

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

Tentative Order

ORDER NO. R2-2005-XXXX

NPDES PERMIT NO. CA0037575

NAPA SANITATION DISTRICT, NAPA COUNTY

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

**TENTATIVE ORDER
NPDES PERMIT NO. CA0037575**

REISSUING WASTE DISCHARGE REQUIREMENTS FOR:

NAPA SANITATION DISTRICT, NAPA COUNTY

FINDINGS

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

1. The Napa Sanitation District, hereinafter referred to as the Discharger, by the Report of Waste Discharge (ROWD) dated August 31, 2004, applied to the Board, for reissuance of waste discharge requirements and a permit to discharge secondary-treated wastewater from its treatment facility to the Napa River, a water of the State and the United States, under the National Pollutant Discharge Elimination System (NPDES).

Facility Description

2. The Discharger owns and operates a secondary municipal wastewater treatment plant (the plant) located at the Soscol Water Recycling Facility south of the City of Napa, Napa County. The plant has a dry weather design capacity of 15.4 million gallons per day (mgd). It serves a current population of 75,000 and provides secondary-level treatment for domestic and commercial wastewater collected from the City of Napa and adjacent unincorporated areas. Wastewater from the City of American Canyon (estimated to be 1.0 mgd) was disconnected from the Discharger's wastewater treatment system in September 2002. A map showing the location of the plant is included as **Attachment A**.
3. The U.S. Environmental Protection Agency (U.S. EPA) and the Board have classified this Discharger as a major discharger.

Purpose of Order

4. This NPDES permit regulates the discharge of treated wastewater to the Napa River. This discharge was previously governed by Waste Discharge Requirements in Order No. 00-059 adopted on July 19, 2000 and a permit amendment Order No. R2-2002-0111, issued on October 18, 2002 (collectively the previous permit or previous Order).

Treatment Process Description

5. During the wet season (from November 1 through April 30), raw wastewater is treated using screens, aerated grit chambers, and primary clarifiers. After primary clarification the flow is treated in the activated sludge system and/or the oxidation pond system. Up to 8 mgd of wastewater can be treated by the activated sludge system (operational in September 2001) followed by secondary clarification. The oxidation pond system consists of four oxidation ponds followed by polymer coagulation and clarification. The four oxidation ponds also act as flow equalization ponds for peak wet season flows. After secondary treatment, the oxidation pond system effluent is blended with the activated sludge effluent before undergoing chlorination and dechlorination, prior to discharge to the Napa River (see

Attachment B: Treatment Process Flow Diagram). The Discharger is currently conducting a study of the plant to optimize treatment and effluent quality and minimize operating costs. Treatment scenarios being evaluated include full secondary treatment in the oxidation ponds, combinations of secondary treatment with some percentage of flow treated in the activated sludge process and the rest in the oxidation pond process, and full secondary treatment in the activated sludge process with peak wet season flows treated in the oxidation ponds.

6. During the dry season period from May 1 through October 31, wastewater is treated the same way as in the wet season. After secondary treatment, the oxidation pond effluent is blended with activated sludge basin effluent, followed by coagulation, filtration, and chlorination before reclamation. The treated wastewater not used for reclamation remains in the oxidation ponds and does not undergo polymer coagulation and clarification until the wet season begins when the discharge of treated wastewater to the Napa River is allowed.

Discharge Description

7. *Discharge Volume.* The plant presently treats an annual average flow of 9.0 mgd. The plant treated an average dry weather flow of 7.2 mgd, based on the influent flows during the dry weather months from September 2002 through September 2004. The plant discharged an average flow of 13.5 mgd to the Napa River, based on the discharge flows during the wet weather months from November 2002 through April 2004.
8. *Wet Season Discharge and Outfall Location.* During the period from November 1 through April 30, treated wastewater is discharged into the Napa River through a submerged diffuser that is located approximately 160 feet offshore and is 13.4 feet below water surface. The location of the outfall is at latitude 38° 14' 09", longitude 122° 17' 10".
9. *Emergency Dry Season Discharge.* From May 1 through October 31, treated wastewater is either stored in the oxidation ponds or further treated and beneficially reused. This is further discussed in Finding 11 below. Emergency discharge to the River is only allowed with approval by the Executive Officer. The Discharger has historically requested emergency discharges due to oxidation pond capacity-related issues. Since 1995, records show that the plant had nine emergency discharges over the past eight years. The Discharger made repairs to the pond levee in the summer of 2003 restoring the oxidation pond storage capacity, which will minimize the Discharger's requests for emergency dry season discharges.
10. *Effluent Characterization.* A summary of effluent quality is presented in the Fact Sheet. The summary is based on the data from the self-monitoring reports from September 2001 through March 2004 for conventional pollutants, and from September 2001 through April 2004 for most priority pollutants, when there were discharges to the Napa River.

Reclamation Description

11. During the dry season, effluent goes through secondary treatment and then filtration prior to reclamation. The discharges to land are presently governed by Water Reclamation Requirements in Order 96-011, adopted by the Board on January 17, 1996. Order No. 96-011 allows discharges of disinfected secondary-treated effluent or tertiary treated water from the Soscol Facility to industrial parks, golf courses, pasture lands, feed and fodder crops, and drip irrigation of vineyards. A detailed list of the Discharger's current reclamation users can be found in the Fact Sheet.

Sludge Handling and Disposal

12. Sludge from the primary clarifiers is pumped to an anaerobic digester. The sludge from the secondary clarifier and filter is thickened in a dissolved air flotation thickener (DAFT), conveyed to the anaerobic digester, then to the sludge holding tank and gas holder, where the gas is used for gas cogeneration, and finally to the sludge belt press for dewatering. Sludge from the flocculation clarifiers is currently sent to the oxidation ponds. Settled sludge is periodically removed from the ponds. The biosolids (digested sludge) are either land applied, stored, or disposed of at a landfill.

Collection System Description

13. The Discharger's wastewater collection system is approximately 245 miles long and contains five pump stations. The stations have adequate alarms, pump capacity and redundancy, and provision for emergency power. The Discharger has a continuous program of maintaining and upgrading these pump stations to ensure reliability of the collection system.

Sanitary Sewer Management Plan

14. On October 15, 2003, the Board adopted Order No. R2-2003-0095 establishing a collaborative effort with the Bay Area Clean Water Agencies (BACWA) to develop guidance for sanitary sewer management plans (SSMPs) aimed at reducing or eliminating sanitary sewer overflows, and for uniform, electronic reporting of SSOs to the Board to facilitate the Board's assessment of the problem regionally. This Order requires the Discharger to fully participate in the BACWA effort, to develop and implement an SSMP once this activity is required by the Board or its Executive Officer, and to report sanitary sewer overflows electronically. The requirements for reporting are specified in the Executive Officer's letter (*Requirement for Electronic Reporting of Sanitary Sewer Overflows*) dated November 4, 2004.

Applicable Plans, Policies and Regulations

15. Water quality objectives (WQOs), water quality criteria (WQC), effluent limitations, and calculations contained in this Order are based on the statutes and regulations detailed in Section III of the attached Fact Sheet, which is incorporated here by reference.

Beneficial Uses

16. Beneficial uses for the Napa River, in the vicinity of the discharge, as identified in the *Water Quality Control Plan San Francisco Bay Basin (Region 2)* (the Basin Plan) (Table 2-7), and based on known uses of the receiving waters in the vicinity of the discharge, are:
 - a. Agricultural Water Supply
 - b. Navigation
 - c. Contact and Non-Contact Water Recreation
 - d. Warm and Cold Fresh Water Habitat
 - e. Wildlife Habitat
 - f. Preservation of Rare and Endangered Species
 - g. Fish Migration and Spawning

Basis For Effluent Limitations

General Basis

Applicable WQOs/WQC

17. The WQOs and WQC applicable to the receiving water of this discharge are from the Basin Plan, the U.S. EPA's May 18, 2000 *Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California* (the California Toxics Rule, or the CTR), and U.S. EPA's *National Toxics Rule* (the NTR).
 - a. 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 fresh water, lead, mercury, nickel, silver, zinc, and total polynuclear aromatic hydrocarbons (PAHs) in salt water. The narrative toxicity objective states in part "[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 "[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.
 - b. 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 inland surface waters and enclosed bays and estuaries such as here, except that where the Basin Plan's Tables 3-3 and 3-4 specify numeric objectives for certain of these priority toxic pollutants, the Basin Plan's numeric objectives apply over the CTR (except in the South Bay south of the Dumbarton Bridge).
 - c. The NTR established 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 Sacramento-San Joaquin Delta. This includes the receiving water for this Discharger.
18. Where numeric effluent limitations have not been established or updated in the Basin Plan, 40 CFR Part 122.44(d) specifies that water quality-based effluent limitations (WQBELs) may be set based on U.S. EPA criteria, supplemented where necessary by other relevant information, to attain and maintain narrative WQC to fully protect designated beneficial uses. The Fact Sheet for this Permit discusses the specific bases and rationales for effluent limitations, and is incorporated as part of this Order.

Basin Plan Amendment

19. On January 21, 2004, the Board adopted Resolution No. R2-2004-0003 amending the Basin Plan to (1) update the dissolved WQOs for metals to be identical to the CTR WQC except for cadmium; (2) to change the Basin Plan definitions of marine, estuarine and freshwater to be consistent with the CTR definitions; (3) to update NPDES implementation provisions to be consistent with *the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (the State Implementation Plan, or SIP); (4) to remove settleable matter effluent limitations for POTWs, and other editorial changes. Subsequent to approval by the State Water Resources

Control Board (SWRCB) and the Office of Administrative Law (OAL) (July 22, 2004, and October 4, 2004, respectively), the U.S. EPA approved the amendment on January 5, 2005.

Basin Plan and CTR Receiving Water Salinity Policy

20. The Basin Plan and CTR state that the salinity characteristics (i.e., freshwater versus saltwater) of the receiving water shall be considered in determining the applicable WQOs/WQC, except for cadmium, where the 1995 Basin Plan salinity definition applies (see the finding above). Freshwater criteria shall apply to discharges to waters with salinities equal to or less than 1 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 waters with salinities in between these two categories, or tidally influenced fresh waters that support estuarine beneficial uses, the criteria shall be the lower of the salt- or freshwater criteria (the freshwater criteria for some metals are calculated based on ambient hardness), for each substance.

Receiving Water Salinity

21. The receiving waters for the subject discharge are the waters of the Napa River, which is a tributary of San Pablo Bay. The Discharger has collected receiving water salinity data at several monitoring stations both upstream and downstream of the discharge during November 2001 through December 2004. There are a total of 181 salinity measurements available. Of these, 59 values are below 1 ppt (32.6%), and 53 values are above 10 ppt (29.3%). Therefore, the receiving water is classified as estuarine by both Basin Plan and CTR definition. This is consistent with the fact that the Napa River where the Discharger's outfall is located, is tidally influenced. Therefore, the effluent limitations specified in this Order are based on the lower of the marine and freshwater WQOs and WQC of the Basin Plan, CTR, and NTR.

Receiving Water Hardness

22. Some WQOs and WQC are hardness dependent. The Discharger has collected receiving water hardness data at several monitoring stations both upstream and downstream of the discharge during November 2001 through December 2004. There are a total of 306 hardness measurements available. Of these, only 181 hardness values are paired with salinity measurements on the same sampling dates. When calculating a representative ambient hardness value, the hardness data set was censored (from 181 values to 55 values) to eliminate hardness values above 400 mg/L and to eliminate hardness values obtained when the receiving water salinity was above 1.0 ppt. From the censored data set, the adjusted geometric mean, which is the value that 30% of the measurements fall below, was calculated to be 147 mg/L (see the attached Fact Sheet for more details). Therefore, 147 mg/L is used as the representative ambient hardness value to calculate hardness dependent WQOs/WQC

Technology-Based Effluent Limits

23. Permit effluent limitations for conventional pollutants are technology-based. Technology-based effluent limitations are put in place to ensure that full secondary treatment is achieved by the wastewater treatment facility, as required under 40 CFR Part 133.102. Effluent limitations for these conventional pollutants are defined by the Basin Plan. Further, these conventional effluent limits are the same as those from the previous permit for the following constituents:

- Biochemical oxygen demand (BOD)
- BOD percent removal
- Total suspended solids (TSS)

- TSS percent removal
- pH
- Oil and grease, and
- Total chlorine residual

The settleable solids effluent limitations are no longer required per the 2004 Basin Plan amendment.

Water Quality-Based Effluent Limitations (WQBELs)

24. Toxic substances are regulated by WQBELs derived from the Basin Plan, Tables 3-3 and 3-4, the CTR, the NTR, and/or best professional judgment (BPJ) as provided in the Basin Plan and in Section IV of the attached Fact Sheet. WQBELs in this Order are revised and updated from the limits in the previous permit and their presence in this Order is based on an evaluation of the Discharger's data as described below under the Reasonable Potential Analysis. Numeric WQBELs are required for all constituents that have reasonable potential to cause or contribute to an excursion above any State water quality standard. Reasonable potential is determined and final WQBELs are developed using the methodology outlined in the SIP. If the Discharger demonstrates that the final limits will be infeasible to meet and provides justification for a compliance schedule, then interim limits are established, with a compliance schedule to achieve the final limits. Further details about the effluent limitations are given below and in the associated Fact Sheet.

- a. Maximum Daily Effluent Limitations (MDELs) are used in this permit to protect against acute water quality effects. It is impracticable to use weekly average limitations to guard against acute effects. Although weekly averages are effective for monitoring the performance of biological wastewater treatment plants, the MDELs are necessary for preventing fish kills or mortality to aquatic organisms.
- b. NPDES regulations, the SIP, and U.S. EPA's Technical Support Document (TSD) provide the basis to establish MDELs:

(1) NPDES regulations at 40 CFR Part 122.45(d) state:

“For continuous discharges all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall unless impracticable be stated as:

- i. Maximum daily and average monthly discharge limitations for all discharges other than publicly owned treatment works (POTWs); and
- ii. Average weekly and average monthly discharge limitations for POTWs.” (Emphasis added.)

(2) The SIP (p. 8, Section 1.4) requires that WQBELs to protect aquatic life be expressed as MDELs and average monthly effluent limitations (AMELs). For aquatic life-based calculations (only), the SIP indicates MDELs are to be used in place of average weekly limitations for POTWs.

(3) The TSD states a maximum daily limitation is appropriate for two reasons:

- i. The basis for the 7-day average for POTWs derives from the secondary treatment requirements. This basis is not related to the need for assuring achievement of water quality standards.

- ii. The 7-day average, which could comprise up to seven or more daily samples, could average out peak toxic concentrations and therefore the discharge's potential for causing acute toxic effects would be missed. A maximum daily limitation would be toxicologically protective of potential acute toxicity impacts.

Receiving Water Ambient Background Data used in Calculating WQBELs

25. By letter dated August 6, 2001, the Executive Officer required the Discharger to conduct additional ambient monitoring pursuant to section 13267 of the California Water Code. On March 5, 2003, a group of five dischargers to the Napa River, including the Discharger, submitted the Collaborative Napa River Receiving Water Evaluation. Ambient data collected in 2002, from the Station Napa River near Napa, and additional copper and nickel receiving water data collected during 2001 through 2004 by the Discharger, were used in evaluating background water quality for this Order.

Constituents Identified in the 303(d) List

26. On June 6, 2003, the U.S. EPA approved a revised list of impaired waterbodies prepared by the State. The list (hereinafter referred to as the 2002-303(d) list) was developed in accordance with Section 303(d) of the Federal Clean Water Act to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. The Napa River is a tributary to San Pablo Bay and both are listed as impaired water bodies on the 2002 303(d) List. The 2002 303(d) list includes San Pablo Bay as impaired by: chlordane, DDT, diazinon, dieldrin, dioxin compounds, exotic species, furan compounds, mercury, nickel, PCBs, dioxin-like PCBs, and selenium. Discharges of conservative pollutants (pollutants that do not break down readily) to Napa River could reach San Pablo Bay through sediment transport or in the water column and may contribute to impairment of San Pablo Bay. The 2002 303(d) list includes the Napa River as impaired by sediment, pathogens, and nutrients.

