permit is necessary.

7. **Anti-Backsliding Requirements.** CWA Sections 402(o)(2) and 303(d)(4) and 40 CFR §122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. In this Order, all effluent limitations are at least as stringent as those in the previous Order.

8. **Monitoring and Reporting Requirements.** 40 CFR §122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC Sections 13267 and 13383 authorize the Regional Water Boards to require technical and monitoring reports. The MRP may be amended by the Executive Officer pursuant to USEPA regulations at 40 CFR §122.62, 122.63, and 124.5.

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

In November 2006, the USEPA approved a revised list of impaired water bodies prepared by the State [hereinafter referred to as the 303(d) list], pursuant to provisions of CWA section 303(d), which requires identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. The Carquinez Strait is listed as an impaired water body for chlordane, DDT, dieldrin, dioxin compounds, exotic species, furan compounds, mercury, PCBs, dioxin-like PCBs and selenium. The SIP requires final effluent limitations for all 303(d)-listed pollutants to be 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 the Carquinez Strait within the next ten years. Future review of the 303(d)-list for the Carquinez Strait may provide schedules or result in revision of the schedules for adoption of TMDLs.

2. Waste Load Allocations

The TMDLs will establish waste load allocations (WLAs) for point sources and load allocations (LAs) for non-point sources, and will result in achieving the 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 to the Bay the option to collectively assist in developing and implementing analytical techniques capable of detecting 303(d)-listed pollutants to at least their respective levels of concern or 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 Carquinez Strait.

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

This Order is also based on the following plans, polices, and regulations:

1. The Federal *Water Pollution Control Act*, Sections 301 through 305, and 307, and amendments thereto, as applicable (CWA);

2. The State Water Board's March 2, 2000 *Policy for Implementation of Toxics Standards for Inland Surface Water Enclosed Bays, and Estuaries of California*; the USEPA's May 18, 2000 *Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California* or CTR, 40 C.F.R. §131.38(b) and amendments;

3. The USEPA's *Quality Criteria for Water* [EPA 440/5-86-001, 1986] and subsequent amendments (the USEPA Gold Book);

4. Applicable federal regulations [40 CFR §§ 122 and 131];

5. 40 CFR §131.36(b) and amendments [Federal Register Volume 60, Number 86, 4 May 1995, pages 22229-22237];

6. USEPA's December 10, 1998 National Recommended Water Quality Criteria compilation [Federal Register Vol. 63, No. 237, pp. 68354-68364];

7. USEPA's December 27, 2002 Revision of National Recommended Water Quality Criteria compilation [Federal Register Vol. 67, No. 249, pp. 79091-79095]; and

8. Guidance provided with State Water Board Orders remanding permits to the Regional Water Board for further consideration.

9. Time Schedule Order No. R2-2005-0057 to Upgrade and Repair its Wastewater Treatment Facility. (Regional Water Board, October 19, 2005)

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 the NPDES regulations: 40 CFR §122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR §122.44(d) requires that permits include 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 in 40 CFR §122.44(d)(1)(vi).

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

A. Discharge Prohibitions

1. **Discharge Prohibitions III.A (No discharge other than that described in this Order):** This prohibition is the same as in the previous permit and is based on California Water Code section 13260, which requires filing a Report of Waste Discharge (ROWD) before discharges can occur. Discharges not described in the ROWD, and subsequently in the Order, are prohibited.

2. **Discharge Prohibition III.B. (Average dry weather flow not to exceed dry weather design capacity)**: This prohibition is based on the design treatment capacity of the wastewater treatment facility upon completion of the requirements of Time Schedule Order No. R2-2005-0057. Exceedance of the treatment plants' average dry weather flow design capacity of 0.033 mgd may result in lowering the reliability of achieving compliance with water quality requirements.

3. **Discharge Prohibitions III.C (No discharge receiving less than 10:1 dilution):** This prohibition is the same as in 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. Further, this Order 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.

4. **Discharge Prohibition III.D. (No bypass except under the conditions at 40 CFR §122.41 (m)(4)(i)(A)(B)-(C):** This prohibition is based on the NPDES regulations expressed at 40 CFR §122.41 (m)(4).

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

B. Technology-Based Effluent Limitations

1. Scope and Authority

NPDES regulations at 40 CFR §122.44(a) require that permits include applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR §133 and/or Best Professional Judgment (BPJ) in accordance with 40 CFR §125.3.

Secondary Treatment Regulations, which are specified in 40 CFR §133, apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of biochemical oxygen demand (BOD_5), total suspended solids (TSS), and pH.

2. Applicable Technology-Based Effluent Limitations

The Order is retaining the following technology based effluent limitations, applicable to Discharge Point 001, from Order No. R2-2003-0009.

Table F-6. Summary of Technology-Based Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
BOD5	mg/L	30	45	---	---	---
TSS	mg/L	30	45	---	---	---
Oil and Grease	mg/L	10	---	20	---	---
pH	s.u.	---	---	---	6.0	9.0
Total Residual Chlorine	mg/L	---	---	---	---	0.0
Total Coliform	MPN/100 mL	240	---	10,000	---	---

a. Oil and Grease. The limitations established for oil and grease are levels attainable by secondary treatment and are required by the Basin Plan (Table 4-2) for all discharges to inland surface waters and enclosed bays and estuaries of the Region.

b. pH. The pH limitation is retained from the previous Order and is required by USEPA's Secondary Treatment Regulation at 40 CFR §133 and by the Basin Plan (Table 4-2).

c. BOD_5 and TSS. Effluent limitations for BOD_5 and TSS, including the 85% removal requirement, are required by 40 CFR §133 and Table 4-2 of the Basin Plan, and are retained from the previous Order.

d. Total Colifom Bacteria. Effluent limitations for total coliform bacteria are retained from Order R2-2003-0009. These limitations reflect conventional pollutant limitations established by Table 4-2 of the Basin Plan, and applicable water quality objectives for water contact recreation, established by Table 3-1 of the Basin Plan, and are applied as end-of-pipe effluent limitations.

e. Setteable Matter. The technology based effluent limitations for settleable matter are not retained from Order No. R2-2003-0009, per the 2004 Basin Plan amendment.

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, when necessary, calculating WQBELs is intended to (1) protect the designated beneficial uses of the receiving water specified in the Basin Plan, and (2) achieve applicable WQOs and WQC that are contained in the California Toxics Rule (CTR), National Toxics Rule (NTR), Basin Plan, and other State plans and policies.

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

(1) NPDES Regulations. NPDES regulations at 40 CFR §122.45(d) state: "For continuous discharges all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall *unless impracticable* be stated as maximum daily and average monthly discharge limitations for all discharges other than publicly owned treatment works." 40 CFR §122.45(d)2 specifies that discharge limitations for POTWs shall be stated as average weekly limitations and average monthly limitations, unless impracticable.

(2) SIP. The SIP (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 CTR, established by USEPA at 40 CFR §131.38; and the NTR, established by USEPA at 40 CFR §131.36. Some pollutants have WQC/WQOs established by more than one of these three sources.

a. Applicable Beneficial Uses. Beneficial uses applicable to Carquinez Strait are as follows.

Table F-7. Basin Plan Beneficial Uses

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

b. 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 to implement these objectives, based on available information.

c. 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).

d. 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. These criteria of the NTR are applicable to the Carquinez Strait, the receiving water for this Discharger.

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

f. 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 part per thousand (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, the Carquinez Strait, is an estuarine environment based on salinity data generated through the Regional Monitoring Program (RMP) at the Pacheco Creek (BF10) sampling station between 1993 and 2001. In that period, the minimum salinity was 0.0 ppt, the maximum salinity was 12.8 ppt, and the average salinity was 4.4 ppt. As the salinity was between 1 and 10 ppt in 33 percent of receiving water samples, both the freshwater and saltwater criteria from the Basin Plan, NTR, and CTR are applicable to this discharge.

g. Site-Specific Metals Translators. Because NPDES regulations at 40 CFR §122.45(c) require that effluent limitations for metals be expressed as total recoverable metal, and applicable WQC for 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 that are used in NPDES permitting activities; however, site-specific conditions such as water temperature, pH, suspended solids, and organic carbon greatly impact the form of metal (dissolved, filterable, or otherwise) that is present in the water, and therefore available 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 WQOs.

For deep water discharges to the Carquinez Strait, the Regional Water Board staff used the following translators for copper and nickel, based on recommendations of the Clean Estuary Partnership's (CEPs) *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 used default translators established by the USEPA in the CTR at 40 CFR §131.38(b)(2), Table 2.

Cu and Ni Translators for Deepwater Discharges to the Carquinez Strait	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 and priority) "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any narrative or numeric criteria within a State water quality standard." Thus, assessing whether a pollutant has "reasonable potential" is the fundamental step in determining whether or not a WQBEL is required. For non-priority pollutants, Regional Water Board staff used available monitoring data; the receiving water's designated beneficial 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 Port Costa facility demonstrates Reasonable Potential as described below in sections 3.a – 3.e.

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 Port Costa 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 established by the USEPA in the NTR and 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 Site-Specific Objectives 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 or equal to the lowest applicable WQO (MEC ≥ WQO), which has been adjusted, if appropriate, for pH, hardness, and translator data. If the MEC is greater than or equal to 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 (MEC > ND).

(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—available online; see Standard Language and Other References Available Online, below) to all permittees, formally required the Discharger (pursuant to Section 13267 of the California Water Code) to initiate or continue monitoring for the priority pollutants using analytical methods that provide the best detection limits reasonably feasible. Regional Water Board staff analyzed this effluent data and the nature of the Port Costa facility to determine if the discharge has Reasonable Potential. The RPA was based on the effluent monitoring data collected by the Discharger from June 2002 through March 2007 for most inorganic pollutants. No effluent data was collected for organic pollutants.

d. Ambient Background Data

Ambient background values are used in the RPA and in the calculation of effluent limitations. For the RPA, ambient background concentrations are the observed maximum detected water column concentrations. The SIP states that for calculating WQBELs, ambient background concentrations are either the observed maximum ambient water column concentrations or, for criteria/objectives intended to protect human health from carcinogenic effects, the arithmetic mean of observed ambient water concentrations. The RMP station at Yerba Buena Island, located in the Central Bay, has been monitored for most of the inorganic (CTR constituent numbers 1–15) and some of the organic (CTR constituent numbers 16–126) toxic pollutants, and, with the exception of total ammonia, this data from the RMP was used as background data in performing the RPA for this Discharger. Ammonia WQBELs were calculated using ambient background data from the RMP station at Pacheco Creek, the station closest to the discharge point.

Not all the constituents listed in the CTR have been analyzed by the RMP. These data gaps are addressed by the Board's August 6, 2001, Letter. 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 RMP 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 *San Francisco Bay Ambient Water Monitoring Interim Report* (2003). This study includes monitoring results from sampling events in 2002 and 2003 for the remaining priority pollutants not monitored by the RMP. The RPA was conducted and the WQBELs were calculated using RMP data from 1993 through 2003 (inorganics and organics) at the Yerba Buena Island and 1993 – 2001 (ammonia) at Pacheco Creek RMP stations, and additional data from the BACWA *Ambient Water Monitoring: Final CTR Sampling Update* (2004) for the Yerba Buena Island RMP station. The Discharger 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. Reasonable Potential Determination

The 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 WQOs/WQC for all pollutants, and monitoring data was not available for others. RPA results are shown below and in Appendix A of this Fact Sheet. Based on a review of the effluent data collected during the previous permit term, the pollutants that exhibit Reasonable Potential are cadmium, copper, mercury, and ammonia.

Table F-8. Reasonable Potential Analysis Summary

CTR #	Priority Pollutants	MEC or Minimum DL [(1)(2)] (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL [(1)(2)] (µg/L)	RPA Results [(3)]
1	Antimony	**0.52**	4300	1.8	No
2	Arsenic	Not Available	36	2.81	No
3	Beryllium	< 0.5	No Criteria	0.215	Ud
4	Cadmium	**1.3**	1.1	0.16	**Yes**
5a	Chromium (III)	**0.58**	200	Not Available	Ud
5b	Chromium (VI)	Not Available	11	4.4	Ud
6	Copper	**23**	7.2	2.55	**Yes**
7	Lead	**1.48**	3.0	0.80	No
8	Mercury (303d listed)	**0.044**	0.025	0.0086	**Yes**
9	Nickel	**27**	30	3.7	No
10	Selenium	Not Available	5	0.39	Ud
11	Silver	**0.34**	2.2	0.052	No
12	Thallium	< 0.5	6.3	0.21	No
13	Zinc	**23**	86	5.1	No
14	Cyanide	**0.04**	1	< 1.0	No
15	Asbestos	Not Available	No Criteria	Not Available	Ud
16	2,3,7,8-TCDD (303d listed)	Not Available	1.4E-08	Not Available	Ud
16-TEQ	Dioxin TEQ (303d listed)	Not Available	1.4E-08	7.10E-08	Ud
17	Acrolein	Not Available	780	< 0.5	Ud
18	Acrylonitrile	Not Available	0.66	0.03	Ud

CTR #	Priority Pollutants	MEC or Minimum DL [1][2] (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL [1][2] (µg/L)	RPA Results [3]
19	Benzene	Not Available	71	< 0.05	Ud
20	Bromoform	Not Available	360	< 0.5	Ud
21	Carbon Tetrachloride	Not Available	4.4	0.06	Ud
22	Chlorobenzene	Not Available	21000	< 0.5	Ud
23	Chlorodibromomethane	Not Available	34	< 0.05	Ud
24	Chloroethane	Not Available	No Criteria	< 0.5	Ud
25	2-Chloroethylvinyl ether	Not Available	No Criteria	< 0.5	Ud
26	Chloroform	Not Available	No Criteria	< 0.5	Ud
27	Dichlorobromomethane	Not Available	46	< 0.05	Ud
28	1,1-Dichloroethane	Not Available	No Criteria	< 0.05	Ud
29	1,2-Dichloroethane	Not Available	99	0.04	Ud
30	1,1-Dichloroethylene	Not Available	3.2	< 0.5	Ud
31	1,2-Dichloropropane	Not Available	39	< 0.05	Ud
32	1,3-Dichloropropylene	Not Available	1700	Not Available	Ud
33	Ethylbenzene	Not Available	29000	< 0.5	Ud
34	Methyl Bromide	Not Available	4000	< 0.5	Ud
35	Methyl Chloride	Not Available	No Criteria	< 0.5	Ud
36	Methylene Chloride	Not Available	1600	22	Ud
37	1,1,2,2-Tetrachloroethane	Not Available	11	< 0.05	Ud
38	Tetrachloroethylene	Not Available	8.9	< 0.5	Ud
39	Toluene	Not Available	200000	< 0.3	Ud
40	1,2-Trans-Dichloroethylene	Not Available	140000	< 0.5	Ud
41	1,1,1-Trichloroethane	Not Available	No Criteria	< 0.5	Ud
42	1,1,2-Trichloroethane	Not Available	42	< 0.05	Ud
43	Trichloroethylene	Not Available	81	< 0.5	Ud
44	Vinyl Chloride	Not Available	525	< 0.5	Ud
45	2-Chlorophenol	Not Available	400	< 1.2	Ud
46	2,4-Dichlorophenol	Not Available	790	< 1.3	Ud
47	2,4-Dimethylphenol	Not Available	2300	< 1.3	Ud
48	2-Methyl- 4,6-Dinitrophenol	Not Available	765	< 1.2	Ud
49	2,4-Dinitrophenol	Not Available	14000	< 0.7	Ud
50	2-Nitrophenol	Not Available	No Criteria	< 1.3	Ud
51	4-Nitrophenol	Not Available	No Criteria	< 1.6	Ud
52	3-Methyl 4-Chlorophenol	Not Available	No Criteria	< 1.1	Ud
53	Pentachlorophenol	Not Available	0.0059	< 1.0	Ud
54	Phenol	Not Available	4600000	< 1.3	Ud
55	2,4,6-Trichlorophenol	Not Available	6.5	< 1.3	Ud
56	Acenaphthene	Not Available	2700	0.0019	Ud
57	Acenaphthylene	Not Available	No Criteria	0.00053	Ud
58	Anthracene	Not Available	110000	0.0005	Ud
59	Benzidine	Not Available	0.00054	< 0.0015	Ud
60	Benzo(a)Anthracene	Not Available	0.049	0.0053	Ud
61	Benzo(a)Pyrene	Not Available	0.049	0.00147	Ud
62	Benzo(b)Fluoranthene	Not Available	0.049	0.0046	Ud
63	Benzo(ghi)Perylene	Not Available	No Criteria	0.0027	Ud
64	Benzo(k)Fluoranthene	Not Available	0.049	0.0015	Ud
65	Bis(2-Chloroethoxy)Methane	Not Available	No Criteria	< 0.3	Ud
66	Bis(2-Chloroethyl)Ether	Not Available	1.4	< 0.3	Ud
67	Bis(2-Chloroisopropyl)Ether	Not Available	170000	Not Available	Ud
68	Bis(2-Ethylhexyl)Phthalate	Not Available	5.9	0.091	Ud
69	4-Bromophenyl Phenyl Ether	Not Available	No Criteria	< 0.23	Ud
70	Butylbenzyl Phthalate	Not Available	5200	0.0056	Ud

CTR #	Priority Pollutants	MEC or Minimum DL [1][2] (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL [1][2] (µg/L)	RPA Results [3]
71	2-Chloronaphthalene	Not Available	4300	< 0.3	Ud
72	4-Chlorophenyl Phenyl Ether	Not Available	No Criteria	< 0.3	Ud
73	Chrysene	Not Available	0.049	0.0024	Ud
74	Dibenzo(a,h)Anthracene	Not Available	0.049	0.00064	Ud
75	1,2-Dichlorobenzene	Not Available	17000	< 0.8	Ud
76	1,3-Dichlorobenzene	Not Available	2600	< 0.8	Ud
77	1,4-Dichlorobenzene	Not Available	2600	< 0.8	Ud
78	3,3 Dichlorobenzidine	Not Available	0.077	< 0.001	Ud
79	Diethyl Phthalate	Not Available	120000	< 0.24	Ud
80	Dimethyl Phthalate	Not Available	2900000	< 0.24	Ud
81	Di-n-Butyl Phthalate	Not Available	12000	0.016	Ud
82	2,4-Dinitrotoluene	Not Available	9.1	< 0.27	Ud
83	2,6-Dinitrotoluene	Not Available	No Criteria	< 0.29	Ud
84	Di-n-Octyl Phthalate	Not Available	No Criteria	< 0.38	Ud
85	1,2-Diphenylhydrazine	Not Available	0.54	0.0037	Ud
86	Fluoranthene	Not Available	370	0.011	Ud
87	Fluorene	Not Available	14000	0.0036	Ud
88	Hexachlorobenzene	Not Available	0.00077	0.000022	Ud
89	Hexachlorobutadiene	Not Available	50	< 0.3	Ud
90	Hexachlorocyclopentadiene	Not Available	17000	< 0.31	Ud
91	Hexachloroethane	Not Available	8.9	< 0.2	Ud
92	Indeno(1,2,3-cd)Pyrene	Not Available	0.049	0.004	Ud
93	Isophorone	Not Available	600	< 0.3	Ud
94	Naphthalene	Not Available	No Criteria	0.00255	Ud
95	Nitrobenzene	Not Available	1900	< 0.25	Ud
96	N-Nitrosodimethylamine	Not Available	8.1	< 0.3	Ud
97	N-Nitrosodi-n-Propylamine	Not Available	1.4	< 0.001	Ud
98	N-Nitrosodiphenylamine	Not Available	16	< 0.001	Ud
99	Phenanthrene	Not Available	No Criteria	0.0061	Ud
100	Pyrene	Not Available	11000	0.0194	Ud
101	1,2,4-Trichlorobenzene	Not Available	No Criteria	< 0.3	Ud
102	Aldrin	Not Available	0.00014	1.4E-07	Ud
103	Alpha-BHC	Not Available	0.013	0.000496	Ud
104	beta-BHC	Not Available	0.046	0.000413	Ud
105	gamma-BHC	Not Available	0.063	0.0007034	Ud
106	delta-BHC	Not Available	No Criteria	0.000053	Ud
107	Chlordane (303d listed)	Not Available	0.00059	0.00018	Ud
108	4,4'-DDT (303d listed)	Not Available	0.00059	0.000167	Ud
109	4,4'-DDE (linked to DDT)	Not Available	0.00059	0.000693	Ud
110	4,4'-DDD	Not Available	0.00084	0.000313	Ud
111	Dieldrin (303d listed)	Not Available	0.00014	0.000264	Ud
112	Alpha-Endosulfan	Not Available	0.0087	0.000031	Ud
113	beta-Endolsulfan	Not Available	0.0087	0.000069	Ud
114	Endosulfan Sulfate	Not Available	240	0.0000819	Ud
115	Endrin	Not Available	0.0023	0.00004	Ud
116	Endrin Aldehyde	Not Available	0.81	Not Available	Ud
117	Heptachlor	Not Available	0.00021	0.000019	Ud
118	Heptachlor Epoxide	Not Available	0.00011	0.000094	Ud
119-125	PCBs sum (303d listed)	Not Available	0.00017	0.00146	Ud
126	Toxaphene	Not Available	0.0002	Not Available	Ud
	Tributylin	Not Available	0.0074	0.002	Ud
	Total PAHs	Not Available	15	0.05145	Ud