Dilution Credit

27. In the previous permit, the Board granted a 10:1 dilution when calculating WQBELs for discharges to the Napa River during the wet season. This was based on a hydrologic model run by U.S. EPA. The model used an average wet season river flow of 417 cubic feet per second (cfs), which supported a 10:1 dilution. However, a SWRCB Technical Report (see **Attachment G**) issued for SWRCB Order WQ 2001-016¹ stated this dilution evaluation was not in accordance with SIP procedures. Specifically, the SWRCB Technical Report indicated that the 417 cfs flow rate was above critical receiving water flows (e.g., 1Q10 and 7Q10 for aquatic life) allowed for dilution ratio determination by the SIP (Section 1.4.2.1, Table 3). Based on Board staff's evaluation, the Board finds that there is insufficient evidence to justify any dilution credit at this time. However, this evaluation is based on United States Geological Survey (USGS) Napa River historical flow and the Discharger's effluent flow data, and did not account for effects of Napa River tidal conditions on the mixing zone.
28. Due to the tidal influence of the Bay on Napa River near this discharge and the undefined mixing zone, the Board considers the discharge as incompletely mixed. Pursuant to Section 1.4.2.1 of the SIP, for incompletely-mixed discharges, the Discharger may demonstrate that a dilution credit is appropriate by performing mixing zone studies, such as a tracer study, a dye study, a modeling study, or monitoring upstream and downstream of the discharge to characterize the extent of actual dilution. Provision F.4 of this Order requires the Discharger to conduct a mixing zone study to justify an

¹ SWRCB Order WQ 2001-016 was a remand order of the previous permit, Order No. 00-059.

appropriate dilution credit. In the interim, the WQBELs are calculated with no dilution (D=0) and a 10:1 dilution (D=9) for wet season discharges. This expresses the range of wet season WQBELs once the appropriate dilution credit is determined. After the study is submitted and approved by the Executive Officer, the permit may be reopened to include revised WQBELs, as appropriate. The mixing zone information will also be considered in the next permit reissuance.

Dry season Emergency Discharge

29. Due to limited upstream fresh water flows during the dry season period (from May 1 through October 31), the discharge is classified as a shallow water discharge during the dry season. Therefore, no dilution credit is granted (D=0) for calculating WQBELs for dry season discharges. This approach is consistent with the previous permit.

Discharge Prohibition Exception

30. The Basin Plan prohibits the discharge of wastewater which has characteristics of concern to beneficial uses at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1, or into any nontidal water, dead-end slough, similar confined waters, areas or any immediate tributaries thereof. Discharge of treated wastewater to Napa River is subject to this prohibition.
31. The Basin Plan provides that exceptions to the above prohibition will be considered for discharges where: 1) an inordinate burden would be placed on the discharger relative to beneficial uses protected, and an equivalent level of environmental protection can be achieved by alternate means such as an alternative discharge site, a higher level of treatment, and/or improved treatment reliability; or, 2) the discharge is approved as a part of a reclamation project; or, 3) it can be demonstrated that net environmental benefits will be derived as a result of the discharge.
32. In addition to the criteria stated above for exceptions, the Basin Plan requires that the Board consider the reliability of the discharger's system in preventing inadequately treated wastewater from being discharged to the receiving water, and the environmental consequences of such discharges.
33. During the dry season, the Discharger currently reclaims treated wastewater for irrigation of golf course, vineyards, and commercial landscaped areas. Treated wastewater is also applied to property owned by the Discharger for disposal purposes. From September 2002 through September 2004, the Discharger reclaimed an average of 3.4 mgd of effluent during the dry season, which is approximately 48% of its annual average dry season flow. The oxidation ponds provide necessary storage for the remaining dry season flow not reclaimed.
34. The Discharger's pond system, utilized for both treatment and storage of wastewater, affords the Discharger a significant volume of storage capacity that can be used for containment of effluent flows during the dry season, or for emergency storage in the event of facility upset. The existence and use of these ponds minimizes the possibility of discharge of untreated or partially treated wastewater to the Napa River.
35. The Board finds that the water reuse program implemented by the Discharger complies with the exception provision of the Basin Plan. The Board, therefore, continues the exception to the discharge prohibition for wet season discharges to the Napa River for a six-month period each year (November 1 through April 30). This exception is subject to the following conditions. The Discharger shall:

- a. Continue to operate all treatment facilities to assure high reliability and redundancy;
- b. Continue to implement a source control program as required by the permit;
- c. Continue to implement measures to maintain, repair, and upgrade the existing wastewater facilities so as to ensure continued operation and treatment capability in conformance with permit requirements;
- d. Continue to promote and encourage beneficial reuse of treated wastewater.

Total Maximum Daily Loads (TMDLs) and Waste Load Allocations (WLAs)

36. The Board plans to adopt Total Maximum Daily Loads (TMDLs) for San Pablo Bay for the above 303(d)-listed pollutants within the next ten years, with the exception of dioxin and furan compounds. For dioxin and furan compounds the Board intends to consider this matter further after U.S. EPA completes its national health reassessment. The Board plans to adopt the TMDLs for the Napa River within the term of this Order. Future review of the 303(d) list for San Pablo Bay and the Napa River may result in revision of the schedules and/or provide schedules for other pollutants.
37. The TMDLs will establish waste load allocations (WLAs) and load allocations for point sources and non-point sources, respectively, and will result in achieving the water quality standards for the water body. Depending upon whether the Discharger is found to be impacting water quality in San Pablo Bay and/or the Napa River, the TMDLs may include WLAs for the Discharger. If the TMDLs address the Discharger, the final effluent limitations for this discharge would be based on the applicable WLAs.
38. The following summarizes the Board's strategy to collect water quality data and to develop TMDLs:
 - a. *Data collection* – The dischargers collectively may 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. The Board will require dischargers to characterize the pollutant loads from their facilities into the water quality-limited water bodies. The results will be used in the development of TMDLs, but may also be used to update/revise the 303(d) list and/or change the WQOs/WQC for the impaired water bodies including the San Pablo Bay and/or the Napa River.
 - b. *Funding mechanism* – The Board has received, and anticipates continued receipt of, resources from federal and state agencies for the development of TMDLs. To ensure timely development of TMDLs, the Board intends to supplement these resources by allocating development costs among dischargers through appropriate funding mechanisms.

Interim Limitations and Compliance Schedules

39. Pursuant to Section 2.1.1 of the SIP, “the compliance schedule provisions for the development and adoption of a TMDL only apply when: (a) the discharger requests and demonstrates that it is infeasible for the discharger to achieve immediate compliance with a CTR criterion; and (b) the discharger has made appropriate commitments to support and expedite the development of the TMDL. In determining appropriate commitments, the Board should consider the discharger's contribution to current loadings and the discharger's ability to participate in TMDL development.” As further described in a finding below, the Discharger has requested and demonstrated that it is infeasible to achieve immediate compliance for copper, mercury, cyanide, selenium, and tributyltin. Also, the Discharger has agreed to assist the Board in TMDL development through its affiliation with

BACWA. The Board adopted Resolution No. 01-103, on September 19, 2001, with BACWA, and other parties to accelerate the development of Water Quality Attainment Strategies including the TMDLs for the San Francisco Bay-Delta and its tributaries.

40. The SIP and the Basin Plan authorize compliance schedules in a permit if an existing discharger cannot immediately comply with a new and more stringent effluent limitation. Compliance schedules for limitations derived from CTR or the NTR WQC are based on Section 2.2 of the SIP, and compliance schedules for limitations derived from Basin Plan WQOs are based on the Basin Plan. Both the SIP and the Basin Plan require the discharger to demonstrate the infeasibility of achieving immediate compliance with the new limitation to qualify for a compliance schedule. The SIP and Basin Plan require the following documentation to be submitted to the Board to support a finding of infeasibility:
- Descriptions of diligent efforts the discharger has made to quantify pollutant levels in the discharge, sources of the pollutant in the waste stream, and the results of those efforts.
 - Descriptions of source control and/or pollution minimization efforts currently under way or completed.
 - A proposed schedule for additional or future source control measures, pollutant minimization, or waste treatment.
 - A demonstration that the proposed schedule is as short as practicable.

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

41. On January 24, 2005 and March 18, 2005, the Discharger submitted a feasibility study (the 2005 Feasibility Study) and a supplemental (**Attachment F**), asserting it is infeasible to immediately comply with the WQBELs, calculated according to SIP Section 1.4, for copper, mercury, cyanide, selenium, and tributyltin. Board staff conducted statistical analysis or comparative analysis of recent plant performance data for these pollutants, as further detailed in later findings under the heading Development of Specific Effluent Limitations and also in Section V.g. 5, Table E of the attached Fact Sheet. Based on these analyses, the Board concurs that it is infeasible to achieve immediate compliance for these pollutants.
42. a. For limitations based on CTR criteria (copper during wet season), this Order establishes a 5-year compliance schedule until April 30, 2010, and for limitations based on NTR criteria (cyanide during wet weather and selenium), this Order establishes a compliance schedule until April 27, 2010, as allowed by the SIP. Though the previous permit provided for a compliance schedule, that schedule was to collect additional data to enable calculation of WQBELs (SIP Section 2.2.2). These additional data are now available. The Discharger has demonstrated that it is infeasible to immediately comply with the calculated WQBELs. Therefore (pursuant to a different SIP Section 2.2.1), a new compliance schedule is warranted.
- b. For dry season discharges, the previous permit (Order No. R2-2002-0111) established a compliance schedule for copper and cyanide until July 31, 2005, or until site-specific objectives (SSOs) are adopted. The SSOs for copper and cyanide are still in development; therefore extension of the compliance schedule is appropriate. This Order extends the compliance deadline

to December 31, 2007. This date is five years from when the compliance schedule started in the previous permit, and is within the maximum length allowed by the SIP. Though this Order requires final WQBELs for copper and cyanide to be met starting on January 1, 2008, these WQBELs based on existing WQC appear to be over-protective in consideration of the site-specific objectives (SSOs) being developed for copper and cyanide. It is the Board's intent to revisit these WQBELs once the SSOs are established.

- c. For limitations based on the Basin Plan WQOs (mercury), this Order establishes compliance schedule until April 27, 2010, or until the Board adopts TMDL-based effluent limitation for mercury, therefore, the same interim limitation based on pooled mercury data is continued under this Order until the expiration of this compliance schedule.
43. This Order establishes compliance schedules that extend beyond one year for copper, mercury, cyanide, and selenium. Pursuant to the SIP and 40 CFR 122.47, the Board shall establish interim numeric limitations and interim requirements to control these pollutants. This Order establishes interim limitations for copper, mercury, cyanide, and selenium based on the previous permit limitations or existing plant performance. This Order also establishes interim requirements in a provision for development and/or improvement of a Pollution Prevention and Minimization Program to reduce pollutant loadings to the plant, and for submittal of annual reports on this Program.

Since the compliance schedules either exceed or equals the length of the permit (4 years and 11 months), these calculated final limits are intended as points of reference for the infeasibility demonstration and are only included in the findings by reference to the Fact Sheet. Additionally, the actual final WQBELs for these pollutants will very likely be based on either the site-specific objective (SSO) or TMDL/WLA as described in other findings specific to each of the pollutants.

In addition to interim mercury concentration limitation, this Order establishes interim performance-based mass limitation to maintain the Discharger's current mass loadings of mercury into the Napa River and San Pablo Bay. Mercury is 303(d)-listed bioaccumulative pollutant. The interim performance-based mass limitation is retained from the previous permit.

Antidegradation and Anti-backsliding

44. The limitations in this Order are in compliance with the Clean Water Act Section 402(o) prohibition against establishment of less stringent WQBELs for the following reasons:
- (1) For impairing pollutants, the revised final limitations will be in accordance with TMDLs and WLAs once they are established.
 - (2) For nonimpairing pollutants, the final limitations are or will be consistent with current State WQOs/WQC.

The interim limitations in this Order are in compliance with antidegradation requirements and meet the requirements of the SIP because the interim limitations hold the Discharger to performance levels that will not cause or contribute to water quality impairment or further water quality degradation.

Specific Basis

Reasonable Potential Analysis

45. As specified in 40 CFR 122.44(d)(1)(i), permits are required to include WQBELs for all pollutants "which the Director determines are or may be discharged at a level which will cause, have the

reasonable potential to cause, or contribute to an excursion above any State water quality standard.” Using the method prescribed in Section 1.3 of the SIP, the Board has analyzed the effluent data to determine whether the discharge, which is the subject of this Order, has a reasonable potential to cause or contribute to an excursion above a State water quality standard (reasonable potential analysis or RPA). For all parameters that have reasonable potential, WQBELs are required. The RPA compares the effluent data with numeric and narrative WQOs in the Basin Plan and numeric WQC from the NTR and the CTR.

RPA Methodology

46. The method for determining reasonable potential involves identifying the observed maximum pollutant concentration in the effluent (MEC) for each constituent, based on effluent concentration data. There are three triggers in determining reasonable potential.
- (1) The first trigger (Trigger 1) is activated when the MEC is greater than or equal to the lowest applicable WQO/WQC, which has been adjusted for pH, hardness (for freshwater WQO/WQC only), and translator data, if appropriate. If the MEC is greater than or equal to the adjusted WQO/WQC, then that pollutant has reasonable potential and a WQBEL is required.
 - (2) The second trigger (Trigger 2) is activated if the observed maximum ambient background concentration (B) is greater than the adjusted WQO/WQC ($B > WQO/WQC$), and either:
 - i. The MEC is less than the adjusted WQO/WQC ($MEC < WQO/WQC$) or
 - ii. The pollutant was not detected in any of the effluent samples and all the detection levels are greater than or equal to the adjusted WQO/WQC.
 - (3) The third trigger (Trigger 3) is activated if a review of other information determines that a WQBEL is required even though both MEC and B are less than the WQO/WQC, or effluent and background data are unavailable or insufficient (e.g., all nondetects). A limitation is required only under certain circumstances to protect beneficial uses.

RPA Determinations

47. Board staff conducted an RPA based on effluent data collected from September 2001 through April 2004 for most priority pollutants, and receiving water ambient background data collected from September 2001 through December 2004, for priority pollutants using the method prescribed in Section 1.3 of the SIP.
48. The MECs, WQOs/WQC, basis for the WQOs/WQC, background concentrations and reasonable potential conclusions are listed in Table 2 for all constituents analyzed. The RPA results for some of the constituents in the CTR were not determined because of lack of an objective/criteria. (Further details about the RPA can be found in the Fact Sheet.) Based on the RPA methodology in the SIP, the following constituents have been found to have reasonable potential to cause or contribute to an excursion above WQOs/WQC: copper, mercury, nickel, selenium, cyanide, TCDD TEQ (dioxins and furans), and tributyltin.

Table 2. Summary of RPA Results

CTR No.	Constituents	WQO/WQC (µg/L)	Basis ^[1]	MEC (µg/L)	Maximum Ambient Background Conc. (µg/L)	Reasonable Potential (Trigger Type) ^[2]
1	Antimony	4,300	CTR, hh	0.4	1.7	No
2	Arsenic	36	BP, sw	2.0	34	No
4	Cadmium	1.5	BP, fw H=147	0.1	0.04	No
5b	Chromium (VI)	11	BP, fw	0.7	0.4	No
6	Copper	7.4	CTR, sw T=0.42	13	18.5	Yes (#1)
7	Lead	5.2	BP, fw, H=147	0.3	0.78	No
8	Mercury*	0.025	BP, sw	0.15	0.011	Yes (#1)
9	Nickel*	8.3	BP, sw	4.9	68.7	Yes (#2)
10	Selenium*	5.0	NTR, fw/sw	5	19	Yes (#1)
11	Silver	2.2	BP, sw	0.3	<0.02	No
12	Thallium	6.3	CTR, hh	0.08	0.3	No
13	Zinc	86	BP, sw	30	10	No
14	Cyanide	1.0	NTR, sw	20	0.363	Yes (#1)
	TCDD TEQ*	1.4x10 ⁻⁸	BP, narrative	2 x10 ⁻⁹	3.68 x10 ⁻⁸	Yes (#2)
	CTR#s 17-126	Various or NA	CTR & NTR, hh	Non- detect, less than WQC, or no WQC	Less than WQC or Not Available	No or Undetermined ^[3]
	Tributyltin	0.0074	BP, narrative	0.0226	0.00143	Yes (Trigger #1)
	Total PAHs	15	BP, sw	0 ^[4]	0 ^[4]	No

* = Constituents on 303(d) list

[1] RPA based on the following: BP = Basin Plan; CTR = California Toxics Rule; NTR=National Toxics Rule; sw = saltwater; fw = freshwater; hh = human health; H = ambient hardness value, 147 mg/L as CaCO₃; T = translator to convert dissolved to total copper.

[2] Trigger type is as defined in Finding 46 above.

[3] Undermined due to lack of WQOs/WQC.

[4] The total PAHs concentration was calculated using 16 individual PAH concentrations. Since all 16 individual PAH measurements for both the effluent and ambient background are non-detect, the total PAHs concentration was determined to be zero.