CTR #	Priority Pollutants	MEC or Minimum DL [1][2] (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL [1][2] (µg/L)	RPA Results [3]
	Total Ammonia [4]	**9600**	1,240	200/70 [5]	**Yes**

Footnotes for Table F-8:
(1) The Maximum Effluent Concentration (MEC) and maximum background concentration are the actual detected concentrations unless preceded by a "<" sign, in which case the value shown is the minimum detection level (DL).
(2) The MEC or maximum background concentration is "Not Available" when there are no monitoring data for the constituent.
(3) RPA Results = Yes, if MEC > WQO/WQC, B > WQO/WQC and MEC is detected, or Trigger 3;
= No, if MEC and B are < WQO/WQC or all effluent data are undetected;
= Undetermined (Ud), if no criteria have been promulgated or there are insufficient data.
(4) See section IV.C.4.d of this Fact Sheet for an explanation of the WQOs for ammonia.
(5) Maximum background concentrations of 200 and 70 were used to calculate acute and chronic WQBELs, respectively

(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 Discharger will continue to monitor for these constituents in the effluent using analytical methods that provide the best feasible detection limits. When additional data become available, further RPA will be conducted to determine whether to add numeric effluent limitations to this Order or to continue monitoring.

(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 Discharger 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.

4. WQBEL Calculations

a. Pollutants with Reasonable Potential

WQBELs were developed for the toxic and priority pollutants that were determined to have reasonable potential to cause or contribute to exceedances of applicable 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.

b. Dilution Credit

The SIP provides the basis for any dilution credit. The Port Costa WWTP outfall is designed to achieve a minimal dilution of 10:1. Based on 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 itself is very complex. Thus there is 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 nay be limited or denied on a pollutant-by-pollutant basis…." 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.

(1) 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. USEPA added dioxin and furan compounds, chlordane, dieldrin, and 4,4'DDT to the CWA Section 303(d) list. A dilution credit is 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 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).

(2) 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. There were insufficient data for mercury to determine a mass load for this Discharger.

(3) For non-bioaccumulative constituents, a conservative allowance of 10:1 dilution (D=9) 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 from Table 4-1, 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:

(a) 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-body basis (SIP 1.4.3). Consistent with the SIP, Regional Water Board staff have chosen to use a water body-by-body basis because of the uncertainties inherent in accurately characterizing ambient background in a complex estuarine system on a discharge-by-discharge basis.

(b) Because of the complex hydrology of the San Francisco Bay, a mixing zone has not been established. There are uncertainties inaccurately 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 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 seep. These changes affect flow patterns that in turn can affect the initial dilution achieved by a diffuser.

(c) The SIP allows a limited mixing zone and dilution credit for persistent pollutants. Discharges to the Bay are defined in the SIP as incompletely mixed discharges. Thus, dilution credit should be determined using site-specific information. 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 Regional Water Board shall consider the presence of pollutants in a discharge that are…persistent." The SIP defines persistent pollutants to be "substances fro 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 initial dilution do not address the effects of these persistent pollutants in the Bay environment, such as their long term effects on sediment concentrations. Though this concern would not apply to non-persistent pollutants like ammonia, cyanide, and some organic compounds, a conservative dilution credit is still appropriate because of the lack of near field receiving water data for these pollutants.

(d) In calculating WQBELS for total ammonia, a conservative 10;1 dilution ratio was used. However, ammonia is not a persistent pollutant, and the Basin Plan states: "In most instances, ammonia will be diluted or degraded to a nontoxic state fairly rapidly." As such, granting dilution credits based on actual initial dilution is protective of water quality. As the Discharger can comply with WQBELs for ammonia using a 10:1 dilution ratio, an actual initial dilution study was not undertaken.

d. Calculation of Pollutant Specific WQBELs

(1) Cadmium

(a) *Cadmium WQC.* The most stringent applicable WQC for cadmium, established by the Basin Plan for protection of aquatic life, are acute and chronic criteria of 3.7 and 1.1 µg/L, respectively.

(b) *RPA Results.* This Order establishes effluent limitations for cadmium, as the MEC of 1.3 µg/L exceeds the applicable WQC for this pollutant, demonstrating Reasonable Potential by Trigger 1.

(c) *Cadmium WQBELs.* Final WQBELs for cadmium, calculated according to SIP procedures (and a coefficient of variation [CV] of 1.1), are an AMEL of 6.7 µg/L and an MDEL of 18 µg/L. The limitations take into account the deep water nature of the discharge, and are therefore based on a minimum initial dilution of 10 to 1, in accordance with the Basin Plan.

Table F-9. Effluent Limitations for Cadmium

Effluent Limitations for Cadmium		
	AMEL	**MDEL**
Based on SIP	6.7 µg/L	18 µg/L

(d) *Immediate Compliance Feasible.* Statistical analysis of effluent data for cadmium collected over the period of June 2002 through March 2007 shows that the 95th percentile (0.87 µg/L) is less than the AMEL (6.7 µg/L); the 99th percentile (1.6 µg/L) is less than the MDEL (18 µg/L); and the mean (0.27 µg/L) is less than the long term average of the projected normal distribution of the effluent data set after accounting for effluent variability (3.3 µg/L). Therefore, the Regional Water Board concludes that immediate compliance with final effluent limitations for cadmium is feasible, and final effluent limitations will become effective upon adoption of this Order.

(2) Copper

(a) *Copper WQC.* The chronic and acute marine WQC for copper from the Basin Plan and the CTR are 3.1 and 4.8 micrograms per liter (µg/L), respectively, expressed as dissolved metal. Regional Water Board staff converted these WQC to total recoverable metal using the site-specific translators of 0.38 (chronic) and 0.67 (acute), as recommended by the CEP's *North of Dumbarton Bridge Copper and Nickel Development and Selection of Final Translators* (2005). The resulting chronic water quality criterion of 8.2 µg/L and acute water quality criterion of 7.2 µg/L were used to perform the RPA.

(b) *RPA Results.* This Order establishes effluent limitations for copper because the MEC of 23 µg/L exceeds the WQC for copper, demonstrating Reasonable Potential by Trigger 1.

(c) *Copper WQBELs.* WQBELs are calculated based on the CTR's WQC and the site-specific WQOs recommended by the CEP's *North of Dumbarton Bridge Copper and Nickel Site-Specific Objective (SSO) Derivation* (2004). Both sets of criteria are expressed as total recoverable metal using the site-specific translators and water effects ratio (WER) of 2.4 recommended by the CEP. The following table compares effluent limitations for copper calculated according to SIP procedures (and a CV of 0.61) using the two sets of criteria described above. The limitations take into account the deep water nature of the discharge, and are

therefore based on a minimum initial dilution of 10 to 1, in accordance with the Basin Plan.

Table F-10. Effluent Limitations for Copper

Effluent Limitations for Copper		
	AMEL	**MDEL**
Based on CTR Criteria	73 µg/L	150 µg/L
Based on SSOs	58 µg/L	120 µg/L

(d) *Immediate Compliance Feasible.* Statistical analysis of effluent data for copper, collected over the period of June 2002 through March 2007, shows that the 95th percentile (18 µg/L) is less than the AMEL (73 µg/L); the 99th percentile (22 µg/L) is less than the MDEL (150 µg/L); and the mean (8.9 µg/L) is less than the long term average of the projected normal distribution of the effluent data set after accounting for effluent variability (47 µg/L). The Regional Water Board concludes, therefore, that immediate compliance with final effluent limitations for copper is feasible; and final effluent limitations will become effective upon adoption of this Order.

(e) *Alternate Limitations for Copper.* As described in the CEP's *North of Dumbarton Bridge Copper and Nickel Site-Specific Objective Determination* (December 2004), the Regional Water Board proposes to develop site-specific criteria for copper in non-ocean, marine waters of the Region. Proposed SSOs for copper are 2.5 and 3.9 µg/L as four-day and one-hour average (i.e., chronic and acute) criteria, respectively. If these SSOs for copper are adopted, final effluent limitations, calculated according to Section 1.4 of the SIP, using a WER of 2.4, would be an AMEL of 58 µg/L and an MDEL of 120 µg/L. If these SSOs for copper are adopted, the alternate effluent limitations will become immediately effective upon the adoption date, so long as the SSOs and their current justification remain unchanged.

(3) Mercury

(a) *Mercury WQC.* The most stringent applicable WQC for mercury, established by the Basin Plan for protection of saltwater aquatic life, are acute and chronic criteria of 2.1 and 0.025 µg/L, respectively.

(b) *RPA Results.* This Order establishes effluent limitations for mercury, as the MEC of 0.044 µg/L exceeds the applicable WQC for this pollutant, demonstrating Reasonable Potential by Trigger 1.

(c) *Mercury WQBELs.* Final WQBELs for mercury, calculated according to SIP procedures (and a CV of 0.6), are an AMEL of 0.020 µg/L and an MDEL of 0.041 µg/L. Because mercury is a bioaccumulative pollutant, these limitations are calculated without credit for dilution.