49. *Reasonable Potential and WQBELs for Dry Season Discharges.* When determining the reasonable potential above, the dry season river discharge monitoring data were pooled with the wet season discharge data for all analyses. Therefore, the reasonable potential identified applies to both the dry season and wet season discharges. Similarly, the discussions on developing WQBELs for specific pollutants applies to both dry and wet season discharges, unless specified in the findings.

50. *RPA Results for Impairing Pollutants.* While TMDLs and WLAs are being developed, interim concentration limitations are established in this permit for 303(d)-listed pollutants that have a

reasonable potential to cause or contribute to an excursion above the water quality standard. In addition, mass limitations are required for bioaccumulative 303(d)-listed pollutants that can be reliably detected. Constituents on the 303(d) list for which the RPA determined a need for effluent limitations are mercury, nickel, selenium, and TCDD TEQ. Final determination of reasonable potential for some other constituents identified on the 303(d) list could not be performed owing to the lack of an established WQO or WQC.

51. *Polynuclear Aromatic Hydrocarbons (PAHs)*. This Order implements the policy and regulations of the CTR and SIP in regard to PAHs, i.e., reasonable potential is determined for individual PAHs. The Basin Plan contains a WQO for total PAHs for the protection of saltwater aquatic life of 15 µg/L, as a 24-hour average; therefore, a RPA was also performed for total PAHs. The Discharger has monitoring data for all 16 individual PAHs, and all of the concentrations are non-detect with MDLs ranging from 0.02-0.3 µg/L. Therefore, the total PAH concentration is determined to be zero, and there is no reasonable potential for individual or total PAHs. Continued monitoring for these pollutants is required by Provision F.2.
52. *Other Organics*. The Discharger has performed sampling and analysis for all the organic constituents listed in the CTR except for asbestos. The data were used to perform the RPA. The full RPA is presented as an attachment in the Fact Sheet. The Discharger will continue to monitor for these constituents in the effluent and receiving water compliant with Provisions F.2 and F.3.
53. *Effluent Reasonable Potential Monitoring*. This Order does not include effluent limitations for constituents that do not show reasonable potential, but continued monitoring for these pollutants is required as described in Provision F.2. 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 a reasonable potential to cause or contribute to an excursion above the applicable WQO/WQC.
54. *Permit Reopener*. This Order includes a reopener provision to allow numeric effluent limitations to be added for any constituent that exhibits, respectively, reasonable potential. The Board will make this determination based on monitoring results.
55. *Copper*
 - a. *Copper WQC*. The saltwater criteria for copper in the CTR are 3.1 µg/L for chronic protection and 4.8 µg/L for acute protection, expressed as dissolved metal. The Discharger developed site-specific translators for copper. The translators are 0.42 and 0.57 for converting the CTR chronic and acute dissolved WQC into total WQC, respectively. Using these translators, the translated criteria of 7.4 µg/L for chronic protection and 8.4 µg/L for acute protection were used to perform the RPA and to calculate effluent limitations.
 - b. *RPA Results*. This Order establishes effluent limitations for copper because the 13 µg/L MEC exceeds the governing WQC of 7.4 µg/L, demonstrating reasonable potential by Trigger 1, as defined in a previous finding.
 - c. *WQBELs*. The copper WQBELs calculated according to SIP procedures are 8.4 µg/L as the maximum daily effluent limit (MDEL) and 4.2 µg/L as the average monthly effluent limit (AMEL) for both wet and dry season discharges. Dilution credit was not able to be incorporated in the calculation of WQBELs for wet season discharges because the maximum ambient copper concentration is higher than the limiting WQC.

- d. *Immediate Compliance Infeasible.* The Discharger's Feasibility Study asserts the Discharger cannot immediately comply with these WQBELs. Board staff statistically analyzed the Discharger's effluent data from September 2001 through April 2004 (see Section V.g. 5 and Table E of the attached Fact Sheet for detailed results of the statistical analysis). Based on the analysis, the Board concurs with the Discharger's assertion of infeasibility to comply with final copper WQBELs.
- e. *Interim Performance-based Effluent Limitation (IPBL).* Because it is infeasible for the Discharger to immediately comply with the copper WQBELs, an interim limitation is required. Board staff considered effluent data from September 2001 to April 2004 to develop an interim limitation. Historically, IPBLs have been referenced to the 99.87th percentile value of recent performance data. Statistical analysis of the copper effluent data indicates a 99.87th percentile value of 21.5 µg/L. The previous permit contained an interim effluent limitation of 34 µg/L as a daily maximum, which is less stringent. Therefore, the 99.87th percentile based on the new performance data, 21.5 µg/L, is set as the interim limitation, expressed as a daily maximum effluent limitation.
- f. *Plant Performance and Attainability.* During the period September 2001 through April 2004, the plant's effluent concentrations ranged from 1 µg/L to 13 µg/L (29 samples). All concentrations are below the IPBL, therefore, it is expected that the Discharger can comply with the IPBL for copper.
- g. *Term of Interim Effluent Limitations.* The copper interim limitation for wet season discharges shall remain in effect until April 30, 2010, and until December 31, 2007 for dry season discharges.
- h. *Copper SSO.* During the permit term, the Board may amend the copper WQBEL based on the SSOs being developed for San Pablo Bay. San Pablo Bay SSOs will be applicable to the Napa River.
- i. *Antibacksliding/Antidegradation.* Antibacksliding and antidegradation requirements are satisfied, since the new IPBL is more stringent than the previous permit effluent limitation.

56. Mercury

- a. *Mercury WQOs/WQC.* Both the Basin Plan and the CTR include objectives and criteria that govern mercury in the receiving water. The Basin Plan specifies objectives for the protection of salt water aquatic life of 0.025 µg/L as a 4-day average and 2.1 µg/L as a 1-hour average. The CTR specifies a long-term average criterion for protection of human health of 0.051 µg/L.
- b. *Mercury RPA Results.* This Order establishes effluent limitations for mercury because the MEC for the Discharger's effluent was 0.15 µg/L, which triggers reasonable potential by Trigger 1 as defined in a previous finding.
- c. *Mercury WQBELs.* The mercury WQBELs calculated according to SIP procedures are 0.039 µg/L as the MDEL and 0.012 µg/L as the AMEL for wet and dry season discharges. No dilution credit is allowed in calculating WQBELs for mercury.
- d. *Immediate Compliance Infeasible.* The Discharger's Feasibility Study asserts the Discharger cannot immediately comply with these WQBELs for mercury. Board staff statistically analyzed the Discharger's effluent data from September 2001 through April 2004 (see Section V.g. 5 and

Table E of the attached Fact Sheet for detailed results of the statistical analysis). Based on the analysis, the Board concurs with the Discharger's assertion of infeasibility to comply with final mercury WQBELs.

- e. *Mercury Control Strategy.* The Board is developing a TMDL to control mercury levels in the San Pablo Bay. The Board, together with other stakeholders, will cooperatively develop source control strategies as part of the TMDL development. Municipal discharge point sources may not represent a significant mercury loading to San Pablo Bay. Therefore, the currently preferred strategy is to apply interim mass loading limits to point source discharges while focusing mass reduction efforts on other more significant and controllable sources. While the TMDL is being developed, the Discharger will cooperate in maintaining ambient receiving water conditions by complying with performance-based mercury mass emission limits. Therefore, this Order includes interim mass loading effluent limitations for mercury, as described in the findings below. The Discharger is required to implement source control measures and cooperatively participate in special studies as described below.
- f. *Mercury TMDL.* The current 303(d) list includes the San Pablo Bay as impaired by mercury, due to high mercury concentrations in the tissue of fish from the Bay. Methyl-mercury, the highly toxic form of mercury, is a persistent bioaccumulative pollutant. There is no evidence to show that the mercury discharged by the Discharger is taken out of the hydrologic system, by processes such as evaporation before reaching San Pablo Bay. Absent this evidence, the Board assumes that the mercury reaches the Bay through either sediment transport or water flows. The Board intends to establish a TMDL that will lead towards overall reduction of mercury mass loadings into San Pablo Bay. The final mercury effluent limitations will be based on the Discharger's WLA in the TMDL. While the TMDL is being developed, the Discharger will comply with performance-based mercury concentration and mass-based limitations to cooperate in maintaining current ambient receiving water conditions.
- g. *Interim Performance-based Effluent Limitation (IPBL).* Because it is infeasible for the Discharger to immediately comply with the mercury WQBELs, an interim limitation is required. The previous Order contained an interim effluent limitation of 0.087 µg/L as an average monthly, which was determined from pooled ultra-clean mercury data for POTWs throughout the Region using secondary treatment (*Staff Report: Statistical Analysis of Pooled Data from Region-wide Ultra-clean Sampling, 2000*). This interim limitation is retained in this Order.
- h. *Interim Mercury Mass Emission Limit.* In addition to the concentration-based mercury IPBL, this Order establishes an interim mercury mass loading limit of 0.025 kilograms per month (kg/month). This limit is retained from the previous Order. It will maintain current loadings until a TMDL is established and is consistent with state and federal antidegradation and antibacksliding requirements. The final mass-based effluent limitation will be based on the WLA derived from the mercury TMDL.
- i. *Mass Trigger.* This Order establishes a mercury mass trigger of 0.014 kilograms per month (kg/mo). This mass trigger is also retained from the previous Order. The mass loading trigger, if exceeded, requires the Discharger to initiate additional actions, as specified in Provision F.7.
- j. *Discharger's Performance and Attainability.* During the period September 2001 through April 2004, the Discharger's effluent concentrations ranged from 0.008 µg/L to 0.15 µg/L (38 samples). Only one concentration, 10 times higher than the second highest concentration, was above the IPBL. This value appears to be extremely rare and is an isolated incident as it occurred

just once out of 38 samples. It is, therefore, expected that the Discharger can comply with the IPBL for mercury.

- k. *Term of Interim Mass Limitation.* The mercury interim concentration limitation shall remain in effect until April 27, 2010, or until the Board amends the limitations based on additional data, SSOs, or until the Board adopts a TMDL-based effluent limitation for mercury.
- l. *Antibacksliding/Antidegradation.* The antibacksliding and antidegradation requirements are satisfied as the IPBL and mass emission limitations are unchanged from the previous permit limitations.

57. Nickel

- a. *Nickel WQOs.* The Basin Plan contains numeric nickel saltwater WQOs, which are 8.2 µg/L for chronic protection and 74 µg/L for acute protection, as dissolved metal. Using the conversion factor of 0.99, the converted WQOs for nickel are 8.3 µg/L for chronic protection and 75 µg/L for acute protection, as total recoverable metal.
- b. *RPA Results.* The maximum ambient background nickel concentration of 68.7 µg/L exceeds the governing WQO of 8.3 µg/L, demonstrating reasonable potential by Trigger 2, as defined in a finding above.
- c. *WQBELs.* The nickel WQBELs calculated according to SIP procedures are 9.5 µg/L as the MDEL and 8.0 µg/L as the AMEL for both wet and dry season discharges. Dilution credit was not able to be incorporated in the calculation of WQBELs for wet season discharges because the maximum ambient nickel concentration is higher than the limiting WQO.
- d. *Plant Performance and Attainability.* During the period September 2001 through April 2004, the Discharger's nickel effluent concentrations ranged from 3 µg/L to 4.9 µg/L (26 samples). Board staff performed a statistical analysis on the data. Based on this analysis, the Board determines that the Discharger can comply with the final WQBELs.
- e. *Antibacksliding/Antidegradation.* The previous permit did not contain an effluent limitation for nickel. Therefore, the antibacksliding and antidegradation requirements do not apply.

58. Selenium

- a. *Selenium WQC.* To protect saltwater aquatic life, the NTR specifies WQC for selenium of 5 µg/L for chronic aquatic life protection and 20 µg/L for acute protection.
- b. *RPA Results.* The maximum ambient background selenium concentration of 19 µg/L exceeds the governing WQC of 5 µg/L, demonstrating reasonable potential by Trigger 2, as defined in a finding above.
- c. *WQBELs.* The selenium WQBELs calculated according to SIP procedures are 9.2 µg/L MDEL and 3.3 µg/L AMEL for dry and wet season discharges. No dilution credit is allowed in calculating WQBELs for selenium.
- d. *Immediate Compliance Infeasible.* The Discharger's Feasibility Study asserts the Discharger cannot immediately comply with these WQBELs for selenium. There are a total of 23 data points, among them only 7 are detected values. Due to the high censoring and lack of good

distribution fit to the data set, Board staff compared the MEC and the AMEL to examine the feasibility of compliance for selenium. Since the MEC of 5 µg/L is higher than the AMEL of 3.3 µg/L, the Board concurs with the Discharger's infeasibility assertion.

- e. *Interim Performance-based Effluent Limitation (IPBL)*. Because it is infeasible for the Discharger to immediately comply with the selenium WQBELs, an interim limitation is required. Since it is not possible to perform a meaningful statistical analysis due to high censoring to estimate the 99.87th percentile, the MEC of 5 µg/L is set as the interim limitation, as a daily maximum.
- f. *Plant Performance and Attainability*. During the period from September 2001 through April 2004, the plant's effluent concentrations for selenium ranged from <0.5- 5 µg/L (23 samples) with only 7 detected concentrations. All detected values are below the interim limitation. Therefore, it is expected that the Discharger can comply with the interim limitation for selenium.
- g. *Term of Selenium IPBL*. The selenium interim concentration limitation shall remain in effect until April 27, 2010 or until the Board amends the limitations based on additional data, or until the Board adopts a TMDL-based effluent limitation for selenium.
- h. *Selenium Source Control Strategy*. As a prerequisite to being granted the compliance schedule and interim limits described above, the Discharger will implement selenium source control strategies as indicated in the Discharger's 2005 Feasibility Study, as **Attachment F** of this Order.
- i. *Selenium Mass Limitations*. The Clean Estuary Partnership (CEP)'s *Conceptual Model and Impairment Assessment for Selenium in San Francisco Bay*, dated February 2004, suggests that POTWs are insignificant sources of selenium. POTWs are estimated to contribute no more than 2% of the total mass loadings to the Bay as compared to all other major sources, i.e., Sacramento River, agricultural drainage via San Joaquin River, and refineries. Additionally, that report highlighted some of the uncertainties associated with the impairment assessment. Based on this, an interim mass limit for this discharge is unnecessary at this time as the interim concentration limit will be sufficient to maintain current performance. Thus, no selenium mass limitations are established in this Order.
- j. *Antibacksliding/Antidegradation*. The previous permit did not contain an effluent limitation for selenium. Therefore, the antibacksliding and antidegradation requirements do not apply.

59. Cyanide

- a. *Cyanide WQC*. The NTR includes WQC that govern cyanide for the protection of aquatic life in salt surface water. The NTR specifies a saltwater Criterion Maximum Concentration (CMC) and Criterion Chronic Concentration (CCC) of 1 µg/L.
- b. *RPA Results*. This Order establishes effluent limitations for cyanide because the 20 µg/L MEC exceeds the governing WQC of 1 µg/L, demonstrating reasonable potential by Trigger 1, as defined in a previous finding, above.
- c. *Cyanide WQBELs*. The cyanide WQBELs calculated according to SIP procedures are 1.0 µg/L MDEL and 0.4 µg/L AMEL for dry season discharges and wet season discharges without dilution (D=0), and 6.7 µg/L MDEL and 2.6 µg/L AMEL for wet season discharges with a 10:1 dilution (D=9).