Table F-11. Effluent Limitations for Mercury

Effluent Limitations for Mercury		
	AMEL	**MDEL**
Based on SIP	0.020 µg/L	0.041 µg/L

(d) *Immediate Compliance Infeasible.* The Discharger's Feasibility Study asserts that the facility cannot immediately comply with the final WQBELs for mercury. With insufficient effluent data to determine the distribution of the effluent data set or to calculate a mean and standard deviation, feasibility to comply with final effluent limitations is determined by comparing the MEC (0.044 µg/L) to the AMEL (0.020 µg/L) and the MDEL (0.041 µg/L). Based on this comparison, the Regional Water Board concurs with the Discharger's assertion of infeasibility to comply with final WQBELs for mercury.

(e) *Need for Cease and Desist Order.* Pursuant to State Water Board Order WQ-2007-0004, compliance schedules are not authorized for effluent limitations based on numeric objectives or criteria that were in effect prior to the SIP. This includes the Basin Plan criteria for mercury. Because it is infeasible for the Discharger to immediately comply with final WQBELs for mercury, the Discharger will discharge in violation of this Order. Therefore, a Cease and Desist Order has been adopted concurrently with this Order. The Cease and Desist Order is necessary to ensure that the Discharger achieves compliance; and it establishes time schedules for the Discharger to complete necessary investigative, preventive, and remedial actions to address its imminent and threatened violations. However, if approved, requirements under the mercury TMDL will supersede the Cease and Desist Order.

(4) Ammonia

(a) *Ammonia WQC.* The Basin Plan contains WQOs for un-ionized ammonia of 0.025 milligrams per liter (mg/L) as an annual median, 0.16 mg/L as a maximum north of the Golden Gate Channel, and 0.4 mg/L as a maximum south of the Golden Gate Channel. The WQOs are translated from un-ionized ammonia concentrations to equivalent total ammonia concentrations (as nitrogen), since (1) sampling and laboratory methods are not available to analyze for un-ionized ammonia; and (2) the fraction of total ammonia that exists in the toxic un-ionized form depends on the pH, salinity and temperature of the receiving water.

To translate the Basin Plan unionized ammonia objective, Regional Water Board staff used pH, salinity and temperature data from March 1993 to August 2001 from the Pacheco Creek RMP station, the nearest RMP station to the outfall. The following equation was used to determine the fraction of total ammonia in a discharge that would be converted to the toxic un-ionized form in freshwater (USEPA, 1999, *Update of Ambient Water Quality Criteria for Ammonia*, EPA Publication No. 822-R-99-014):

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

Where:

pK = 0.09018 + 2729.92/(T+273)
T = temperature in degrees Celsius

To convert the Basin Plan's chronic un-ionized ammonia WQO to an equivalent total ammonia concentration, the median un-ionized ammonia fraction at the Pacheco Creek monitoring station was used. To convert the Basin Plan's acute un-ionized ammonia WQO to an equivalent total ammonia concentration, the 90th percentile un-ionized ammonia fraction at Pacheco Creek was used. Using the 90th percentile and median to express the acute and chronic un-ionized ammonia WQOs as equivalent total ammonia concentrations is consistent with USEPA guidance on translating dissolved metal WQOs to total recoverable metal WQOs (USEPA, 1996, *The Metals Translator: Guidance for Calculating a Total Recoverable Limit from a Dissolved Criterion,* EPA Publication Number 823-B-96-007). The equivalent total ammonia acute and chronic WQOs are 4.66 mg/L and 1.24 mg/L, respectively.

(b) *RPA Results*. The SIP methodology was used to perform the RPA and to calculate effluent limitations. To set limitations for toxic pollutants (section 4.5.5.2), the Basin Plan indicates that WQBELs shall be calculated according to the SIP. Section 3.3.20 of the Basin Plan refers to ammonia as a toxic pollutant, and therefore, it is consistent with the Basin Plan to use SIP methodology to determine and establish effluent limitations for ammonia. This Order establishes effluent limitations for total ammonia because the MEC of 9.6 mg/L exceeds the most stringent, applicable WQO (1.24 mg/L) for this pollutant, demonstrating Reasonable Potential by Trigger 1.

(c) *WQBELs*. The total ammonia WQBELs calculated according to SIP procedures are an MDEL of 33 mg/L and an AMEL of 13 mg/L. To calculate total ammonia limits, some statistical adjustments were made because the Basin Plan's chronic WQO for un-ionized ammonia is based on an annual median, while chronic criteria are usually based on a 4-day average; also, the SIP assumes a monthly sampling frequency of 4 days per month to calculate effluent limitations based on chronic criteria. To use SIP methodology to calculate effluent limits for a Basin Plan objective that is based on an annual median, an averaging period of 365 days and a monitoring frequency of 30 days per month (the maximum daily sampling frequency in a month since the averaging period for a chronic criterion is longer than 30 days) were used. These statistical adjustments are supported by USEPA's *Water Quality Criteria; Notice of Availability; 1999 Update of Ambient Water Quality Criteria for Ammonia*; published on December 22, 1999, in the Federal Register. A conservative dilution credit of 10:1 was used in calculating the ammonia WQBELs, as an actual initial dilution ratio for this Discharger was not available.

Following SIP methodology as guidance, Regional Water Board staff used the maximum ambient background total ammonia concentration to calculate effluent

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

Final WQBELs were calculated using a conservative dilution ratio of 10:1. Ammonia, however, is not a persistent pollutant and Regional Water Board staff believe it is appropriate to use actual initial dilution. The actual initial dilution ratio was not available at the time of permit reissuance. The Discharger will be required to perform a modeling study of the actual initial dilution ratio.

Table F-12. Effluent Limitations for Total Ammonia

Effluent Limitations for Total Ammonia		
	AMEL	**MDEL**
Based on SIP	13 mg/L	33 mg/L

(d) *Plant Performance and Attainability.* Statistical analysis of effluent data for total ammonia collected over the period of August 2002 through June 2007 shows that the 95th percentile (12 mg/L) is less than the AMEL (13 mg/L); the 99th percentile (18 mg/L) is less than the MDEL (33 mg/L); and the mean (5 mg/L) is less than the long-term average of the projected distribution of the effluent data set after accounting for effluent variability (16 mg/L). The Regional Water Board concludes, therefore, that immediate compliance with final effluent limitations for ammonia is feasible; and final effluent limitations will become effective upon adoption of this Order.

f. Effluent Limit Calculations

The following table shows the WQBEL calculations for cadmium, copper, mercury, and total ammonia.

Table F-13. Effluent Limitation Calculations

PRIORITY POLLUTANTS	Cadmium	Copper		Mercury	Total Ammonia	
Units	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Basis and Criteria type	Basin Plan FW Aq Life	Basin Plan & CTR SW Aq Life	Alternate limits using SSOs (December 2004)	Basin Plan SW Aq Life	Basin Plan (Acute)	Basin Plan (Chronic)
CTR Criteria -Acute	-----	7.2	-----	-----	4660	
CTR Criteria -Chronic	-----	8.2	-----	-----		1240
SSO Criteria -Acute (December 2004) (Diss.)		-----	3.9			
SSO Criteria -Chronic (December 2004) (Diss.)		-----	2.5			
Water Effects ratio (WER)	1	2.4	2.4	1	1	
Lowest WQO	1.1	7.2		0.025	4660	1240
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
No. of samples per month	4	4	4	4	4	30
Aquatic life criteria analysis required? (Y/N)	Y	Y	Y	Y	Y	Y
HH criteria analysis required? (Y/N)	N	N	N	Y	N	N
Applicable Acute WQO	3.7	17	13.97	2.1	4930	
Applicable Chronic WQO	1.1	20	15.79	0.025		1240
HH criteria	-----	-----	-----	0.051	N	N
Background (Conc for Aquatic Life calc)	0.16	2.6	2.6	0.0086	200	70
Background (Average Conc for Human Health calc)	-----	-----	-----	0.0025		
Is the pollutant Bioaccumulative(Y/N)? (e.g., Hg)	N	N	N	Y	N	N
ECA acute	36	149	117	2.1	47500	
ECA chronic	10	173	135	0.025		11770
ECA HH				0.051		
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	N	N	N	Y	N	N
Avg of effluent data points	0.27	8.9	8.9		5086	5086
Std Dev of effluent data points	0.30	5.5	5.5		2876	2876
CV calculated	1.1	0.61	0.61	N/A	0.56542	0.56542
CV (Selected) - Final	1.1	0.61	0.61	0.60	0.56542	0.56542
ECA acute mult99	0.19	0.31	0.31	0.32	0.337	
ECA chronic mult99	0.35	0.52	0.52	0.53		0.934
LTA acute	6.8	46.9	36.7	0.7	16028	
LTA chronic	3	90	70	0.013		10992
minimum of LTAs	3.3	47	37	0.013	16028	10992
AMEL mult95	2.0	1.6	1.6	1.6	1.5	1.2
MDEL mult99	5.3	3.2	3.2	3.1	3.0	3.0
AMEL (aq life)	7	73	58	0.020	24338	12952
MDEL(aq life)	18	149	117	0.041	47500	32575
MDEL/AMEL Multiplier	2.61	2.03	2.03	2.01	1.95	2.52
AMEL (human hlth)				0.051		
MDEL (human hlth)				0.102		
minimum of AMEL for Aq. life vs HH	6.7	73.4	57.6	0.020	24338	12952
minimum of MDEL for Aq. Life vs HH	17.6	149.0	116.8	0.041	47500	32575
Current limit in permit (30-day average)	-----	-----	-----	-----	-----	-----
Current limit in permit (daily)	-----	-----	-----	-----	-----	-----
Final limit - AMEL	6.7	73	58	0.020	24338	12952
Final limit - MDEL	18	149	117	0.041	47500	32575
Max Effl Conc (MEC)	1.3	23	23	0.044	9800	9800

5. Whole Effluent Toxicity (WET)

a. Permit Requirements

This Order includes effluent limits for whole-effluent acute toxicity. All bioassays shall be performed according to the USEPA approved method in 40 CFR §46, currently "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms," currently 5th Edition. The Discharger is required to use the 5th Edition method for compliance determination upon the effective date of this Order.

b. Ammonia Toxicity

If acute toxicity is observed in the future and the Discharger believes that it is due to ammonia toxicity, this has to be shown through a Toxicity Identification Evaluation (TIE) acceptable to the Executive Officer. If the Discharger demonstrates to the satisfaction of the Executive Officer that exceedance of the acute toxicity limits is caused by ammonia and that the discharge is in compliance with the effluent limit for ammonia, then such toxicity does not constitute a violation of this effluent limit. This is based on the Basin Plan, at Chapter 3 under "Un-Ionized Ammonia." If ammonia toxicity is verified in the TIE, the Discharger may use an adjustment protocol approved by the Executive Officer for routine bioassay testing.

D. Final Effluent Limitations

1. Following is a summary of the technology-based and water quality-based effluent limitations established by this Order for Discharge Point E-001.

a. Effluent Limitations for Toxic Pollutants

Table F-14. Summary of Final Water Quality Based Effluent Limitations

Parameter	Units	Final Effluent Limits	
		AMEL	MDEL
Cadmium	µg/L	6.7	18
Copper [1]	µg/L	73	150
Mercury	µg/L	0.020	0.041
Total Ammonia	mg/L N	13.0	33.0

Footnotes for Table F-14:

(1) As described in this Fact Sheet, the Regional Water Board is proposing to develop SSOs for copper in non-ocean, marine waters of the Region. Based on proposed SSOs of 2.5 and 3.9 µg/L as four-day and one-hour average criteria, final effluent limitations would be an AMEL of 58 µg/L and an MDEL of 120 µg/L. If these SSOs for copper are adopted, the alternate effluent limitations will become immediately effective upon the adoption date, so long as the SSOs and their current justification remain unchanged.

E. Land Discharge Specifications

Not Applicable

F. Reclamation Specifications

Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Receiving Water Limitations V.A. (Surface Water Limitations)

These limitations are in the existing permit and are based on water quality objectives for physical, chemical, and biological characteristics of receiving waters from Chapter 3 of the Basin Plan.

B. Receiving Water Limitation V.B. (Ground Water Limitations)

Not Applicable

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

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

(a) Document compliance with waste discharge requirements and prohibitions established by the Regional Water Board,

(b) Facilitate self-policing by the discharger in the prevention and abatement of pollution arising from waste discharge,

(c) Develop or assist in the development of limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards, and to

(d) 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 Regional Water Board's policies. The MRP also defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents, for which no effluent limitations are established, is also required to provide data for future completion of RPAs for them.

A. Influent Monitoring

The influent monitoring requirements are unchanged from Order R2-2003-0009.

B. Effluent Monitoring

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

(1) Monitoring for settleable solids is no longer required, as the effluent limitation for this parameter has not been retained by the Order.

(2) Specific monitoring requirements for arsenic, chromium (VI), cyanide, lead, nickel, selenium, silver, zinc, dieldrin, and 4,4,-DDE have been replaced with monitoring requirements for all priority pollutants once per the five year term of this Order.

(3) Routine monitoring in effluent is required for cadmium, copper, mercury, and total ammonia – those priority toxic pollutants with effluent limitations established by the Order. Monitoring for all other priority toxic pollutants must be conducted in accordance with methods described in the Regional Water Board's letter of August 6, 2001 – Requirements for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy.

C. Receiving Water Monitoring

Receiving water monitoring requirements include Standard Observations and are retained from the previous permit.

D. Other Monitoring Requirements

1. Sludge Monitoring.

Under agreement with Central Contra Costa Sanitary District (CCCSD), all solids from the facility's septic tank are transported to CCCSD, where they become part of the waste stream at this wastewater treatment plant. Therefore, this requirement does not apply.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions (Provision VI.A)

Standard Provisions, which in accordance with 40 CFR §122.41 and §122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachments D and G of this Order.

NPDES regulations at 40 CFR §122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in this 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 at 40 CFR §122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code 13387(e).

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

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 D**)** 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 Study

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. Optional Mass Offset Plan

This option is provided to encourage the Discharger to further implement aggressive reduction of mass loads to the Carquinez Strait. If the Discharger wishes to pursue a mass offset program, a mass offset plan for reducing 303(d) listed pollutants to the same receiving water body needs to be submitted for Board approval. The Board will consider any proposed mass offset plan and amend this Order accordingly.

3. Best Management Practices and Pollution Prevention

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

Additionally, on October 15, 2003, the Regional Water Board adopted Resolution R2-2003-0096 in support of a collaborative working approach between the Regional Water Board and BACWA, to promote Pollution Minimization Program development and excellence. Specifically, the Resolution embodies a set of eleven guiding principles that will be used to develop tools such as "P2 menus" for specific pollutants, as well as provide guidance in

improving P2 program efficiency and accountability. Key principles in the Resolution include promoting watershed, cross-program and cross-media approaches to pollution prevention, and jointly developing tools to assess program performance that may include peer reviews, self-audits or other formats.

Due to the size of the facility and its service area, the expectation of the Regional Water Board is that the annual report will include, at a minimum, a brief description of its treatment plant and service area, documentation of the continuation of its public outreach program, and identification of specific tasks and time schedules for future efforts.

4. Construction, Operation, and Maintenance Specifications

a. Wastewater Facilities, Review and Evaluation, Status Reports

This provision is based on the previous Order and the Basin Plan. See Section VI.C.4 of this Order for specific requirements.

b. Operations and Maintenance Manual, Review and Status Reports

This provision is based on the Basin Plan, the requirements of 40 CFR §122, and the previous Order. See Section VI.C.4 of this Order for specific requirements.

c. Contingency Plan, Review and Status Reports

This provision is based on the Basin Plan, the requirements of 40 CFR §122, and the previous Order. See Section VI.C.4 of this Order for specific requirements.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Sludge Management Practices Requirement

This provision is based on the Basin Plan (Chapter 4) and 40 CFR §257 and 503.

b. Sanitary Sewer Overflows and Sewer System Management Plan

The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ on May 2, 2006. This provision is to explain the Order's requirements as they relate to the Discharger's collection system, and to promote consistency with the State Water Board adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Overflow (SSO DWRs) and the related Monitoring and Reporting Program (Order No. 2006-0003-DWQ).

6. Implementation Plan for Copper

The proposed Basin Plan copper SSO amendment includes implementation plans for source control of copper for the entire Bay region. This provision requires an action plan for implementation of source control requirements for wastewater treatment facilities once the alternate limits become effective.

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, San Francisco Bay Region (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 Port Costa WWTP. 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 has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the following a public notice in the Martinez News-Gazette on, or around, November 15, 2007

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail to the Executive Officer at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on **December 21, 2007.**

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 30, 2008
Time: 9:00 am
Location: Elihu Harris State Office Building
1515 Clay Street, 1st 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 is http://www.waterboards.ca.gov/sanfranciscobay where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water 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 Adrienne Miller at (510) 622-2415 or ADMiller@waterboards.ca.gov

APPENDIX B

Revised Tentative Cease and Desist Order

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

REVISED TENTATIVE CEASE AND DESIST ORDER NO. R2-2008-XXXX

REQUIRING THE CONTRA COSTA COUNTY SANITATION DISTRICT NO. 5 TO CEASE AND DESIST DISCHARGING WASTEWATER IN VIOLATION OF REQUIREMENTS TO WATERS OF THE STATE

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

1. The Contra Costa County Sanitation District No. 5 (hereinafter "Discharger") owns and operates a wastewater treatment plant, located at the end of Canyon Lake Drive, Port Costa, Contra Costa County. The plant treats domestic wastewater from the community of Port Costa. It has a dry weather design capacity of 0.033 million gallons per day.

2. The wastewater discharge has been regulated by waste discharge requirements in Order No. R-2-2003-0009 (NPDES Permit No. CA0037885).

3. Concurrent with the adoption of this Cease and Desist Order, the Regional Water Board adopted Order No. R2-2008-XXXX (hereinafter "Permit"), reissuing waste discharge requirements for the Discharger. The Permit contains prohibitions, limitations, and provisions regulating the discharge. The limitations include those listed in Table 1 below, among others.

Table 1: Permit Effluent Limits

Parameter	Final Effluent Limits in Permit		Monitoring Station
	Average Monthly Effluent Limit (µg/L)	Maximum Daily Effluent Limit (µg/L)	
Mercury	0.020	0.041	E-001

4. The Discharger submitted an infeasibility study demonstrating that it cannot comply with the effluent limits listed in Table 1. As stated in the Permit findings, the Regional Water Board concurs with the Discharger because the maximum effluent concentration exceeds the average monthly and daily maximum limits, 0.20 µg/L and 0.041 µg/L, respectively.

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

6. Because the Discharger will violate or threatens to violate required effluent limits, this Order is necessary to ensure that the Discharger achieves compliance. This Order establishes time schedules for the Discharger to complete necessary investigative, preventive, and remedial actions to address its imminent and threatened violations.

7. The time schedules in this Order are parameter-specific and intended to be as short as possible. They account for the considerable uncertainty in determining effective measures (e.g., pollution prevention and treatment plant upgrades) necessary to achieve compliance. This Order allows some time to first explore source control measures before requiring further actions, such as treatment plant upgrades, which are likely to be much more costly. The time schedules are based on reasonably expected times needed to implement source identification and upstream source control, evaluate success, identify on-site treatment alternatives if necessary, test and select from among alternatives, and construct plant upgrades. The Regional Water Board may revisit these assumptions as more information becomes available.

8. As part of the time schedules to achieve compliance, this Order requires the Discharger to comply with interim effluent limits, where feasible. These interim limits are intended to ensure that the Discharger maintains at least its existing performance while completing all tasks required during the time schedules. The interim limits are based on past performance or limits in previous orders, whichever are more stringent. If based on past performance, the interim limits represent the 99.87th percentile of actual measured discharge concentrations (three standard deviations from the mean).

   There is insufficient mercury effluent data to calculate a mean or standard deviation, and the maximum observed effluent concentration for the WWTP for the period from June 2002-March 2007 is 0.044 µg/L. The Discharger requested an interim mercury limit of 0.087 µg/L), which is based on secondary treatment performance of POTWs in the San Francisco Bay region as cited in the June 2001, Water Board Staff Report entitled *Statistical Analysis of Pooled Data From Regionwide Ultraclean Mercury Sampling for Municipal Dischargers*. The Regional Water Board grants this request, and this Order establishes the interim mercury effluent limitation at 0.087 µg/L.

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

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

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

1. Prescribed Actions. The Discharger shall comply with the required actions in Table 2 in accordance with the time schedules provided therein to comply with all effluent limits contained in the Permit. All deliverables listed in Table 2 shall be acceptable to the Executive Officer, who will review them for adequacy and compliance with the Table 2 requirements. The Discharger shall further implement all actions set forth in each deliverable, unless the Executive Officer finds the deliverable to be unacceptable.