- d. *Immediate Compliance Infeasible.* The Discharger's Feasibility Study asserts the Discharger cannot immediately comply with these WQBELs for cyanide. Board staff statistically analyzed the Discharger's effluent data from September 2001 through April 2004 (see Section V.g. 5 and Table E of the attached Fact Sheet for detailed results of the statistical analysis). Based on the analysis, the Board concurs with the Discharger's assertion of infeasibility to comply with final cyanide WQBELs.
- e. Cyanide is a regional problem associated with the analytical protocol for cyanide analysis due to matrix interferences. There is also evidence to suggest that, to some degree, cyanide measured in effluents may be an artifact of the analytical method used or the result of analytical interferences. In general, the chemistry of cyanide formation in POTW effluents is highly complex, involving both chemical and environmental factors, in ways that are still poorly understood, despite considerable research. In addition, it is not known whether the form(s) of cyanide that are measured in POTW effluents exhibit toxicity in these environments. A 3-year \$1.5 million (M) investigation completed in late 2002, sponsored by the Water Environment Research Foundation (WERF), in which several Bay Area POTWs participated, described a number of possible mechanisms for cyanide formations, and shed new light on analytical issues, but found no process or operational measures that could be implemented by the Discharger to reduce observed cyanide levels in the effluent.
- f. *SSO and Ambient Background Data Collection.* A regional discharger-funded study is underway for development of a cyanide SSO or recalculation of the criteria. The cyanide study plan was submitted on October 29, 2001, and the final report was submitted on June 29, 2003. The WQBELs will be re-calculated based on a cyanide SSO, or updated criteria if adopted.
- g. WERF has initiated a follow-up \$0.5 million study to reassess cyanide criteria for the protection of aquatic life and wildlife. It will critique data to assure it meets current best scientific standards and new U.S. EPA guidelines, recommend testing strategies, and develop a data set to meet guidelines for ambient water quality development. It is expected that results from that study will provide information useful to devising alternative cyanide compliance strategies for shallow water dischargers in San Francisco Bay.
- h. *Interim Effluent Limitation.* Because it is infeasible for the Discharger to immediately comply with the cyanide WQBELs, an interim limitation is required. Board staff considered effluent data from September 2001 to April 2004 to develop an interim limitation. Historically, IPBLs have been referenced to the 99.87th percentile value of recent performance data. Statistical analysis of the cyanide effluent data indicates a 99.87th percentile value of 43.7 µg/L. The previous permit contains an interim limitation of 25 µg/L, which was developed based on pooled cyanided effluent data from several waste water treatment plants (WWTP) using activated sludge treatment systems. Therefore, the previous permit limitation is retained as the interim effluent limitation, expressed as a daily maximum.
- i. *Plant Performance and Attainability.* During the period September 2001 through April 2004, the Discharger's cyanide effluent concentrations ranged from 0.3 µg/L to 20 µg/L (36 samples). All concentrations were below the interim limitation of 25 µg/L. It is, therefore, expected that the plant can comply with the interim limitation for cyanide.
- j. *Term of Interim Effluent Limitations.* The cyanide interim limitation shall remain in effect until April 27, 2010 for wet season discharges, and until December 31, 2007 for dry season discharges, or until the Board amends the limitations based on additional data or SSOs.

- k. *Anti-backsliding/Anti-degradation.* The anti-backsliding/anti-degradation requirements are satisfied as the interim limitation is unchanged from the previous permit limitation.

60. Dioxins and Furans

- a. *Dioxin TEQ WQC.* The CTR establishes a numeric human health WQC of 0.014 pg/L for 2,3,7,8-TCDD based on consumption of organisms. The preamble of the CTR states that California NPDES permits should use TEQs where dioxin-like compounds have reasonable potential to cause or contribute to violation of narrative standards. The preamble further states that U.S. EPA intends to use the 1998 World Health Organization TEF scheme in the future and encourages California to use this scheme in State programs. In addition, the CTR preamble states U.S. EPA's intent to adopt revised WQC guidance subsequent to their health reassessment for dioxin-like compounds. In 1998, the U.S. EPA listed the Bay as impaired by dioxin-like compounds. Therefore, discharges that contain dioxin-like compounds have a reasonable potential to contribute to this impairment. To address this, it is appropriate to apply the TEQ scheme in setting numeric limits for such discharges to protect the Basin Plan narrative standards. The Board used TEQs to translate the narrative WQOs to numeric WQOs for the other 16 congeners.
- b. *RPA Results.* The maximum ambient background dioxin TEQ is 0.0368 pg/L, and is above the governing WQC, which triggers reasonable potential using Trigger 2, as defined in a previous finding.
- c. *WQBELs.* The TCDD TEQ WQBELs calculated according to SIP procedures are 0.014 pg/L as the AMEL and 0.028 pg/L for both wet season and dry season discharges. No dilution credit is allowed in calculating WQBELs for TCDD TEQ.
- d. *Dioxin Monitoring.* The Discharger has eight measurements of 2,3,7,8,-TCDD and all 16 congeners from September 2001 through February 2004. There are only three detected TCDD TEQ, ranging from 0.000684 to 0.002 pg/L. Although all data are either non-detect or below the WQC, there is uncertainty in determining compliance attainability due to limited data. In addition, the MLs for all 17 dioxin congeners range from 5 pg/L to 50 pg/L (see BACWA Letter dated April 23, 2002), which are higher than the WQBELs, therefore, the Board has determined that it is infeasible for the Discharger to achieve immediate compliance. This Order requires additional dioxin monitoring to complement the Clean Estuary Project's special dioxin project, consisting of impairment assessment and a conceptual model for dioxin loading into the Bay. The permit will be reopened, as appropriate, to include interim dioxin limitations when additional data become available.

61. Tributyltin (TBT)

- a. *TBT WQOs.* The Basin Plan provides narrative TBT WQOs for saltwater aquatic life of 0.0074 µg/L for chronic protection (4-day average) and 0.42 µg/L for acute protection (1-hour average).
- b. *RPA Results.* The MEC is 0.0226 µg /L, and is above the governing WQO, which triggers reasonable potential using Trigger 1, as defined in a previous finding.
- d. *TBT WQBELs.* The tributyltin WQBELs calculated according to SIP procedures are 0.006 µg/L as the AMEL and 0.012 µg/L as the MDEL for dry season discharges and wet season discharges without dilution (D=0), and 0.05 µg/L MDEL and 0.1 µg/L AMEL for wet season discharges with a 10:1 dilution (D=9).

- e. *Monitoring Requirements.* The Discharger has eight measurements of TBT from September 2001 through February 2004. There are only two detected concentrations; all others are non-detect, with detection limits ranging from 0.00051 to 0.00159 µg/L. The Discharger claimed that it is not feasible to achieve immediate compliance with the WQBELs for TBT. Due to limited effluent data, the Board concurred with the Discharger's infeasibility assertion. Also due to limited data, this Order does not establish an interim limitation for TBT. This Order requires the Discharger to continue monitoring TBT and develop pollution prevention activities to reduce concentrations in the effluent. The permit will be reopened, as appropriate, to include TBT limitations when additional data become available. Final WQBELs for TBT may be considered by the Board in the next permit reissuance if the effluent continues to show reasonable potential.

Whole Effluent Acute Toxicity

62. a. *Permit Requirements.* This Order includes effluent limits for whole-effluent acute toxicity that are unchanged from the previous Order. All bioassays shall be performed according to the U.S. EPA approved method in 40 CFR 136, currently "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 5th Edition." The Discharger is required to use the 5th Edition method for compliance determination upon the effective date of this Order. If the Discharger needs a time period for the transition from the 4th to the 5th Edition method, it should submit a written request with justifications to the Executive Officer for approval within 30 days of the permit adoption date.
- b. *Compliance History.* The Discharger's acute toxicity monitoring data show that there were a few exceedances of the effluent limitations during 2001-2003, with fish survival rates ranging between 25-65% (current test species is fathead minnow). The Discharger has claimed that the observed toxicity was mostly due to elevated un-ionized ammonia in the effluent. The Discharger, however, did not provide the necessary analysis to prove that the toxicity was caused by elevated un-ionized ammonia concentrations.
- c. *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 ammonia toxicity is verified in the TIE, the Discharger may utilize pH adjustment protocol for the routine bioassay testing.

Whole Effluent Chronic Toxicity

63. a. *Permit Requirements.* This permit includes requirements for chronic toxicity monitoring based on the Basin Plan narrative toxicity objective, and in accordance with U.S. EPA and SWRCB Task Force guidance, and BPJ. This permit includes the Basin Plan narrative toxicity objective as the applicable effluent limit, implemented via monitoring with numeric values as "triggers" to initiate accelerated monitoring and to initiate a chronic toxicity reduction evaluation (TRE) as necessary. The permit requirements for chronic toxicity are also consistent with the CTR and SIP requirements.
- b. *Wet Season Chronic Toxicity Triggers.* This Order includes chronic toxicity triggers for wet season discharges, which are three sample median of 10 chronic toxicity (TUc^2) and a single

² A TUc equals 100 divided by the no observable effect level (NOEL). The NOEL is determined from IC, EC, or NOEC values. Monitoring and TRE requirements may be modified by the Executive Officer in response to the degree of toxicity detected in the effluent or in ambient waters related to the discharge. Failure to conduct the required toxicity tests or a TRE within a designated period shall result in the establishment of effluent limits for chronic toxicity

sample maximum of 20 TUc. These triggers are appropriate at this time pending on a mixing zone study; however, the Board intends to revisit these triggers subsequent to the mixing zone study results.

- c. *Screening Phase Study.* The Discharger has not previously performed chronic toxicity monitoring. The Discharger has prepared a chronic toxicity screening phase study plan and will complete the study by June 30, 2005. The Discharger shall start using the identified species as the compliance species if approved by the Executive Officer.
- d. *Permit Reopener.* The Board will consider amending this permit to include numeric toxicity limits if the Discharger fails to aggressively implement all reasonable control measures included in its approved TRE workplan, following detection of consistent significant non-artifactual toxicity.

Bacteriological Limits

64. The Discharger submitted a report titled *Revised Bacteria Effluent Limits Special Study* (Study), June 2003 to assess the beneficial uses of its receiving water and to evaluate the feasibility of substituting the total coliform effluent limitations with fecal coliform or enterococcus effluent limitations. The study shows that the alternative bacteriological effluent limitations can provide enough protection of the beneficial uses of the receiving water. Furthermore, as the Napa River is estuarine at the discharge point, the lower, more conservative, enterococci WQOs for freshwater were chosen. This Order includes alternative enterococcus effluent limits instead of the total coliform limits included in the previous Order. Effluent Limitations B(iii) of this Order specify the effluent limitations and detailed requirements.

Storm Water

65. *Regulations.* Federal Regulations for storm water discharges were promulgated by the U.S. EPA on November 19, 1990. The regulations [40 CFR Parts 122, 123, and 124] require specific categories of industrial activity (industrial storm water) to obtain a NPDES permit and to implement Best Available Technology Economically Available (BAT) and Best Conventional Pollutant Control Technology (BCT) to control pollutants in industrial storm water discharges.

66. *Exemption from Coverage under Statewide Storm Water General Permit.* The State Board adopted a statewide NPDES permit for storm water discharges associated with industrial activities (NPDES General Permit CAS000001, adopted November 19, 1991, amended September 17, 1992). The General Permit is applicable to municipal wastewater treatment facilities. Coverage under the General Permit is not required for the subject discharge because all storm water flows from the plant and sludge disposal area are captured, directed to the plant headworks, and treated along with the wastewater discharged to the plant. Because all storm water from the facility is treated at the facility, this permit regulates the discharge of storm water from the plant.

Pollution Prevention

67. The Discharger has established a Pollution Prevention Program under the requirements specified by the Board.

- a. Section 2.4.5 of the SIP specifies under what situations and for which priority pollutant(s) (i.e., reportable priority pollutants) the Discharger shall be required to conduct a Pollutant Minimization Program in accordance with Section 2.4.5.1.
 - b. There may be some redundancy between the Pollution Prevention Program and the Pollutant Minimization Program requirements.
 - c. Where the two programs' requirements overlap, the Discharger is allowed to continue, modify, or expand its existing Pollution Prevention Program to satisfy the Pollutant Minimization Program requirements.
 - d. For constituents identified under Effluent Limitations, Section B, the Discharger will conduct appropriate source control or pollutant minimization measures that are consistent with its approved Pollution Prevention Program. For constituents with compliance schedules under this permit, the applicable source control and pollutant minimization requirements of Section 2.1 of the SIP will also apply.
68. On October 15, 2003, the Board adopted Resolution R2-2003-0096 in support of a collaborative working approach between the Board and BACWA to promote Pollution Prevention 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.

Pretreatment Program

69. *Pretreatment Program.* The Discharger has implemented and is maintaining an effective U.S. EPA approved pretreatment program in accordance with Federal pretreatment regulations (40 CFR Part 403) and the requirements specified in **Attachment D** "Pretreatment Requirements". Order No. 01-059 amended the Discharger's permit (as well as fourteen other dischargers' permits in the Region) to reflect the Board's most recent pretreatment requirements. The requirements of this Order supersede Order No. 01-059.
70. The Discharger submitted an evaluation of its local limits titled Soscol Water Recycling Facility Local Limits Report, July 2003 (the July 2003 report). On April 8 and 11, 2005, the Discharger submitted a response and a revised response, respectively, to the Board staff's comments on the July 2003 report. The Discharger's response dated April 11, 2005, is included in this Order as **Attachment D**. The Board approves all the modifications to the local limits, except copper, as detailed in **Attachment D** (Table: Summary of Findings). The Board, as part of this permit, conditionally approves an increase of the copper local limit from 2.8 pounds/day (lb/day) to 5.12 lb/day as maximum allowable industrial loading. An increase of a local limit requires a 30-day public noticing, therefore, a provision is included in this Order requiring the Discharger to complete this task before the new copper local limit becomes effective.

Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy

71. On August 6, 2001, the Board sent a letter to all the permitted dischargers pursuant to Section 13267 of the California Water Code requiring the submittal of effluent and receiving water data on priority pollutants. The letter (described above) is referenced throughout the permit as the “August 6, 2001 Letter”.
72. Pursuant to the August 6, 2001 Letter from Board Staff, the Discharger was required to submit workplans and sampling results for characterizing the levels of selected constituents in the effluent. The Discharger has collected 7 effluent samples for all 126 priority pollutants except for asbestos since 2001 and 3 receiving water samples for the 126 priority pollutants in 2002 through the Napa River Collaborative Study, and additional receiving water monitoring data during several other studies. These data were used in the RPA and interim limitation calculations in this Order.

Monitoring Requirements (Self-Monitoring Program)

73. *Monitoring Requirements (Self-Monitoring Program)*. The SMP includes monitoring at the outfall for conventional, non-conventional, toxic pollutants, and acute and chronic toxicity. Monitoring for conventional and non-conventional pollutants has remained the same as the previous permit except that the effluent settleable solids monitoring is no longer required since the settleable solids limitations have been eliminated. Monthly monitoring is required for copper, mercury, nickel, selenium, and cyanide to determine compliance with effluent limitations. Twice per year monitoring for dioxins is required to provide information for TMDL development. Twice per year monitoring for TBT is required to provide information for effluent limitation development. The Discharger shall also continue its 13267 monitoring for the effluent and receiving water for all the priority pollutants listed in the August 6, 2001 Letter according to its sampling plan. A minimum of one sample of the priority pollutants shall be collected during the term of the permit. The results shall be submitted 180 days before the permit expires with the permit renewal application. With respect to effluent monitoring, the monitoring and reporting requirements of this Order supersede the requirements of the Executive Officer’s August 6, 2001 letter.

Optional Mass Offset

74. This Order contains requirements to prevent further degradation of impaired waterbodies. Such requirements include the adoption of interim mass limitations that are based on treatment plant performance, provisions for aggressive source control, feasibility studies for additional wastewater reclamation, and treatment plant optimization. After implementing these efforts, the Discharger may find that further net reductions of the total mass loadings of the 303(d)-listed pollutants to the receiving water can be achieved only through a mass offset program. This Order includes an optional provision for a mass offset program.

O & M Manual

75. The Discharger maintains an Operations and Maintenance Manual (O & M Manual) to provide the plant and regulatory personnel with a source of information describing all equipment, recommended operational strategies, process control monitoring, and maintenance activities. To remain a useful and relevant document, the manual shall be kept updated to reflect significant changes in treatment facility equipment and operation practices.

CEQA Exemption, Notification, and Public Hearing

76. *NPDES Permit.* This Order serves as an NPDES permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code [California Environmental Quality Act (CEQA)] pursuant to Section 13389 of the California Water Code.
77. *Notification.* The Discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharges and have been provided an opportunity to submit their written views and recommendations. Board staff prepared a Fact Sheet and Response to Comments, which are hereby incorporated by reference as part of this Order.
78. *Public Hearing.* The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code, regulations, and plans and policies adopted thereunder, and to the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, that the Discharger shall comply with the following:

A. DISCHARGE PROHIBITIONS

1. Discharge of wastewater at any point where it does not receive a minimum initial dilution of 10:1, or into dead-end slough and similar confined waters is prohibited, except as defined below. Based on Findings 33 through 35, an exception to this prohibition is granted for the discharge of treated effluent during the wet season. Discharge of treated wastewater at a location or in a manner different from that described in the findings of this Order is prohibited.
2. The bypass or overflow of untreated or partially treated wastewater to waters of the State, either at the plant or from the collection system or pump stations tributary to the plant, is prohibited, except as provided for bypasses under the conditions stated in 40 CFR 122.41(m)(4) and in Standard Provisions A.13.
3. The average dry season discharge shall not exceed 15.4 mgd. The average dry season flow shall be determined over three consecutive dry season months each year.
4. Discharges of water, materials, or wastes other than storm water, which are not otherwise authorized by this NPDES permit, to a storm drain system or waters of the State are prohibited.
5. From May 1 through October 31, discharge is prohibited. Discharge to the Napa River prior to October 31 or later than May 1 may be authorized by the Executive Officer, based on written, email or facsimile request from the Discharger documenting that normally planned disposal to land is not feasible due to wet season conditions. In these cases, the discharge shall comply with Prohibition A.3 and the effluent limitations prescribed in B(ii) and B(iii), emergency discharge into shallow waters, of this Order.

B. EFFLUENT LIMITATIONS

The term "effluent" refers to the treated wastewater effluent from the Discharger's wastewater treatment facility, as discharged to the Napa River.

i. Effluent Limitations Applicable to Wet Season Discharges (November 1 through April 30):

- 1. Conventional Pollutants:** The effluent discharged to the Napa River during the wet season period (November 1 through April 30) shall not exceed the following limits specified in Table 3 for conventional pollutants:

Table 3 - Conventional Pollutants Effluent Limitations for Wet Season Discharges

Constituent	Units	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum
Biochemical Oxygen Demand (BOD ₅ , 20°C)	mg/L	30	45	--	--
or Carbonaceous Oxygen Demand (COD)	mg/L	25	40	--	--
Total Suspended Solids	mg/L	30	45	--	--
Oil & Grease	mg/L	10	--	20	--
Chlorine Residual ¹	mg/L	--	--	--	0.0

[1] The chlorine residual requirement is defined as below the limit of detection in standard methods defined in *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, chlorine and sodium bisulfite dosage (which could be interpolated), and concentration to prove that chlorine residual exceedances are false positives. If convincing evidence is provided, Board staff may conclude that these false positive chlorine residual exceedances are not violations of this permit limitation.

- 2. pH:** The pH of the discharge shall not exceed 9.0 nor be less than 6.0 standard units. If the Discharger employs continuous pH monitoring, the Discharger shall be in compliance with the pH limitation specified herein, provided that both of the following conditions are satisfied:

- a. The total time during which the pH values are outside the required range shall not exceed 7 hours and 26 minutes in any calendar month.
- b. No individual excursion from the required range of pH values shall exceed 60 minutes.

3. Chronic Toxicity:

- a. Compliance with the Basin Plan narrative toxicity objective shall be demonstrated according to the following tiered triggers based on results from representative samples of the treated effluent meeting test acceptability criteria and Provision F.9:

- (1) Routine monitoring;
- (2) Accelerated monitoring on a monthly basis after exceeding a three sample median value of 10 TUc or a single sample maximum of 20 TUc or greater.
- (3) Return to routine monitoring if accelerated monitoring does not exceed either “trigger” in (2), above;
- (4) Initiate approved toxicity identification evaluation/toxicity reduction evaluation (TIE/TRE) work plan if accelerated monitoring confirms consistent toxicity above either “trigger” in (2), above;

(5) Return to routine monitoring after appropriate elements of TRE work plan are implemented and either the toxicity drops below “trigger” level in (2), above or, based on the results of the TRE, the Executive Officer authorizes a return to routine monitoring.

b. *Test Species and Methods:* The Discharger shall conduct routine monitoring with the most sensitive species determined during the most recent chronic toxicity screening performed by the Discharger and approved by the Executive Officer. Chronic Toxicity Monitoring Screening Phase Requirements, Critical Life Stage Toxicity Tests and definitions of terms used in the chronic toxicity monitoring are identified in **Attachment A** of the SMP. In addition, bioassays may be conducted in compliance with the most recently promulgated test methods, currently “Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms,” currently third edition (EPA-821-R-02-014), and “Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms,” currently fourth Edition (EPA-821-R-02-013), with exceptions granted the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).

4. **Toxic Pollutants:** The effluent discharged to the Napa River during the wet season period (November 1 through April 30) shall not exceed the following limits specified in Table 4 for priority toxic pollutants:

Table 4 – Toxic Pollutants Effluent Limitations for Wet Season Discharges [1,2]

Constituents	Notes	WQBELs		Interim Limits	
		Daily Maximum (MDEL) µg/L	Monthly Average (AMEL) µg/L	Daily Maximum µg/L	Monthly Average µg/L
Copper	[3]	--	--	21.5	--
Mercury	[4]	--	--	--	0.087
Nickel	--	9.5	8.0	--	--
Selenium	[3]	--	--	5	--
Cyanide	[3][5]	--	--	25	--

- [1] a. Compliance with these limitations is intended to be achieved through secondary treatment and, as necessary, pretreatment and source control.
- b. All analyses shall be performed using current U.S. EPA methods, or equivalent methods approved in writing by the Executive Officer. The Discharger is in violation of the limitation if the discharge concentration exceeds the effluent limitation and the reported ML for the analysis for that constituent.
- c. Limitations apply to the average concentration of all samples collected during the averaging period (daily = 24-hour period; monthly = calendar month).
- d. All metal limitations are total recoverable.

[2] A daily maximum or average monthly value for a given constituent shall be considered noncompliant with the effluent limits only if it exceeds the effluent limitation and the reported ML for that constituent. The table below indicates the lowest minimum level that the Discharger’s laboratory must achieve for compliance determination purposes.

Constituent	ML (µg/L)
Copper	0.5
Mercury	0.002
Nickel	1
Selenium	1
Cyanide	5

- [3] The interim limitations for copper shall remain in effect until April 30, 2010, for cyanide and selenium, they shall remain in effect until April 27, 2010, or until the Board amends the limitation based on additional information, SSOs, or WLA from a selenium TMDL.
- [4] The interim limitation for mercury shall remain in effect until April 27, 2010, or until the Board adopts TMDL-based effluent limitation for mercury. Effluent mercury monitoring shall be performed by using ultra-clean sampling and analysis techniques, with a method detection limit of 0.002 µg/L or lower.
- [5] Compliance may be demonstrated by measurement of weak acid dissociable cyanide.

ii. Effluent Limitations Applicable to Dry Season Discharges (May 1 through October 31):

The Discharger reclaims and reuses treated effluent in accordance with Order No. 96-011. The effluent limitations prescribed in this section are intended for emergency discharge cases in which extreme season conditions have disturbed the normal summertime water reuse irrigation schedule.

- 1. Conventional Pollutants:** The effluent discharged to the Napa River during the dry season period (May 1 through October 31) shall not exceed the following limits specified in Table 5 for conventional pollutants:

Table 5 - Conventional Pollutants Effluent Limitations for Dry Season Discharges

Constituent	Units	30-Day (Monthly) Average	7-Day (Weekly) Average	Daily Maximum	Instantaneous Maximum
A. Biochemical Oxygen Demand (BOD ₅ , 20°C)	mg/L	10	20	--	--
B. Total Suspended Solids	mg/L	20	30	--	--
C. Oil & Grease	mg/L	10	--	20	--
D. Residual Chlorine ¹	mg/L	--	--	--	0.0

[1] The chlorine residual requirement is defined as below the limit of detection in standard methods defined in *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, chlorine and sodium bisulfite dosage (which could be interpolated), and concentration to prove that chlorine residual exceedances are false positives. If convincing evidence is provided, Board staff may conclude that these false positive chlorine residual exceedances are not violations of this permit limitation.

- 2. pH:** The pH of the discharge shall not exceed 8.5 nor be less than 6.5 standard units. If the Discharger employs continuous pH monitoring, the Discharger shall be in compliance with the pH limitation specified herein, provided the following condition is satisfied:

No individual excursion from the required range of pH values shall exceed 60 minutes.

3. Chronic Toxicity:

If an emergency discharge lasts longer than 7 days, the Discharger shall perform chronic toxicity and compliance with the Basin Plan narrative toxicity objective shall be demonstrated according to the following trigger based on results from representative samples of the treated effluent meeting test acceptability criteria and Provision F.9:

- (1) Routine monitoring;
- (2) Accelerated monitoring on a monthly basis after exceeding a single sample maximum of 1 TUc or greater.
- (3) Return to routine monitoring if accelerated monitoring does not exceed the trigger in (2), above;
- (4) Initiate approved toxicity identification evaluation/toxicity reduction evaluation (TIE/TRE) work plan if accelerated monitoring confirms consistent toxicity above trigger in (2) above;
- (5) Return to routine monitoring after appropriate elements of TRE work plan are implemented and either the toxicity drops below “trigger” level in “2”, above or, based on the results of the TRE, the Executive Officer authorizes a return to routine monitoring.

b. *Test Species and Methods:* The Discharger shall conduct routine monitoring with the most sensitive species determined during the most recent chronic toxicity screening performed by the Discharger and approved by the Executive Officer. Chronic Toxicity Monitoring Screening Phase Requirements, Critical Life Stage Toxicity Tests and definitions of terms used in the chronic toxicity monitoring are identified in **Attachment A** of the SMP. In addition, bioassays may be conducted in compliance with the most recently promulgated test methods, currently “Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms,” currently third edition (EPA-821-R-02-014), and “Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms,” currently fourth Edition (EPA-821-R-02-013), with exceptions granted the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).

4. Toxic Pollutants: The effluent discharged to the Napa River during the dry season period (May 1 through October 31) shall not exceed the following limits specified in Tables 6 and 7 for priority toxic pollutants:

**Table 6 – Toxic Pollutants Effluent Limitations for Dry season Discharges [1,2]
 (From Permit Effective Date to December 31, 2007)**

Constituents	Notes	WQBELs (µg/L)		Interim Limits (µg/L)	
		Daily Maximum (MDEL)	Monthly Average (AMEL)	Daily Maximum	Monthly Average
Copper	[3]	--	--	21.5	--
Mercury	[4]	--	--	--	0.087
Nickel	--	9.5	8.0	--	--
Selenium	[5]	--	--	5	--
Cyanide	[3][6]	--	--	25	--

**Table 7 – Toxic Pollutants Effluent Limitations for Dry season Discharges [1,2]
 (Starting January 1, 2008)**

Constituents	Notes	WQBELs (µg/L)		Interim Limits (µg/L)	
		Daily Maximum (MDEL)	Monthly Average (AMEL)	Daily Maximum (MDEL)	Monthly Average (AMEL)
Copper	--	8.4	4.2	--	--
Mercury	[4]	--	--	--	0.087
Nickel	--	9.5	8.0	--	--
Selenium	[5]	--	--	5	--
Cyanide	[6]	1.0	0.4	---	--

- [1] a. Compliance with these limitations is intended to be achieved through secondary treatment and, as necessary, pretreatment and source control.
- b. All analyses shall be performed using current U.S. EPA methods, or equivalent methods approved in writing by the Executive Officer. The Discharger is in violation of the limitation if the discharge concentration exceeds the effluent limitation and the reported ML for the analysis for that constituent.
- c. Limitations apply to the average concentration of all samples collected during the averaging period (daily = 24-hour period; monthly = calendar month).
- d. All metal limitations are total recoverable.
- [2] A daily maximum or average monthly value for a given constituent shall be considered noncompliant with the effluent limits only if it exceeds the effluent limitation and the reported ML for that constituent. The table below indicates the lowest minimum level that the Discharger's laboratory must achieve for compliance determination purposes.

Constituent	ML (µg/L)
Copper	0.5
Mercury	0.002
Nickel	1
Selenium	1
Cyanide	5

- [3] The interim limitations for copper and cyanide shall remain in effect until December 31, 2007, and final WQBELs shall become effective on January 1, 2008.
- [4] The interim limitation for mercury shall remain in effect until April 27, 2010 or until the Board adopts TMDL-based effluent limitation for mercury. Effluent mercury monitoring shall be performed by using ultra-clean sampling and analysis techniques, with a method detection limit of 0.002 µg/L or lower.
- [5] The interim limitations for selenium shall remain in effect until April 27, 2010, or until the Board amends the limitation based on additional information or WLA from a selenium TMDL.
- [6] Compliance may be demonstrated by measurement of weak acid dissociable cyanide.

iii. Effluent Limitations Applicable to Wet and Dry Season Discharges:

- 1. Enterococcus Limitations:** The treated wastewater, at some point in the treatment process prior to discharge, shall meet the following limits of bacteriological quality:

The monthly average (expressed as a geometric mean) shall not exceed 33 colonies per 100 mL of effluent sample. A single effluent sample shall not exceed a maximum value of 89 colonies per 100 mL of effluent sample, as verified by a follow-up sample taken within 24 hours. If the Discharger fails to collect a follow-up sample, the original single sample result in excess of the limit shall constitute an exceedance of the limit.

- 2. 85 Percent Removal, BOD and TSS:** The arithmetic mean of the biochemical oxygen demand (5-day, 20°C) and total suspended solids values for effluent samples collected in each calendar month shall not exceed 15 percent of the arithmetic mean of the respective values for influent samples collected at approximately the same times during the same period.

- 3. Acute Toxicity:**

- a. Representative samples of the discharge shall meet the following limits for acute toxicity. Bioassays shall be conducted in compliance with Provision F.8.

The survival of organisms in undiluted effluent from parallel 96-hour flow-through bioassays shall be an eleven (11) sample median value of not less than 90 percent survival, and an eleven (11) sample 90 percentile value of not less than 70 percent survival.

- b. These acute toxicity limits are further defined as follows:

11-sample median: Any bioassay test showing survival of 90 percent or greater is not a violation of this limit. A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if five or more of the past ten or less bioassay tests show less than 90 percent survival.

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

- c. Bioassays shall be performed using methods in 40 CFR 136 and the most sensitive species as specified in writing by the Executive Officer. Bioassays shall be conducted in compliance with “Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters 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).
- d. If the Discharger demonstrates to the satisfaction of the Executive Officer that toxicity exceeding the levels cited above is caused by ammonia and that the ammonia in the discharge is not adversely impacting receiving water quality or beneficial uses, then such toxicity does not constitute a violation of this effluent limitation.

- 4. Mass Trigger and Limit:** Until TMDL and WLA efforts for mercury provide enough information to establish a different WQBEL, the Discharger shall demonstrate that the current mercury mass loading to the receiving water does not increase by complying with the following:

- a. *Mass limit.* The 12-month moving average mass loading for mercury shall not exceed the 0.025 kg/month.
- b. *Mass trigger.* If the 12-month moving average monthly mass loading for mercury exceeds the 0.014 kg/month trigger value, this is not considered a permit limit violation; however, the actions specified in Provision F.7 shall be initiated. Failure to initiate and complete the actions will be considered a permit condition violation.
- c. Compliance with this limit and trigger shall be evaluated using monthly moving averages of total mass load, computed as described below:

12-Month Monthly Moving Average of Total Mass Load = Average of the monthly total mass loads from the past 12 months

Monthly Total Mass Load (kg/month) = monthly plant discharge flows (in mgd) from the Outfall (E-001) × monthly effluent concentration measurements (in µg/L) corresponding to the above flows, for samples taken at E-001 × 0.1151 (conversion factor to convert million gallons/day × µg/L to kg/month).

If there is no river discharge during a particular month, the flow is set to zero for the calculation. If more than one measurement is obtained in a calendar month, the average of these concentrations is used as the monthly value for that month. If the results are less than the method detection limit used, the concentrations are assumed to be equal to the method detection limit.

- d. The Discharger shall submit a cumulative total of mass loadings for the previous 12 months with each monthly Self-Monitoring Report. Compliance of each month will be determined based on the 12-month moving averages over the previous 12 months of monitoring calculated as using the method described in section B(iii)(2)(c) above. The Discharger may use monitoring data collected under accelerated schedules (i.e., special studies) to determine compliance.
- e. The mercury TMDL and WLAs will supersede the interim mass emission limitation upon its completion. The Clean Water Act's anti-backsliding rule, Section 402(o), indicates that this Order may be modified to include a less stringent requirement following completion of the TMDLs and WLAs, if the requirements for an exception to the rule are met.

C. POND SPECIFICATIONS

1. Wastewater grab samples within 1 foot of the surface of all ponds shall meet the following triggers at all times:

Dissolved oxygen	2.0 mg/L minimum
Dissolved sulfides	0.1 mg/L maximum

If the trigger is not met, the Discharger shall investigate the cause and address the issue.

2. A minimum freeboard of two feet shall be maintained in all ponds at all times.
3. All ponds shall be protected from erosion, washout, and flooding from the maximum flood having a predicted frequency of once in 100 years.