2. Exceptions. The following exceptions apply to the parameter-specific time schedules and prescribed actions in Table 2.

    a. *Mercury*. The mercury-related time schedules and prescribed actions shall cease to be in effect upon the effective date of a permit[*] that supersedes the mercury limits in the Permit.

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

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

5. Effective Date. This Order shall be effective on the effective date of the Permit.

[*] In November 2007, the Regional Water Board adopted a permit that will supersede existing mercury requirements and implement the wasteload allocations for municipal and industrial wastewater discharges identified in the San Francisco Bay Mercury TMDL that the Regional Water Board adopted in August 2006.

Table 2: Time Schedules and Prescribed Actions

Action	Deadline
	Mercury
a. Comply with the following interim effluent limits at Monitoring Station EFF-001: *Mercury*: Maximum daily effluent limit = 0.087 µg/L	Upon the effective date of this Order
b. If discharge data from the previous two years continue to show that the discharge is out of compliance (as defined in Section 2.4.5 of the State Implementation Policy) with the permit effluent limits, submit a plan for identifying all mercury sources to the discharge. Examples of potential mercury sources include dental offices, laboratories, medical facilities, fluorescent light tubes, thermometers, and electrical switches. The plan shall, at a minimum, include sampling influent waste streams to identify and quantify pollutant sources.	January 1, 2009
c. Implement the plan developed in action "b" within 30 days following the deadline for action "b," and submit by the deadline for this action a report that contains an inventory of the pollutant sources.	June 1, 2009
d. Submit a report documenting development and initial implementation of a program to reduce and prevent the pollutants of concern in the discharge. The program shall consist, at a minimum, of the following elements: i. Maintain a list of sources of pollutants of concern. ii. Investigate each source to assess the need to include it in the program. iii. Identify and implement targeted actions to reduce or eliminate discharges from each source in the program. iv. Develop and distribute, as appropriate, educational materials regarding the need to prevent sources to the sewer system.	January 1, 2010
e. Continue to implement the program described in action "d" and submit annual status reports that evaluate its effectiveness and summarize planned changes. Report whether the program has successfully brought the discharge into compliance with the effluent limits in the Permit. If not, identify and implement additional measures to further reduce discharges.	Annually each February 28 in Best Management Practices and Pollutant Minimization Report required by Permit Provision VI.C.3

Action	Deadline
	Mercury
f. If by February 28, 2011, discharge data continue to show the discharge is out of compliance (as defined in 2.4.5 of the State Implementation Policy) with the Permit effluent limits, submit a report, by the deadline for this action, identifying more aggressive actions to ensure compliance. These actions shall include, but not be limited to, reviewing options for pretreatment and upgrades to the treatment plant. The report shall identify an implementation schedule for investigating these options, selecting a preferred option, and implementing the chosen option. At a minimum, the report shall plan for the following activities: i. Bench scale testing or pilot scale testing or both ii. Development of preliminary design specifications iii. Development of final design specifications iv. Procurement of funding v. Acquisition of necessary permits and approvals vi. Construction	January 1, 2012
g. Implement the plan required in action "f" within 45 days following the deadline for action "f," and submit annual status reports.	Annually each January 30 in the Annual Self-Monitoring Report required by Permit Attachment E, Monitoring and Reporting Program
h. Submit documentation confirming complete plan implementation and comply with effluent limits in the Permit.	June 1, 2015

I, Bruce H. Wolfe, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on _____, 2008.

BRUCE H. WOLFE
Executive Officer

APPENDIX C

Written Comments

OAKLEY WATER STRATEGIES

December 21, 2007

VIA EMAIL AND FACSIMILE: (510) 622-2460

Mr. Bruce Wolfe, Executive Officer
San Francisco Bay Regional Water Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Subject: Comments on Tentative Order Reissuing the Contra Costa County Sanitation District No. 5 NPDES Permit (CA0037885)

Dear Mr. Wolfe:

On behalf of Contra Costa County Sanitation District No. 5, we want to thank you for the opportunity to comment on the Tentative Order for the Contra Costa County Sanitation District No. 5 NPDES Permit for the Port Costa Wastewater Treatment Plant. The District would also like to thank your staff for their diligence and care in preparing the document. The District's comments are enclosed, roughly in the order the items appear in the permit. Please feel free to contact me should you have any questions or require additional information. Thank you for your consideration of these comments.

Sincerely,

OAKLEY WATER STRATEGIES, INC.

Monica Oakley
President

cc: Lila Tang, Regional Water Board
Bill Johnson, Regional Water Board
Robert Schlipf, Regional Water Board
Adrienne Miller, Regional Water Board
Warren Lai, Contra Costa County Sanitation District No. 5

2100 Lakeshore Ave., Suite C • Oakland • CA • 94606 • (510) 663-3600 tel • (510) 663-3601 fax

Contra Costa County Sanitation District No. 5
Port Costa Wastewater Treatment Plant

Comments Regarding the Tentative Order for Renewal of NPDES Permit and the Accompanying Cease and Desist Order

December 21, 2007

Contra Costa County Sanitation District No. 5 (District) appreciates the opportunity to submit the following comments on the Tentative Order (TO) reissuing the National Pollutant Discharge Elimination System (NPDES) permit for the discharge of treated wastewater to San Francisco Bay, and the accompanying Cease and Desist Order (CDO). The District would also like to commend your staff for their diligence and care in preparing these documents. Due to variations in formatting, page numbers listed are approximate.

COMMENTS ON NPDES PERMIT

1. **Proposed State criteria should not be used to develop water quality-based effluent limitations.**

   (Page 7)
   For Finding G, Water Quality-based Effluent Limitations, the reference to "a proposed state criterion" should be removed, since a proposed state criteria may not be used under state law, because to use a "proposed" state criterion before formal adoption would be considered underground rulemaking.

2. **There are several instances where the permit requirements are more stringent than required by the federal Clean Water Act.**

   (Page 9)
   The first and last sentences of Finding M, Stringency of Requirements for Individual Pollutants, should be removed as legal conclusions not supported by evidence in the record. There are several instances where the permit requirements are more stringent than required by the federal Clean Water Act.

3. **Permit requirements for this very-customized permit should supersede general documents promulgated 15 years ago.**

(Page 15)
New language in this permit, which is different from other recently adopted permits, indicates that, of all the documents produced by the Regional Water Board applicable to this permit, the most stringent requirements should apply, even though some of those documents are 15 years old. First, it is unreasonable to expect that the Port Costa wastewater treatment plant, with a design flow of 0.033 million gallons per day, an annual operating budget of $50,000, and one part-time employee for the entire District, to be able to figure out which requirements are the most stringent. Second, significant resources have been expended to make sure that this (very complicated) individual NPDES permit has state-of-the art regulatory requirements, and in addition, the permit is customized to the Port Costa wastewater treatment plant. The newly adopted NPDES permit should be the applicable governing document if there are any discrepancies. The language in the NPDES permit should be revised as follows:

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* (Attachment G), including any amendments thereto. Where provisions or reporting requirements specified in this Order, ~~-~~ including Attachments D and E, are different from equivalent or related provisions or reporting requirements given in ~~the Standard Provisions in Attachment D~~Attachment G, the specifications of this Order ~~and/or Attachment G~~ shall apply ~~in areas where those provisions are more stringent~~. Duplicative requirements in the federal Standard Provisions in VI.A.1, 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.

4. **The District requests that the following typographical error be corrected:**

(Page E-1, Table of Contents)

VIII. Receiving Water Monitoring Requirements……..E-6
A. Monitoring Locations – C~~RSW~~-001, C~~RSW~~-002, C~~RSW~~-003……...E-6

5. The flow monitoring requirements are unclear and potentially impractical.

(Page E-4)
The flow monitoring requirements in Footnote 2 to Table E-4 are unclear, and potentially impractical. If the flow is to be recorded three times per week, and information is to be reported monthly, it is not clear why the "Daily:" and "Monthly:" qualifiers have been included in the list at the end of the footnote (possibly a typo?), or what they might mean. Also, if flows are only being recorded three times per week, it is not possible to report a maximum and minimum daily flow over the month (it could be a maximum and minimum three-day flow). It is also not clear that the Regional Water Board actually has any use for the maximum and minimum daily flow data.

For these reasons, the District requests the following edits:

(2) Flow Monitoring: Effluent flow shall be monitored at a location, prior to discharge, to be representative of actual discharge rates. Flows shall be measured continuously and recorded at least three times a week. For effluent flows, the following information shall also be reported monthly:
~~Daily:~~ Average Daily Flow (mgd)
~~Monthly:~~ Monthly Average Flow (mgd)
~~Monthly: Maximum Daily Flow (mgd)~~
~~Monthly: Minimum Daily Flow (mgd)~~

6. The reference to the August 6, 2001 letter should be consistent with the applicable portion of the letter.

(Page E-5)
The District previously requested, and Regional Water Board staff agreed, to characterize the applicable portion of the August 6, 2001 letter on effluent monitoring for priority pollutants more precisely. In particular, we request that language in footnote 7 to Table E-4 be revised as follows, in order to avoid confusion related to monitoring frequency:

(7) Sampling methods for all priority pollutants in the SIP is addressed in a letter dated August 6, 2001, from the Regional Water Board Staff: "Requirements for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy" (not attached but available for review or download on the Regional Water Board's website at http://www.waterboards.ca.gov/sanfranciscobay/).

7. The District requests a revision to the description of the transfer of ownership.

(Page F-7)
The District requests the following edit to section II.E.2 of the Fact Sheet, to reflect the fact that the legal agreement, which will transfer ownership of the Port Costa Wastewater Treatment Plant to Crockett Community Services District, is already in place.

2. The Discharger will~~plans to~~ transfer ownership of this facility to Crockett Community Services District after all of the requirements of TSO No. R2-2005-0057, as described above, are fulfilled.

COMMENTS ON CEASE AND DESIST ORDER

8. The detailed action plan for mercury is not consistent with other activities in the region designed to address these constituents.