4. The waste shall not cause a significant degradation of any ground water so as to impair beneficial uses.

D. RECEIVING WATER LIMITATIONS

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at levels that cause nuisance or adversely affect beneficial uses:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
 - b. Bottom deposits or aquatic growths;
 - c. Alteration of temperature, turbidity, salinity, or apparent color;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin and;
 - e. All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident indicator species, decreased fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State any one place within one foot of the water surface:
 - a. Dissolved Oxygen: 5.0 mg/L, minimum

The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, then the discharge shall not cause further reduction in ambient dissolved oxygen concentrations.
 - b. Dissolved Sulfide: 0.1 mg/L, maximum
 - c. pH: Variation from normal ambient pH by more than 0.5 pH units.
 - d. Un-ionized Ammonia: 0.025 mg/L as N, annual median
 0.16 mg/L as N, maximum
 - e. 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.
3. The discharge of waste shall not cause a violation of any existing water quality standard for receiving waters adopted by the Board or the State Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, after the effective date of this Order, the Board may revise and modify this Order in accordance with such more stringent standards.

4. Storm water discharges from the Discharger's site shall not cause or contribute to a violation of any applicable water quality objective for receiving waters contained in the Basin Plan.

E. SLUDGE MANAGEMENT PRACTICES

1. All sludge generated by the Discharger must be disposed of in a municipal solid waste landfill, reused by land application, or disposed of in a sludge-only landfill in accordance with 40 CFR Part 503. If the Discharger desires to dispose of sludge by a different method, a request for permit modification must be submitted to the U.S. EPA 180 days before start-up of the alternative disposal practice. All the requirements in 40 CFR 503 are enforceable by U.S. EPA whether or not they are stated in an NPDES permit or other permit issued to the Discharger. The Board should be copied on relevant correspondence and reports forwarded to the EPA regarding sludge management practices.
2. Sludge treatment, storage and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, or results in groundwater contamination.
3. Due to mitigate: The Discharger shall take all reasonable steps to prevent or minimize any sludge use or disposal which has a likelihood of adversely affecting human health or the environment.
4. The discharge of biosolids shall not cause waste material to be in a position where it is, or can be carried from the sludge treatment and storage site and deposited in the 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 biosolids incinerator as defined in 40 CFR 503, the Discharger shall submit an annual report to the U.S. EPA and the 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 permit. A report of Waste Discharge shall be filed and the site brought into compliance with all applicable regulations prior to commencement of any such activity by the Discharger.
9. Sludge Monitoring and Reporting Provisions of this Board's "Standard Provisions and Reporting Requirements", dated August 1993, apply to sludge handling, disposal and reporting practices.
10. The Board may amend this permit prior to expiration if changes occur in applicable state and federal sludge regulations.

F. PROVISIONS

1. Permit Compliance and Rescission of Previous Waste Discharge Requirements

The Discharger shall comply with the limitations, prohibitions, and other provisions of this Order on the effective date of this NPDES Permit. Requirements prescribed by this Order supersede the requirements prescribed by Order Nos. 00-059 and R2-2002-0111. Order Nos. 00-059 and R2-2002-0111 are hereby rescinded upon the effective date of this Order.

2. Effluent Characterization for Selected Constituents

The Discharger shall monitor and evaluate the discharge from Outfall E-001 for the constituents listed in Enclosure A of the Board's August 6, 2001 Letter, according to its approved sampling plan submitted under the August 6, 2001 Letter. The Discharger shall monitor, for a minimum one sampling event for the constituents listed in Enclosure A of the Board's August 6, 2001 Letter, during the permit term. Compliance with this requirement shall be achieved in accordance with the specifications stated in the Board's August 6, 2001 Letter under Effluent Monitoring for Major Dischargers.

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

3. Ambient Background Receiving Water Study

The Discharger shall collect or participate in collecting background ambient receiving water monitoring for priority pollutants that is required to perform RPA and to calculate effluent limitations. The data on the conventional water quality parameters (pH, salinity, and hardness) shall also be sufficient to characterize these parameters in the receiving water at a point after the discharge has mixed with the receiving waters. This provision may be met through monitoring through the Collaborative Napa River Receiving Water Study, or a similar ambient monitoring program for the Napa River. This permit may be reopened, as appropriate, to incorporate effluent limits or other requirements based on Board review of these data.

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

4. Mixing Zone Study

The Discharger shall comply with the following tasks and deadlines:

Tasks	Compliance Date
a. <i>Study Plan.</i> The Discharger shall prepare a mixing zone study plan, acceptable to the Executive Officer. The plan shall describe the methodology for evaluating an appropriate dilution credit for the discharge.	June 1, 2005.
b. <i>Study Commencement.</i> Initiate the study upon Executive Officer's approval.	Within 30 days of Executive Officer Approval.
c. <i>Report.</i> Submit a report, acceptable to the	If approval of study plan is granted before

Tasks	Compliance Date
Executive Officer, summarizing the study results. The report shall propose a dilution credit for wet weather WQBELs' calculation.	October 1, final Report will be submitted 3 months after the wet season, i.e., July 31, 2006. If approval is granted after October 1, final Report will be submitted three months after the subsequent year's wet season, i.e., July 31, 2007.
d. <i>Feasibility Analysis.</i> The Discharge shall also submit a feasibility analysis, acceptable to the Executive Officer, demonstrating feasibility to comply with the final WQBELs calculated using the identified dilution credit.	Within 60 days after the mixing zone study report is submitted.

5. Cyanide Compliance Schedule and SSO Study

The Discharger shall comply with the following tasks and deadlines:

Tasks	Compliance Date
a. <i>Compliance Schedule.</i> The Discharger should participate in regional studies as described in findings (under Cyanide) above. Results from these studies should enable the Board to determine compliance with final WQBELs during the next permit reissuance.	Progress reports as part of annual self-monitoring reports.
b. <i>SSO Study.</i> The Discharger shall actively participate in the development of regional SSOs for cyanide. Participation through BACWA studies satisfies this task.	Progress reports by cyanide work group due January 31 st of each year until completion
c. Conduct evaluation of compliance attainability with limitations derived using new objectives if developed.	3 years of effective date of this Order.

6. Pollution Prevention and Pollutant Minimization Program

- a. The Discharger shall continue to improve its existing Pollution Prevention Program to reduce loadings of pollutants to the plant and therefore to the receiving waters.
- b. The Discharger shall submit an annual report, acceptable to the Executive Officer, no later than February 28th of each year. Annual reports shall cover January through December of the preceding year. Annual reports shall include at least the following information:
 - i. *A Brief Description of the Plant, Plant Processes, and Service Area.*
 - ii. *A Discussion of the Current Pollutants of Concern.* Periodically, the Discharger shall analyze its own situation to determine which pollutants are currently a problem and/or which pollutants may be potential future problems. This discussion shall include the reasons why the pollutants were chosen. In particular, the Discharger shall address those pollutants for which there is a reasonable potential to cause or contribute to exceedance of WQOs/WQC, specifically, copper, nickel, mercury, selenium, cyanide, TCDD TEQ, and tributyltin.
 - iii. *Identification of Sources for the Pollutants of Concern.* This discussion shall include how the Discharger intends to estimate and identify sources of the pollutants. The Discharger shall also

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

- iv. *Identification of Tasks to Reduce the Sources of the Pollutants of Concern.* This discussion shall identify and prioritize tasks to address the Discharger's pollutants of concern. The Discharger may implement tasks itself or participate in group, regional, or national tasks that will address its pollutants of concern. The Discharger is strongly encouraged to participate in group, regional, or national tasks that will address its pollutants of concern whenever it is efficient and appropriate to do so.
 - v. *Outreach to Employees.* The Discharger shall inform employees about the pollutants of concern, potential sources, and how they might be able to help reduce the discharge of these pollutants of concern into the plant. The Discharger may provide a forum for employees to provide input to the Program.
 - vi. *Continuation of Public Outreach Program.* The Discharger shall prepare a public outreach program to communicate pollution prevention to its service area. Outreach may include participation in existing community events such as county fairs, initiating new community events such as displays and contests during Pollution Prevention Week, conducting school outreach program, conducting plant tours, and providing public information in newspaper articles or advertisements, radio, television stories or spots, newsletters, utility bill inserts, and web site. Information shall be specific to the target audiences. The Discharger shall coordinate with other agencies as appropriate.
 - vii. *Discussion of Criteria Used to Measure the Program's and Tasks' Effectiveness.* The Discharger shall establish criteria to evaluate the effectiveness of its Pollution Prevention Program. This shall also include a discussion of the specific criteria used to measure the effectiveness of each of the tasks in item b. (iv), b. (v), and b. (vi).
 - viii. *Documentation of Efforts and Progress.* This discussion shall detail all the Discharger's activities in the Pollution Prevention Program during the reporting year.
 - ix. *Evaluation of Program's and Tasks' Effectiveness.* The Discharger shall use the criteria established in b. (vii) to evaluate the Program's and tasks' effectiveness.
 - x. *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 plant, and subsequently in its effluent.
- c. According to Section 2.4.5 of the SIP, when there is evidence that a priority pollutant is present in the effluent above an effluent limitation and either:
- 1) A sample result is reported as detected, but not quantified (less than the Minimum Level) and the effluent limitation is less than the reported Minimum Level,
 - 2) A sample result is reported as not detected (less than the Method Detection Limit) and the effluent limitation is less than the Method Detection Limit; or,
 - 3) The dioxin TEQ exceeds the WQO (0.014 pg/L); then

The Discharger shall expand its existing Pollution Prevention Program to include the reportable priority pollutant. A priority pollutant becomes a reportable priority pollutant (1) when there is evidence that it is present in the effluent above an effluent limitation and either (c)(i) or c(ii) is triggered or (2) if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported ML.

- d. If triggered by the reasons in c. above and notified by the Executive Officer, the Discharger's Pollution Prevention Program shall, within 6 months, also include the following:
 - i. An annual review and semiannual 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.
 - ii. 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.
 - iii. 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.
 - iv. Development of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy.
 - v. An annual status report that shall be sent to the RWQCB including the following:
 - (1) All Pollution Prevention monitoring results for the previous year
 - (2) A list of potential sources of the reportable priority pollutant(s)
 - (3) A summary of all actions undertaken pursuant to the control strategy
 - (4) A description of actions to be taken in the following year.
- e. To the extent that the requirements of the Pollution Prevention Program and the Pollutant Minimization Program overlap, the Discharger is allowed to continue, modify, or expand its existing Pollution Prevention Program to satisfy the Pollutant Minimization Program requirements.
- f. These Pollution Prevention/Pollutant Minimization Program requirements are not intended to fulfill the requirements in the Clean Water Enforcement and Pollution Prevention Act of 1999 (Senate Bill 709).

7. Mercury Mass Loading Reduction

If mass loading for mercury exceeds the trigger level specified in B(iii)(4) of this Order, then the following actions shall be initiated and subsequent reports shall include but not be limited to the following:

- a. *Notification:* Any exceedance of the trigger specified in Effluent Limitation B(iii)(4) shall be reported to the Board in accordance with Section E.8.b. in the Standard Provisions and Reporting Requirements (August, 1993).

<p>b. <i>Identification of the problem:</i> Resample to verify the increase in loading. If resampling confirms that the mass loading trigger has been exceeded, determine whether the exceedance is flow or concentration-related. If the exceedance is flow related, identify whether it related to changes in reclamation, increase in the number of sewer connections, increases in infiltration and inflow (I/I), wet season conditions, or unknown sources. If the exceedance is concentration-related, identify whether it is related to industrial, commercial, residential, or unknown sources.</p>
<p>c. Investigation of corrective action: Investigate the feasibility of the following actions:</p> <ul style="list-style-type: none">• Improving public education and outreach• Reducing inflow and infiltration (I/I)• Increasing reclamation <p>Within 60 days after confirmed exceedance of trigger, develop a plan and include time schedule as short as practicable, acceptable to the Executive Officer to implement all reasonable actions to maintain mercury mass loadings at or below the mass loading trigger contained in Effluent Limitation B(iii)(4).</p>
<p>d. <i>Investigation of aggressive prevention/reduction measures.</i> In the event the exceedance is related to growth and the plan required under (c) above is not expected to keep mercury mass loadings below the mass loading trigger, the Discharger shall submit a plan, acceptable to the Executive Officer. The plan should include an initiative to work with the local planning department to investigate the feasibility and potential benefits of requiring water conservation, reclamation, and dual plumbing for new development. This plan should be implemented as soon as practicable.</p>

8. Whole Effluent Acute Toxicity

Compliance with acute toxicity requirements of this Order shall be achieved in accordance with the following:

- a. Compliance with the acute toxicity effluent limits of this Order shall be evaluated by measuring survival of test organisms exposed to 96-hour bioassays.
- b. Test organisms shall be rainbow trout and fathead minnow tested concurrently. The Discharger will continue to perform the flow-through bioassay using fathead minnow, while concurrently running a static renewal test using rainbow trout. Concurrent tests will be performed for the first 12 months after the Order becomes effective, after which time bioassay data will be evaluated and the Discharger may make a request to the Executive Officer for reduction to one fish species. The Discharger must show compliance with the acute toxicity limitation, and that any observed acute toxicity has been observed in only one of these two fish species. If approved in writing by the Executive Officer, compliance may then be determined using the most sensitive of these two species.
- c. All bioassays shall be performed according to the “Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms,”(currently 5th Edition), with exceptions granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).

9. Whole Effluent Chronic Toxicity

The Discharger shall monitor and evaluate the effluent from the treatment plant for chronic toxicity in order to demonstrate compliance with the Basin Plan narrative toxicity objective. Compliance with this requirement shall be achieved in accordance with the following.

- a. The Discharger shall conduct routine chronic toxicity monitoring in accordance with the SMP of this Order.
- b. If data from routine monitoring exceed either of the following evaluation parameters, then the Discharger shall conduct accelerated chronic toxicity monitoring. Accelerated monitoring shall be performed on a monthly basis.
- c. Chronic toxicity evaluation parameters:
 - (1) Wet weather discharges:
 - (i) A three sample median value of 10 TUc; and
 - (ii) A single sample maximum value of 20 TUc.
 - (2) For dry weather discharges: a single sample maximum value of 1 TUc.
 - (3) These parameters are defined as follows:
 - (a) Three-sample median: A test sample showing chronic toxicity greater than 10 TUc for wet season discharge represents an exceedance of this parameter, if one of the past two or fewer tests also show chronic toxicity greater than 10 TUc.
 - (b) TUc (chronic toxicity unit): A TUc equals 100/NOEL (e.g., If NOEL = 100, then toxicity = 1 TUc). NOEL is the no observed effect level determined from IC, EC, or NOEC values.
 - (c) The terms IC, EC, NOEL and NOEC and their use are defined in **Attachment A** of the Self-Monitoring Program (SMP).
- d. If data from accelerated monitoring tests are found to be in compliance with the evaluation parameters, then routine monitoring shall be resumed.
- e. If accelerated monitoring tests continue to exceed either evaluation parameter, then the Discharger shall initiate a chronic toxicity reduction evaluation (TRE).
- f. The TRE shall be conducted in accordance with the following:
 - (1) The Discharger shall submit a TRE workplan acceptable to the Executive Officer. The Board encourages the Discharger to prepare a generic TRE workplan and keep it on hand should it be needed for a toxicity event. The workplan shall be reviewed and updated as necessary in order to remain current and applicable to the subject discharge and discharge facilities.
 - (2) The TRE shall be initiated within 30 days of the date of completion of the accelerated monitoring test observed to exceed either evaluation parameter.

- (3) The TRE shall be conducted in accordance with an approved workplan.
 - (4) The TRE needs to be specific to the discharge and Discharger facility, and may be in accordance with current technical guidance and reference materials including U.S. EPA guidance materials. TRE should be conducted as a tiered evaluation process, such as summarized below:
 - (a) Tier 1 consists of basic data collection (routine and accelerated monitoring).
 - (b) Tier 2 consists of evaluation of optimization of the treatment process including operation practices, and in-plant process chemicals.
 - (c) Tier 3 consists of a toxicity identification evaluation (TIE).
 - (d) Tier 4 consists of evaluation of options for additional effluent treatment processes.
 - (e) Tier 5 consists of evaluation of options for modifications of in-plant treatment processes.
 - (f) Tier 6 consists of implementation of selected toxicity control measures, and follow-up monitoring and confirmation of implementation success.
 - (5) The TRE may be ended at any stage if monitoring finds there is no longer consistent toxicity.
 - (6) The objective of the TIE shall be to identify the substance or combination of substances causing the observed toxicity. All reasonable efforts using currently available TIE methodologies should be employed.
 - (7) As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the source(s) and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with chronic toxicity evaluation parameters.
 - (8) Many recommended TRE elements parallel required or recommended efforts of source control, pollution prevention and storm water control programs. TRE efforts should be coordinated with such efforts. To prevent duplication of efforts, evidence of complying with requirements or recommended efforts of such programs may be acceptable to comply with TRE requirements.
 - (9) The Board recognizes that chronic toxicity may be episodic and identification of causes of and reduction of sources of chronic toxicity may not be successful in all cases. Consideration of enforcement action by the Board will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.
- g. Chronic Toxicity Monitoring Screening Phase Requirements, Critical Life Stage Toxicity Tests and definitions of terms used in the chronic toxicity monitoring are identified in **Attachment A** of the SMP. The Discharger shall comply with these requirements as applicable to the discharge.