The Regional Water Board has been in the process of developing a mercury total maximum daily load (TMDL) for approximately 10 years. The TMDL contains requirements for mercury that have been developed in a deliberate, thoughtful, and meaningful way. The District is concerned that the requirements in the Cease and Desist Order (CDO), which have the potential for significant expenditures of public funds if a mercury watershed permit does not become effective within the next twelve months, are not consistent with requirements related to the TMDL. For these reasons, the District believes the CDO is not necessary. However, if the Regional Water Board retains the CDO, the District requests that the following approach be used instead of the language in the current CDO:

Action	Deadline
	Mercury
a. Comply with the following interim effluent limits at Monitoring Station EFF-001: *Mercury*: Maximum daily effluent limit = 0.087 µg/L	Upon the effective date of this Order
b. If discharge data from the previous two years continue to show that the discharge is out of compliance (as defined in Section 2.4.5 of the State Implementation Policy) with the permit effluent limits, submit a plan for identifying all mercury sources to the discharge. Examples of potential mercury sources include dental offices, laboratories, medical facilities, fluorescent light tubes, thermometers, and electrical switches. The plan shall, at a minimum, include sampling influent waste streams to identify and quantify pollutant sources.	January 1, 2009
c. Implement the plan developed in action "c" within 30 days following the deadline for action "c," and submit by the deadline for this action a report that contains an inventory of the pollutant sources.	June 1, 2009
d. Submit a report documenting development and initial implementation of a program to reduce and prevent the pollutants of concern in the discharge. The program shall consist, at a minimum, of the following elements: i. Maintain a list of sources of pollutants of concern. ii. Investigate each source to assess the need to include it in the program. iii. Identify and implement targeted actions to reduce or eliminate discharges from each source in the program. iv. Develop and distribute, as appropriate, educational materials	January 1, 2010

Action	Deadline
	Mercury
regarding the need to prevent sources to the sewer system.	
e. Continue to implement the program described in action "e" and submit annual status reports that evaluate its effectiveness and summarize planned changes. Report whether the program has successfully brought the discharge into compliance with the effluent limits in the Permit. If not, identify and implement additional measures to further reduce discharges.	Annually each February 28 in Best Management Practices and Pollutant Minimization Report required by Permit Provision VI.C.3
~~f.If by February 28, 2011, discharge data continue to show the discharge is out of compliance (as defined in 2.4.5 of the State Implementation Policy) with the Permit effluent limits, submit a report, by the deadline for this action, identifying more aggressive actions to ensure compliance. These actions shall include, but not be limited to, reviewing options for pretreatment and upgrades to the treatment plant. The report shall identify an implementation schedule for investigating these options, selecting a preferred option, and implementing the chosen option. At a minimum, the report shall plan for the following activities:~~ ~~i.Bench scale testing or pilot scale testing or both~~ ~~ii.Development of preliminary design specifications~~ ~~iii.Development of final design specifications~~ ~~iv.Procurement of funding~~ ~~v.Acquisition of necessary permits and approvals~~ ~~vi.~~i. ~~Construction~~	~~January 1, 2012~~
~~g.~~f. ~~Implement the plan required in action "g" within 45 days following the deadline for action "g," and submit annual status reports.~~	~~Annually each January 30 in the Annual Self-Monitoring Report required by Permit Attachment E, Monitoring and Reporting Program~~
~~h.~~g.~~Submit documentation confirming complete plan implementation and c~~Comply with effluent limits in the Permit.	June 1, 2015

9. In addition, if the CDO is retained, the District requests the following typographical and/or basic language errors be corrected:

Action	Deadline
	Mercury
a. Comply with the following interim effluent limits at Monitoring Station EFF-001: *Mercury*: Maximum daily effluent limit = 0.087 µg/L	Upon the effective date of this Order
b. If discharge data from the previous two years continue to show that the discharge is out of compliance (as defined in Section 2.4.5 of the State Implementation Policy) with the permit effluent limits, submit a plan for identifying all mercury sources to the discharge. Examples of potential mercury sources include dental offices, laboratories, medical facilities, fluorescent light tubes, thermometers, and electrical switches. The plan shall, at a minimum, include sampling influent waste streams to identify and quantify pollutant sources.	January 1, 2009
c. Implement the plan developed in action "b~~c~~" within 30 days following the deadline for action "b~~c~~," and submit by the deadline for this action a report that contains an inventory of the pollutant sources.	June 1, 2009
d. Submit a report documenting development and initial implementation of a program to reduce and prevent the pollutants of concern in the discharge. The program shall consist, at a minimum, of the following elements: i. Maintain a list of sources of pollutants of concern. ii. Investigate each source to assess the need to include it in the program. iii. Identify and implement targeted actions to reduce or eliminate discharges from each source in the program. iv. Develop and distribute, as appropriate, educational materials regarding the need to prevent sources to the sewer system.	January 1, 2010
e. Continue to implement the program described in action "d~~e~~" and submit annual status reports that evaluate its effectiveness and summarize planned changes. Report whether the program has successfully brought the discharge into compliance with the effluent limits in the Permit. If not, identify and implement additional measures to further reduce discharges.	Annually each February 28 in Best Management Practices and Pollutant Minimization Report required by Permit

Action	Deadline
	Mercury
	Provision VI.C.3
f. If by February 28, 2011, discharge data continue to show the discharge is out of compliance (as defined in 2.4.5 of the State Implementation Policy) with the Permit effluent limits, submit a report, by the deadline for this action, identifying more aggressive actions to ensure compliance. These actions shall include, but not be limited to, reviewing options for pretreatment and upgrades to the treatment plant. The report shall identify an implementation schedule for investigating these options, selecting a preferred option, and implementing the chosen option. At a minimum, the report shall plan for the following activities: i. Bench scale testing or pilot scale testing or both ii. Development of preliminary design specifications iii. Development of final design specifications iv. Procurement of funding v. Acquisition of necessary permits and approvals vi. Construction	January 1, 2012
g. Implement the plan required in action "fg" within 45 days following the deadline for action "fg," and submit annual status reports.	Annually each January 30 in the Annual Self-Monitoring Report required by Permit Attachment E, Monitoring and Reporting Program
h. Submit documentation confirming complete plan implementation and comply with effluent limits in the Permit.	June 1, 2015

Bay Area Clean Water Agencies

A Joint Powers Public Agency

P.O. Box 24055, MS 702
Oakland, California 94623

December 21, 2007

VIA EMAIL AND FACSIMILE: (510) 622-2460

Mr. Bruce Wolfe, Executive Officer
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

RE: Comments on the Tentative Order Reissuing the Contra Costa County Sanitation District No. 5 - Port Costa NPDES Permit (CA0037885)

Dear Mr. Wolfe:

The Bay Area Clean Water Agencies (BACWA) appreciate the opportunity to comment on the Tentative Order (TO) for the Contra Costa County Sanitation District No. 5 - Port Costa Wastewater Treatment Facility (District), as well as make comments on policy issues related to the NPDES permit. BACWA members own and operate publicly-owned treatment works (POTWs) that discharge to San Francisco Bay and its tributaries. Collectively, BACWA members serve over 6.5 million people in the nine-county Bay Area, treating all domestic, commercial and a significant amount of industrial wastewater. BACWA was formed to develop a region-wide understanding of the watershed protection and enhancement needs through reliance on sound technical, scientific, environmental and economic information and to ensure that this understanding leads to long-term stewardship of the San Francisco Bay Estuary. BACWA member agencies are public agencies, governed by elected officials and managed by professionals who are dedicated to protecting our water environment and the public health.

BACWA hopes that the following comments will result in changes made to the tentative order prior to issuance of the final NPDES permit for the District. Further, in order to avoid repetition, but to preserve these arguments, BACWA supports and incorporates by reference the comments made by the District in its comment letters.

1. **BACWA has concerns about including final effluent limits for mercury with which the District cannot comply. BACWA also objects to the Cease and Desist Order for mercury.**

   The tentative order (TO) includes final effluent limits for mercury. This pollutant is currently being addressed through alternative means in order to protect beneficial uses for the San Francisco Bay. Requiring final effluent limits that are unachievable by the District for a compound that is awaiting approval of a total maximum daily load (TMDL) is inappropriate. These final limits should be only provided for reference and should not be enforceable. BACWA requests removal of these final concentration limits.

   The Regional Water Board has been in the process of developing a mercury TMDL for at least 10 years. The mercury TMDL approved by the Regional Water Board contains requirements that have been developed in a meaningful way throughout the process of its development and deliberation. Bay Area POTWs are ready to implement the mercury TMDL through activities that will address impairment in San Francisco Bay. This is in contrast to the requirements in the Cease and Desist Order that require extensive actions, including significant expenditures of public funds, within the next year solely because the USEPA has not yet approved the TMDL. This timeline is completely unreasonable given the history of the TMDL process, and the insignificant contribution of mercury by municipal wastewater treatment plants in the San Francisco Bay Area.

   USEPA Region 9 has provided an opinion that TMDLs cannot be used to delay the implementation of a final limit in a permit. This is an opinion of USEPA Region 9, this is not a regulation adopted by the State of California nor the USEPA. We strongly object to having final limits and a Cease and Desist Order for mercury when we have worked tirelessly with the Clean Estuary Partnership (CEP), the Regional Water Board and the State Water Board to have a final mercury TMDL adopted. Now BACWA members are being punished because a final TMDL has not been approved. We urge the Water Board to work with EPA Region 9 on this issue as these circumstances are unique in California.

2. **BACWA supports the NPDES permit as being the governing regulatory document if there are discrepancies with previously issued regional requirements.**

   New language in this permit indicates that, of all the documents applicable to this permit, the most stringent requirements should apply, even though some of those documents, especially some produced on a regional basis, are 15 years old and acknowledged to be out of date. Significant resources have been expended to make sure that this tentative order, a very complicated, individual NPDES permit, has state-of-the art regulatory requirements, and in addition, the permit is customized to the Port Costa wastewater treatment plant. Therefore, the requirements are more thoughtful about the site-specific conditions, and the requirements in the permit should supersede other, more historical documents.