10. Optional Mass Offset

The Discharger may submit to the Board for approval a mass offset plan to reduce 303(d)-listed pollutants to the same watershed or drainage basin. The Board may modify this Order to allow an approved mass offset program.

11. Pretreatment Program

- a. Pretreatment Program: The Discharger shall implement and enforce its approved pretreatment program in accordance with Federal Pretreatment Regulations (40 CFR 403), pretreatment standards promulgated under Section 307(b), 307(c), and 307(d) of the Clean Water Act, pretreatment requirements specified under 40 CFR 122.44(j), and the requirements in **Attachment D**, "Pretreatment Requirements." The Discharger's responsibilities include, but are not limited to:
 - i. Enforcement of National Pretreatment Standards of 40 CFR 403.5 and 403.6;
 - ii. Implementation of its pretreatment program in accordance with legal authorities, policies, procedures, and financial provisions described in the General Pretreatment regulations (40 CFR Part 403) and its approved pretreatment program;
 - iii. Submission of reports to U.S. EPA, the State Board, and the Board, as described in **Attachment D** "Pretreatment Requirements".
 - iv. Evaluate the need to revise local limits under 40 CFR 403.5(c)(1); and within 180 days after the effective date of this Order, submit a report acceptable to the Executive Officer describing the changes with a plan and schedule for implementation.
- b. The Discharger shall implement its approved pretreatment program and the program shall be an enforceable condition of this permit. If the Discharger fails to perform the pretreatment functions, the Board, the State Board, or the U.S. EPA may take enforcement actions against the discharger as authorized by the Clean Water Act.

12. Copper Local Limit

The new local limit for copper, specifically, an increase from the existing maximum allowable industrial loading of 2.8 lb/day to 5.12 lb/day, will become effective upon the Discharger's completion of the following tasks:

- a. Within 90 days of the permit adoption, pursuant to 40 CFR 403.18 for substantial modifications, the Discharger shall issue a public notice of the intent to increase local limit and hold a hearing if there is significant public interest.
- b. Documentation of completion of the above task, to the Executive Officer's satisfaction. The new local limit shall become effective on the day of completion of Task a. above.

13. Sanitary Sewer Management Plan

The Discharger shall fully participate in BACWA's collaborative program to develop guidelines for sanitary sewer management plans (SSMPs). The Discharger shall develop and implement a Discharger-specific SSMP, acceptable to the Executive Officer, as quickly as feasible once BACWA's guidance is available. As part of its SSMP, the Discharger shall report sanitary sewer overflows electronically as soon as the Board's electronic sanitary sewer overflows reporting system is available, even if that capability precedes the development of the Discharger's SSMP.

14. Wastewater Facilities, Review and Evaluation, and Status Reports

- a. 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.
- b. The Discharger shall regularly review and evaluate its wastewater facilities and operation practices in accordance with section a. above. Reviews and evaluations shall be conducted as an ongoing component of the Discharger's administration of its wastewater facilities.
- c. The Discharger shall provide the Executive Officer, upon his or her 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.

15. Operations and Maintenance Manual, Review and Status Reports

- a. The Discharger shall maintain an O & M Manual as described in the findings of this Order for the Discharger's wastewater facilities. The O & M Manual shall be maintained in usable condition, and available for reference and use by all applicable personnel.
- b. The Discharger shall regularly review, revise, or update, as necessary, the O & M Manual(s) so that the document(s) may remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and revisions or updates shall be completed as necessary. For any significant changes in treatment facility equipment or operation practices, applicable revisions shall be completed within 90 days of completion of such changes.
- c. The Discharger shall provide the Executive Officer, upon his or her 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.

16. Contingency Plan, Review and Status Reports

- a. The Discharger shall maintain a Contingency Plan as required by Board Resolution 74-10 (available online—see Standard Language and Other References Available Online, below), 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.
- b. 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.

- c. The Discharger shall provide the Executive Officer, upon his or her 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.

17. 303(d)-Listed Pollutants, Site-Specific Objective and TMDL Status Review

The Discharger shall participate and support the development of TMDLs or SSOs. By January 31 of each year, the Discharger shall submit an update to the Board to document its participation efforts toward development of the TMDL(s) or SSO(s). The Discharger can submit updates through the regional BACWA studies for these pollutants. Board staff shall review the status of TMDL development. This Order may be reopened in the future to reflect any changes required by TMDL development.

18. New Water Quality Objectives

As new or revised WQOs come into effect for the Bay and contiguous waterbodies (whether statewide, regional, or site specific), effluent limitations in this Order will be modified as necessary to reflect updated WQOs. Adoption of effluent limitations contained in this Order is not intended to restrict in any way future modifications based on legally adopted WQOs.

19. Self-Monitoring Program (SMP)

The Discharger shall comply with the SMP for this Order as adopted by the Board. The SMPs may be amended by the Executive Officer pursuant to U.S. EPA regulation 40 CFR 122.63.

20. Standard Provisions and Reporting Requirements

The Discharger shall comply with all applicable items of the attached Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993 (the Standard Provisions), or any amendments thereafter. Where provisions or reporting requirements specified in this Order are different from equivalent or related provisions or reporting requirements given in the Standard Provisions, the specifications of this Order shall apply.

21. Change in Control or Ownership

In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Board. To assume responsibility for and operations under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order (see Standard Provisions and Reporting Requirements, August 1993, Section E.4.). Failure to submit the request shall be considered a discharge without requirements, and a violation of the California Water Code.

22. Order Reopener

The Board may modify or reopen this Order prior to its expiration date in any of the following circumstances:

- (1) If present or future investigations demonstrate that the discharge(s) governed by this Order will or have a reasonable potential to cause or contribute to adverse impacts on water quality and/or beneficial uses of the receiving waters;
- (2) If new or revised WQOs come into effect for the San Francisco Bay estuary and contiguous waterbodies (whether statewide, regional, or site specific). In such cases, effluent limitations in this Order will be modified as necessary to reflect updated WQOs. Adoption of effluent limitations contained in this Order is not intended to restrict in any way future modifications based on legally adopted WQOs or as otherwise permitted under Federal regulations governing NPDES permit modifications;
- (3) If translator or other water quality studies provide new information and a basis for determining that a permit condition(s) should be modified.
- (4) If new or site-specific objectives for copper and/or cyanide are not anticipated to be effective by December 31, 2007, and applicable regulations allow for an extension of the January 1, 2008 compliance schedule for the WQBELs contained in this Order. In such a case, the Order may be modified to shorten or extend the compliance schedule.

The Discharger may request Order modification based on (2), (3), and (4) above or on any other valid legal basis. The Discharger shall include in any such request an antidegradation and antibacksliding analysis, if applicable.

23. NPDES Permit

This Order shall serve as an NPDES permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective on May 1, 2005, provided the U.S. EPA Regional Administrator has no objection. If the Regional Administrator objects to its issuance, the Order shall not become effective until such objection is withdrawn.

24. Order Expiration and Reapplication

- a. This Order expires on March 31, 2010.
- b. In accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code, the Discharger must file a report of waste discharge no later than 180 days before the expiration date of this Order as application for reissue of this permit and waste discharge requirements. The application shall be accompanied by a summary of all available water quality data including conventional pollutant data from no less than the most recent three years, and of toxic pollutant data no less than from the most recent five years, in the discharge and receiving water. Additionally, the Discharger must include with the application the final results of any studies that may have bearing on the limits and requirements of the next permit. Such studies, for example, dilution studies, translator studies and alternate bacteria indicator studies.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that 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 April 20, 2005.

BRUCE H. WOLFE
Executive Officer

Attachments

- A. Discharge Facility Location Map
- B. Discharge Facility Treatment Process Flow Diagram
- C. Self-Monitoring Program, Part B
- D. Part I - Pretreatment Requirements
Part II – April 11, 2005, Response to Board staff’s review of the July 2003 Soscol Water Recycling Facility Local Limits Report
- E. Fact Sheet
- F. Discharger’s Feasibility Study
- G. Technical Report
- H. The following documents are part of this Order but are not physically attached due to volume. They are available on the Internet at:
<http://www.waterboards.ca.gov/sanfranciscobay/Download.htm>.
 - Self-Monitoring Program, Part A (August 1993)
 - Standard Provisions and Reporting Requirements, August 1993
 - Board Resolution No. 74-10
 - Statistical Analysis of Pooled Data from Regionwide Ultraclean Mercury Sampling for Municipal Dischargers, June 2001
 - August 6, 2001 Water Board staff letter, “Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy”

Napa Sanitation District
NPDES Permit No. CA 0037575
Tentative Order

ATTACHMENT A

LOCATION MAP

Napa Sanitation District
NPDES Permit No. CA 0037575
Tentative Order

ATTACHMENT B

WASTEWATER PROCESS SCHEMATIC

Napa Sanitation District
NPDES Permit No. CA 0037575
Tentative Order

ATTACHMENT C

SELF-MONITORING PROGRAM

PART B

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

NAPA SANITATION DISTRICT
NAPA COUNTY

NPDES PERMIT NO. CA0037575
ORDER NO. R2-2005-XXXX

Consists of:

Part A (not attached)
Adopted August 1993

and

Part B (Attached)
Adopted: xxxx
Effective: xxxx

Note: Part A, Standard Provisions and Reporting Requirements for NPDES Surface Water Discharger Permits (dated August 1993), and Resolution No. 74-10 referenced in this Self-Monitoring Program are not attached but are available for review or download on the Board's website at <http://www.waterboards.ca.gov/sanfranciscobay/Download.htm>

SELF MONITORING PROGRAM – PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

<u>Station</u>	<u>Description</u>
A-002	At any point in the Napa Sanitation District treatment facilities' headworks at which all waste tributary to the system is present and preceding any phase of treatment.

B. EFFLUENT

<u>Station</u>	<u>Description</u>
E-001	At any point in the outfall from the treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present (may be the same as E-001-D).
E-001-D	At any point in the treatment facility, at which point adequate contact with the disinfectant is assured.
E-001-P	At any point in the oxidation pond at or near the gate where effluent is discharged to the Napa River

C. RECEIVING WATERS

<u>Station</u>	<u>Description</u>
CC-1	At any point in the Napa River, located by the Southern Crossing Bridge approximately 2000 feet upstream from the point of discharge from outfall E-001.
CC-2	In the Napa River, the area located within a 100-foot radius from the point of discharge from the bypass facilities for the Discharger pump station near Soscol Creek.
CC-3	In the Napa River, the area immediately above the diffuser system for outfall E-001.
CC-4	At any point in the Napa River, located approximately 1000 feet downstream from the point of discharge outfall E-001.
CC-5	At any point in the Napa River, located approximately 2000 feet downstream from the point of discharge outfall E-001.

D. GROUND WATER

<u>Station</u>	<u>Description</u>
G-2	A well located at northeast corner of pond 1, on District property easterly of the Napa River.

E. LAND OBSERVATIONS

<u>Station</u>	<u>Description</u>
L-1 through L-n	Located at corners and midpoints of the perimeter around the treatment facilities of Napa Sanitation District. A sketch showing the locations of these stations should accompany the first report complying with this Order.

F. STABILIZATION PONDS

<u>Station</u>	<u>Description</u>
P-1 through P-n	Located at corners and midpoints of each stabilization ponds.

G. OVERFLOWS AND BYPASSES

<u>Station</u>	<u>Description</u>
O-1 through O-n	Bypass or overflows from manholes, pump stations, or collection system.

Note: Initial self-monitoring report to include map and descriptions of each known bypass or overflow location.

II. SCHEDULE OF SAMPLING, ANALYSES, AND OBSERVATIONS

This Schedule of sampling, analyses, and observations shall be that given in Table 1 of this self-monitoring program.

TABLE 1
SCHEDULE FOR SAMPLING, MEASUREMENTS AND ANALYSIS [1][17]
NAPA SANITATION DISTRICT

Sampling Station:	A-002		E-001			E-001-D			E-001-P [16]	CC-3	All Other CC	G-2	ALL L and P	ALL OV
Type of Sample: [notes]	C-24	Cont.	G	C-24	Cont.	G	C- 24	Cont.	G	G	G/O	G/O	O	G/O
Sampling Required:	Year-round		While discharging to Napa River			While discharging to Napa River			While Discharg- ing to Napa River	While Discharg- ing to Napa River	While Discharg- ing to Napa River	Year- round	Year- round	Year- round
Flow Rate (MGD) [2]		D			D				E/D					
BOD, 5-day, 20 °C (mg/L) [3]	2/W			2/W					E/D					
Total Suspended Solids (mg/L & kg/day) [3]	3/W			3/W					E/D					
Oil and Grease (mg/L & kg/day) [4]				Q										
Chlorine Residual (mg/L) [5]						Cont. or H								
Enterococcus (colonies/100 mL) [6]						3/W			E/D	M		2/Y		
Turbidity (NTU)				2/M						M	M			
pH (Standard Units) [7]			D						E/D	M	M	2/Y		
Temperature (°C)			D						E/D	M	M			
Dissolved Oxygen (mg/l & %- Saturation)			D						E/D	M	M			
Chlorides (mg/L)				M						M	M			

Napa Sanitation District
 NPDES Permit No. CA 0037575
 Tentative Order

Sampling Station:	A-002		E-001			E-001-D			E-001-P [16]	CC-3	All Other CC	G-2	ALL L and P	ALL OV
	C-24	Cont.	G	C-24	Cont.	G	C-24	Cont.	G	G	G/O	G/O	O	G/O
Type of Sample: [notes]														
Sulfides, total and dissolved (mg/L) (if DO < 2.0 mg/L)			D							M	M			
Ammonia Nitrogen (mg/L & kg/day)				M						M		2/Y		
Nitrate Nitrogen (mg/L & kg/day)												2/Y		
Nitrite Nitrogen (mg/L & kg/day)												2/Y		
Total Organic Nitrogen (mg/L & kg/day)												2/Y		
Total Phosphate (m/L & kg/day)												2/Y		
Un-ionized Ammonia Nitrogen (mg/L as N)										M				
Total Dissolved Solids (mg/L)												2/Y		
Hardness (mg/L) [8]										M				
Salinity (ppt) [8]										M				
Chlorophyll- α ($\mu\text{g/L}$)										M				
Acute Toxicity (% Survival) [9]								M						
Chronic Toxicity (TUc) [10]							Q							
Copper ($\mu\text{g/L}$)				M										
Nickel ($\mu\text{g/L}$)				M										
Mercury ($\mu\text{g/L}$ & kg/month) [11]			M											

Sampling Station:	A-002		E-001			E-001-D			E-001-P [16]	CC-3	All Other CC	G-2	ALL L and P	ALL OV
	C-24	Cont.	G	C-24	Cont.	G	C-24	Cont.	G	G	G/O	G/O	O	G/O
Selenium (µg/l & kg/month)				M										
Cyanide (µg/l)			M											
2,3,7,8-TCDD and Congeners (µg/l)			2/Y [12]											
Tributyltin (µg/L)				2/Y [13]										
All priority pollutants [14]			In accordance with Provision F.2 and F.3											
Standard Observations [15]											M		W	E

Legend for Table 1:

TYPES OF SAMPLES

G = grab samples
 C-24 = 24-hour composite sample
 Co = continuous sampling
 O = observation

TYPES OF STATIONS

A = treatment facility influent stations
 E = waste effluent stations
 CC = receiving water stations
 L = treatment facilities perimeter stations
 P = basin and/or pond levee stations
 G = ground waters stations
 O = overflow and bypass stations

FREQUENCY OF SAMPLING

E = each occurrence
 D = once each day
 W = once each week
 2W = every two weeks
 M = once each month, during wet and dry season
 Q = quarterly
 H = every hour
 Cont. = continuous
 2/H = twice per hour
 3/W = three days per week
 5/W = five days per week
 2/Y = once in wet season, once in dry season
 E/D = each occurrence or at least once per day
 E/M = each occurrence or monthly

Footnotes for Table 1

[1] Composite sampling: 24-hour composites may be made up of discrete grabs collected over the course of a day and volumetrically or mathematically flow-weighted. Samples for inorganic pollutants may be combined prior to analysis. Samples for organic pollutants should be analyzed separately. If only one grab sample will be collected, it should be collected during periods of maximum peak flows. Samples shall be taken on random days.