   It is also unreasonable to expect that the Port Costa wastewater treatment plant be held responsible for making the call that if there are conflicting requirements, that requirements

promulgated 15 years ago and acknowledged to be out of date should govern. The newly adopted NPDES permit should be the applicable governing document if there are any discrepancies. For these reasons, language in the NPDES permit should be revised as follows (page 15):

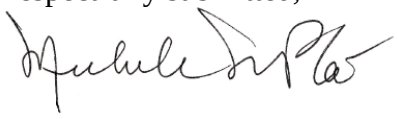
A. Standard Provisions

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* (Attachment G), including any amendments thereto. Where provisions or reporting requirements specified in this Order, including Attachments D and E, are different from equivalent or related provisions or reporting requirements given in Attachment G, the specifications of this Order shall apply. Duplicative requirements in the federal Standard Provisions in VI.A.1, 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

BACWA appreciates the Regional Water Board's close attention to the comments made herein. I would be more than happy to meet with you to discuss our comments and concerns in more detail as you wish.

Respectfully submitted,



Michele Pla
BACWA Executive Director

cc: BACWA Executive Board
Robert Cole, BACWA Permits Committee Chair

APPENDIX D

Response to Comments

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

RESPONSE TO WRITTEN COMMENTS

ON THE REISSUANCE OF WASTE DISCHARGE REQUIREMENTS FOR:

Contra Costa County Sanitation District No. 5
Port Costa Wastewater Treatment Plant
Port Costa, Contra Costa County
NPDES Permit No. CA0037885

I. Contra Costa County Sanitation District No. 5 – December 21, 2007
II. Bay Area Clean Water Agencies – December 21, 2007

Note: The format of this staff response begins with a brief introduction of the party's comment, followed with staff's response. Interested persons should refer to the original letters to ascertain the full substance and context of each comment.

I. Contra Costa County Sanitation District No. 5 (District) – December 21, 2007

Contra Costa County Sanitation District No. 5, Comment 1
The District requests removal of "a proposed state criterion" in Finding G, Water Quality-based Effluent Limitations. A "proposed state criterion" may not be used under State law for the development of water quality-based effluent limits (WQBELs). Using such criteria before they are fully developed and approved could be considered underground rulemaking.

Response 1
Section II.G of all of the Regional Water Board's NPDES permits contain this reference to "a proposed state criterion." We have not removed this reference because it is consistent with CFR 122.44(d)(1)(vi), as referenced in Section II.G of the Tentative Order. Specifically, CFR 122.44.(d)(1)(vi) states that, regarding establishment of effluent limits for pollutants with reasonable potential to cause or contribute to an excursion above a narrative criterion, a calculated numeric water quality criterion may be used. It further states that "Such a criterion may be derived using **a proposed state criterion,** [emphasis added] or an explicit State policy or regulation interpreting its narrative water quality criterion …."

Contra Costa County Sanitation District No. 5, Comment 2
The District requests removal of sentences regarding stringency of requirements for individual pollutant limits in Section II. Finding M. The District believes that these statements are not supported by evidence in the record because the Tentative Order does

contain restrictions for individual pollutants that are more stringent than required by the Clean Water Act.

Response 2

We did not make the requested changes to Section II. Finding M. because we do not agree that the Tentative Order includes requirements that are more stringent than those required by the federal Clean Water Act. In addition to requiring minimum technology-based effluent limits, and water quality-based effluent limits where necessary to protect water quality, the Clean Water Act prohibits backsliding from already established effluent limits unless certain conditions are met. Furthermore, the Clean Water Act prohibits degradation of existing water quality even where water quality already meets or exceeds federal standards. Requirements for individual pollutants that comply with anti-backsliding or anti-degradation prohibitions, or that implement water quality based effluent limits where needed to meet water quality standards, therefore, are not more stringent than required by the federal Clean Water Act.

Contra Costa County Sanitation District No. 5, Comment 3

The District requests that permit requirements for this very-customized permit should supersede general documents promulgated 15 years ago. The District states that it is unreasonable to expect the Port Costa Wastewater Treatment Plant, due to their limited resources and size, to be able to determine which requirements are the most stringent. Second, the permit requirements are customized to the Port Costa Port Costa Wastewater Treatment Plant. For these reasons, the District requests that language in the NPDES permit should be revised as follows:

A. Standard Provisions

1. *Federal Standard Provisions. The Dischargers shall comply with all Standard Provisions included in Attachment D of this Order.*
2. *Regional Water Board Standard Provisions. The Dischargers shall comply with all applicable items of the Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993 (Attachment G), and any amendments thereto. Where provisions of reporting requirements specified in this Order* ***, including Attachments D and E,*** *are different for equivalent or related provisions or reporting requirements given in ~~the Standard Provisions in Attachment D~~* ***Attachment G****, the specifications of this Order ~~and/or Attachment G~~ shall apply ~~in areas where those provisions are more stringent~~. 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.*

Response 3

See Response 2 to BACWA.

Contra Costa County Sanitation District No. 5, Comment 4
The District requests that typographical errors in the Table of Contents be corrected in the labeling of the Receiving Water Monitoring Stations.

Response 4
We have modified the Tentative Order Table of Contents as requested.

Contra Costa County Sanitation District No. 5, Comment 5
The District requests that language in Footnote 2 to Table E-4 be revised to remove maximum and minimum daily effluent flow monitoring because the flow is only recorded 3 times per week.

Response 5
We have modified the Tentative Order as requested.

Contra Costa County Sanitation District No. 5, Comment 6
The District requests that language in Footnote 7 to Table E-4 be revised to clarify that reference to the August 6, 2001 letter is for sampling methods not monitoring frequency.

Response 6
We have modified the Tentative Order as requested.

Contra Costa County Sanitation District No. 5, Comment 7
The District requests an editorial change regarding its proposed transfer of ownership to Crockett Community Services District.

Response 7
We have modified the Tentative Order as requested.

Contra Costa County Sanitation District No. 5, Comment 8
The City requests modification of the detailed action plan for mercury in the Cease and Desist Order (CDO). The District is concerned that the requirements in the CDO, which have the potential for significant expenditures of public funds if a mercury watershed permit does not become effective within the next twelve months, are not consistent with requirements related to the TMDL. For these reasons, the District believes the CDO is not necessary. However, if the Regional Water Board retains the CDO, the District requests that Tasks f. and g. are deleted and Task g. is modified.

Response 8
We believe that the detailed action plan for mercury is reasonable and appropriate. The CDO must contain specific tasks to ensure compliance with final effluent limits by June 1, 2015. Task f. allows the District until February 28, 2011, before it needs to propose

significant plant improvements (e.g., pretreatment and plant upgrades). Without Task f., the CDO would lack any real and definable steps to ensure that the District comes into compliance with final permit limits, and therefore, the CDO would not comply with existing regulations. Furthermore, the February 28, 2011, deadline allows a three-year period for USEPA Region 9 to approve the mercury TMDL.

Contra Costa County Sanitation District No. 5, Comment 9
The District requests that typographical errors in the Cease and Desist Order be corrected if it is retained without modification due to Comment 8.

Response 9
We have modified the Cease and Desist Order as requested.

II. Bay Area Clean Water Agencies (BACWA) – December 21, 2007

BACWA, Comment 1
BACWA has concerns about including final effluent limits for mercury with which the District cannot comply. BACWA also objects to the Cease and Desist Order (CDO) for mercury. The Tentative Order (TO) includes final effluent limits for mercury. However, a total maximum daily load (TMDL) has been adopted by the Water Board and is awaiting adoption by the USEPA Region 9, which will address mercury issues in San Francisco Bay. Requiring final effluent limits that are unachievable by the District for a compound that is awaiting USEPA Region 9 approval of a TMDL is inappropriate. Although USEPA Region 9 has provided an opinion that TMDLs cannot be used to delay the implementation of a final limit in a permit, this is not a regulation adopted by the State of California or the USEPA.

Response 1
We see no basis for removing the final effluent limit for mercury. The State Implementation Policy's prescriptive measures require that we include these limits because there is reasonable potential for the District to discharge these pollutants at levels that could adversely affect water quality. The District's inability to immediately comply with certain water quality-based limits does not diminish the need for the limits.

The final mercury effluent limits in the TO are the following: an Average Monthly Effluent Limit (AMEL) of 0.020 µg/L and a Maximum Daily Effluent Limit (MDEL) of 0.041 µg/L. The maximum concentration measured by District is 0.044 µg/L. We recognize that the District will be unable to immediately comply with these final effluent limits. The accompanying CDO addresses this foreseeable noncompliance. Specifically, until June 1, 2015, the interim effluent limit for mercury in the CDO is a Maximum Daily Effluent Limit (MDEL) of 0.087 µg/L. The District can comply with the interim limit and there is adequate time for USEPA Region 9 to approve the mercury TMDL. The approval of the mercury TMDL will likely result in revised limits; however, we cannot legally delay implementation of existing water quality standards.

BACWA, Comment 2

BACWA supports the NPDES permit as being the governing regulatory document if there are discrepancies with previously issued regional requirements. Language in this permit indicates that, of all the documents applicable to this permit, the most stringent requirements should apply, even though some of the documents, especially some produced on a regional basis, are 15 years old and acknowledged to be out of date. Significant resources have been expended to make sure that this Tentative Order, a very complicated, individual NPDES permit, has current regulatory requirements, and in addition, the permit is customized to the Port Costa Wastewater Treatment Plant. Therefore, the requirements are more thoughtful about the site-specific conditions, and the requirements in the permit should supersede other, more historical documents.

It is also unreasonable to expect that the Port Costa Wastewater Treatment Plant be held responsible for deciding that if there are conflicting requirements, that requirements promulgated 15 years ago and acknowledged to be out of date, should govern. The newly adopted NPDES permit should be the applicable governing document if there are any discrepancies. For these reasons, language in the NPDES permit should be revised as follows:

A. Standard Provisions

1. *Federal Standard Provisions. The Dischargers shall comply with all Standard Provisions included in Attachment D of this Order.*
2. *Regional Water Board Standard Provisions. The Dischargers shall comply with all applicable items of the Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993 (Attachment G), and any amendments thereto. Where provisions of reporting requirements specified in this Order* ***, including Attachments D and E,*** *are different for equivalent or related provisions or reporting requirements given in ~~the Standard Provisions in Attachment D~~* ***Attachment G****, the specifications of this Order ~~and/or Attachment G~~ shall apply ~~in areas where those provisions are more stringent~~. 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.*

Response 2

We did not make the requested changes. Pursuant to State Water Resources Control Board Order WQ 2007-0004, permits cannot contain language stating that, if the standard provisions differ from permit provisions, the permit provisions prevail. This is to ensure that dischargers comply with the minimum federally-required standard conditions.