[2] Flow Monitoring:

Flows shall be monitored continuously and the following shall be reported in monthly self-monitoring reports:

Influent and Effluent:

Daily: Flow Rate (MGD)

Monthly: Average Daily Flow Rate (MGD)

Maximum Daily Flow Rate (MGD)

Minimum Daily Flow Rate (MGD)

Total Flow Volume (MG)

E-001-P: Estimated flow volume (MG) based on Pond levels measured before and after discharge.

[3] BOD & TSS:

Influent analyses for BOD₅ and total suspended solids are required 2 days and 3 days a week, respectively, during the wet season and during dry season is required.

The percent removal for BOD and TSS shall be reported for each calendar month, in accordance with Effluent Limitation B(iii)(2).

[4] Oil & Grease Monitoring:

Each Oil & Grease sampling event shall consist of a composite sample comprised of three grab samples taken at equal intervals during the sampling date, with each grab sample being collected in a glass container. Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent rinsings as soon as possible after use, and the solvent rinsings shall be added to the composite sample for extraction and analysis.

[5] Chlorine Residual:

Monitor dechlorinated effluent continuously or, at a minimum, every hour. Report, on a daily basis, both maximum and minimum concentrations, for samples taken both prior to, and following dechlorination. If continuous monitoring is used, the Discharger may record discrete readings from the continuous monitoring every hour on the hour, and report, on a daily basis, the maximum concentration observed following dechlorination. Total chlorine dosage (kg/day) shall be recorded on a daily basis.

[6] The Index-Enterolert method or the U.S. EPA Method 1600 are approved for use by the Discharger for the enterococci determination. Upon collection of 12 months of data demonstrating consistent compliance with the effluent bacterial limitations, the Discharger may submit a request to the Executive Officer for a reduction in sampling frequency.

[7] pH. In addition to daily monitoring of the discharge, the Discharger shall collect and analyze one sample of the treated effluent prior to initiating a period of discharge. Discharge may not be initiated until the pH of the treated effluent is within the allowable pH range.

[8] Sampling for hardness and salinity shall occur at the upstream receiving water station.

[9] Bioassays:

Monitoring of the bioassay water shall include, on a daily basis during the test, the parameters specified in the U.S. EPA-approved method, such as pH, dissolved oxygen, ammonia nitrogen, and temperature. These results shall be reported. If the fish survival rate in the effluent is less than 70 percent or if the control fish

survival rate is less than 90 percent, the bioassay test shall be restarted with new batches of fish and shall continue back to back until compliance is demonstrated.

- [10] Critical Life Stage Toxicity Test shall be performed and reported in accordance with the Chronic Toxicity Requirements specified in Sections V and VI of the Self-Monitoring Program contained in this Order.
- [11] 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 use alternative methods of analysis (such as U.S. EPA 245), if that alternative method has an ML of 2 ng/L or less.
- [12] Chlorinated dibenzodioxins and chlorinated dibenzofurans shall be analyzed using the latest version of U.S. EPA Method 1613; the analysis shall be capable of achieving one-half of the U.S. EPA MLs and the Discharger shall collect 4-liter samples to lower the detection limits to the greatest extent practicable. Alternative methods of analysis must be approved by the Executive Officer. The minimum levels for 2,3,7,8-TCDD and all other 16 congeners using U.S. EPA 1613 range from 5 – 50 pg/L. These MLs were developed in collaboration with BACWA as levels that were achievable by BACWA participants (see BACWA Letter dated April 23, 2003).
- [13] The Discharger shall use Batelle N-0959-2606 or EBMUD method for treated wastewater, the minimum level is 20 ng/L. This ML was developed in collaboration with BACWA as levels that were achievable by BACWA participants (see BACWA Letter dated April 23, 2003).
- [14] Sampling for all priority pollutants in the SIP is addressed in a letter dated August 6, 2001, from 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 Board’s website at www.waterboards.ca.gov/sanfranciscobay/).
- [15] Receiving water observations shall include only those contained in Items D.1.a, D.1.b, D.1.c, and D.3 of Part A (August 1993) of the Self-Monitoring Program. Perimeter observations shall include only D.5.a (odors) of Part A of the same program.
- [16] The Discharger shall request to the Regional Board when it is necessary to discharge directly from the oxidations ponds into the Napa River to protect its treatment facilities. The Discharger shall sample the discharge according to the schedule listed in Table 1 above for the discharge and report the results with the monthly self-monitoring report of which month the discharge occurs. Sample collection will not be required if weather and flow conditions would endanger personnel collecting oxidation pond effluent samples. The monthly self-monitoring report shall note such occasions.
- [17] Testing conducted under the pretreatment and reclamation programs may be used to satisfy the monitoring requirements of this Order. All analyses shall be performed using current U.S. EPA methods, as specified in 40 CFR Part 136. Metals units are expressed as total recoverable metals.

Tables 2 and 3 below list the pretreatment requirements.

Table 2. Pretreatment Monitoring Requirements

Constituents	Sample Locations and Frequency		
	Influent A-002	Effluent E-001	Biosolids
VOC	2/Y	2/Y	2/Y
BNA	2/Y	2/Y	2/Y
Hexavalent Chromium [1]	M	M	2/Y
Metals [2]	M	M	2/Y
Mercury	M	M	2/Y

Constituents	Sample Locations and Frequency		
	Influent A-002	Effluent E-001	Biosolids
Cyanide	M	M	2/Y
Chlorinated Pesticides and PCBs	2/Y	2/Y	2/Y
Organophosphate Pesticides	2/Y	2/Y	2/Y

Legend for Table 2:

- M = once each month
 2/Y = twice each calendar year (at about 6 month intervals, once in the dry season, once in the wet season)
 VOC = volatile organic compounds
 BNA = base/neutrals and acids extractable organic compounds

Footnote for Table 2:

- [1] Total chromium may be substituted for hexavalent chromium at the Discharger's discretion.
 [2] The parameters are copper, lead, mercury, nickel, silver, zinc, and total chromium if the Discharger elects to substitute total chromium for hexavalent chromium.

Table 3. Pretreatment Monitoring: Analytical Methods and Sample Type

Constituent	Suggested Analytical Methods	Sample Type	
		A-002 & E-001	Biosolids
VOC [1]	624/8260	grab	grab
BNA [1]	625/8270, 610/8270	24-hour composite	grab
Hexavalent chromium [2]	<i>Standard Methods</i> 3500	grab	grab
Metals [3]	GFAA, ICP, ICP-MS	24-hour composite	grab
Mercury	EPA 245, 1631, 7471 (SW846)	24-hour composite	grab
Cyanide	<i>Standard Methods</i> 4500-CN ⁻ C or I, 9012A (SW846)	grab	grab
Chlorinated pesticides and PCBs	EPA 608/8080	24-hour composite	grab
Organophosphate pesticides	EPA 614/8140	24-hr composite	grab

Footnote for Table 3:

- [1] GC/MS methods used must be able to quantify to an equivalent level as applicable GC methods (EPA 601, 602, 603, 604, 606).
 [2] The Discharger may elect to run total chromium instead of hexavalent chromium.

- [3] Copper, lead, nickel, silver, zinc, total chromium (if the Discharger elects to run total chromium instead of hexavalent chromium).

III. MODIFICATIONS TO PART A OF SELF-MONITORING PROGRAM

- A. If any discrepancies exist between Part A and Part B of the SMP, Part B prevails.
- B. Section C.2.h of Part A shall be amended as follows:
- h. When any type of bypass occurs, except for bypasses that are consistent with Prohibition 2, flow volume shall be estimated and samples shall be collected for Table 1 E-001-P constituents at all affected discharge points for the duration of the bypass. Table 1 requirements for sample type (grab or composite) and sampling frequency will be followed.
- C. Sections C.3. and C.5. are satisfied by participation in the Regional Monitoring Program.
- D. Modify Section F.1 as follows:

Spill Reports

A report shall be made of any spill of oil or other hazardous material. The spill shall be reported by telephone as soon as possible and no later than 24 hours following occurrence or Discharger's knowledge of occurrence. Spills shall be reported by telephone as follows:

During weekdays, during office hours of 8 am to 5 pm, to the Board: (510) 622 - 5633, (510) 622-2460 (FAX).

During non-office hours, to the State Office of Emergency Services:
Current telephone number: (800) 852 - 7550.

A report shall be submitted to the Board within five (5) working days following telephone notification, unless directed otherwise by Board staff. A report submitted by facsimile transmission is acceptable for this reporting. The written report shall contain information relative to:

- E. Modify Section F.2 (first paragraph) as follows:

Reports of Plant Bypass, Treatment Unit Bypass and Order Violation

The following requirements apply to all treatment plant bypasses and significant non-compliance occurrences, except for bypasses under the conditions contained in 40 CFR Part 122.41 (m)(4) as stated in Standard Provision A.13. In the event the Discharger violates or threatens to violate the conditions of the waste discharge requirements and prohibitions or intends to experience a plant bypass or treatment unit bypass due to:

(remainder of F.2 is unchanged)

- F. Modify Section F.4 as follows:

Self-Monitoring Reports

For each calendar month, a self-monitoring report (SMR) shall be submitted to the 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. The report shall be submitted to the Board on the first day of the second month after the reporting period ends.

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

- g. If the Discharger wishes to invalidate any measurement, the letter of transmittal will include: a formal request to invalidate the measurement; the original measurement in question; the reason for invalidating the measurement; all relevant documentation that supports the invalidation (e.g., laboratory sheet, log entry, test results, etc.); and discussion of the corrective actions taken or planned (with a time schedule for completion), to prevent recurrence of the sampling or measurement problem. The invalidation of a measurement requires the approval of Regional Board staff, and will be based solely on the documentation submitted at this time.
- h. The Discharger has the option to submit all monitoring results in an electronic reporting format approved by the Executive Officer. The ERS format includes, but is not limited to, a transmittal letter, summary of violation details and corrective actions, and transmittal receipt. If there are any discrepancies between the ERS requirements and the "hard copy" requirements listed in the SMP, then the approved ERS requirements supersede.

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

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

H. Add as Section F.6 the following:

Reports of Wastewater Overflows

The Board developed an electronic sanitary sewer overflow reporting system, overflows of sewage from the Discharger's collection system, other than overflows specifically addressed elsewhere in this Order and SMP, shall be reported to the Board in accordance with the requirements specified in the Executive Officer's letter (*Requirement for Electronic Reporting of Sanitary Sewer Overflows*) dated November 4, 2004. In the event the internet database is not available, the Discharger shall report the overflow by voicemail at 510-622-5633.

I. Amend Section E as Follows:

Recording Requirements – Records to be Maintained

Written reports, electronic records, strip charts, equipment calibration and maintenance records, and other records pertinent to demonstrating compliance with waste discharge requirements including SMP requirements, shall be maintained by the Discharger in a manner and at a location (e.g., wastewater treatment plant or Discharger offices) such that the records are accessible to Board staff. These records shall be retained by the Discharger for a minimum of 3 years. The minimum period of retention shall be extended during the course of any unresolved litigation regarding the subject discharges, or when requested by the Regional Board or by the Regional Administrator of U.S. EPA, Region IX.

Records to be maintained shall include the following:

1. Parameter Sampling and Analyses, and Observations

For each sample, analysis, or observation conducted, records shall include the following:

- a. Identity of the parameter.
 - b. Identity of the sampling or observation station, consistent with the station descriptions given in this SMP.
 - c. Date and time of the sampling or observation.
 - d. Method of sampling (grab, composite, other method).
 - e. Date the analysis was started, and name of personnel or contract laboratory performing the analysis.
 - f. Reference or description of the procedure(s) used for sample preservation and handling, and analytical method(s) used.
 - g. Calculations of results.
 - h. Analytical method detection limits and related quantitation parameters.
 - i. Results of the analyses or observations.
2. Flow Monitoring Data
For all required flow monitoring (e.g., influent and effluent flows), records shall include the following:
- a. Total flow or volume for each day.
 - b. Maximum, minimum, and average daily flows for each calendar month.
3. Wastewater Treatment Process Solids
- a. For each treatment unit process that involves solid removal from the wastewater stream, records shall include the following:
 - (1). Total volume and/or mass quantification of solids removed from each unit (e.g., grit, skimmings, undigested sludge), for each calendar month
 - (2). Final disposition of such solids (e.g., landfill, other subsequent treatment unit).
 - b. For final dewatered sludge from the treatment plant as a whole, records shall include the following:
 - (1). Total volume and/or mass quantification of dewatered sludge, for each calendar month.
 - (2). Solids content of the dewatered sludge.
 - (3). Final disposition of dewatered sludge (point of disposal location and disposal method).
4. Disinfection Process
For the disinfection process, records shall be maintained documenting process operation and performance, including the following:
- a. For bacteriological analyses:
 - (1). Date and time of each sample collected.
 - (2). Wastewater flow rate at the time of the sample collection.
 - (3). Results of the sample analyses (enterococci count).
 - (4). Required statistical parameters of cumulative enterococci values (e.g., geometric mean for a number of samples or the sampling period identified in waste discharge requirements).
 - b. For the chlorination process, at least daily average values for the following:
 - (1). Chlorine residual in contact basin (mg/L).
 - (2). Chlorine dosage (gal/day).
 - (3). Dechlorination chemical dosage (kg/day).
5. Treatment Process Bypasses

A chronological log of all treatment process bypasses, other than wet season bypasses addressed elsewhere in this Order and SMP, shall include the following:

- a. Identification of the treatment process bypassed.
- b. Date(s) and times of bypass beginning and end.
- c. Total bypass duration.
- d. Estimated total volume.
- e. Description of, or reference to other report(s) describing, the bypass event, the cause, corrective actions taken, and any additional monitoring conducted.

IV. ADDITIONS TO PART A OF SELF-MONITORING PROGRAM

Reporting Data in Electronic Format:

The Discharger has the option to submit all monitoring results in electronic reporting format approved by the Executive Officer. If the Discharger chooses to submit the SMRs electronically, the following shall apply:

- a. *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).
- b. *Modification of reporting requirements:* Reporting requirements F.4 in the attached *Self-Monitoring program, Part A*, dated August 1993, shall be modified as follows. In the future, the Board intends to modify Part A to reflect these changes.
- c. *Monthly Report Requirements:* For each calendar month, a self-monitoring report (SMR) shall be submitted to the Board in accordance with the following:
 - i. The report shall be submitted to the Board no later than the first day of the second month after the reporting period ends.
 - ii. *Letter of Transmittal:* Each report shall be submitted with a letter of transmittal. This letter shall include the following:
 - (1) Identification of all violations of effluent limits or other discharge requirements found during the monitoring period;
 - (2) Details of the violations: parameters, magnitude, test results, frequency, and dates;
 - (3) The cause of the violations;
 - (4) Discussion of corrective actions taken or planned to resolve violations and prevent recurrence, and dates or time schedule of action implementation. If previous reports have been submitted that address corrective actions, reference to such reports is satisfactory;
 - (5) If the Discharger wishes to invalidate any measurement, the letter of transmittal will include: a formal request to invalidate the measurement; the original measurement in question; the reason for invalidating the measurement; all relevant documentation that supports the invalidation (e.g., laboratory sheet, log entry, test results, etc.); and discussion of the corrective actions taken or planned (with a time schedule for completion), to prevent recurrence of the sampling or measurement problem. The invalidation of a measurement requires the approval of Regional Board staff, and will be based solely on the documentation submitted at this time.
 - (6) *Signature:* The letter of transmittal shall be signed by the Discharger's principal executive officer or ranking elected official, or duly authorized representative, and shall include the following certification statement:

"I certify under penalty of law that this document and all attachments have been prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. 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."

- (7) Compliance evaluation summary: Each report shall include a compliance evaluation summary. This summary shall include the number of samples in violation of applicable effluent limits.
- (8) Results of analyses and observations.
- (9) Tabulations of all required analyses and observations, including parameter, sample date, sample station, and test result.
- (10) If any parameter is monitored more frequently than required by this permit and SMP, the results of this additional monitoring shall be included in the monitoring report, and the data shall be included in data calculations and compliance evaluations for the monitoring period.
- (11) Calculations for all effluent limits that require averaging of measurements shall utilize an arithmetic mean, unless specified otherwise in this permit or SMP.

V. CHRONIC TOXICITY MONITORING REQUIREMENT

- A. Test Species and Frequency: The Discharger shall collect 24-hour composite samples of treatment plant effluent at the compliance point station specified in Table 1 of this Self-Monitoring Program, for critical life stage toxicity testing as indicated below. For toxicity tests requiring renewals, 24-hour composite samples collected on consecutive days are required.

<u>Test Species</u>	<u>Frequency</u>
To be identified by the Screening Phase Study and Approved by the Executive Officer	Quarterly (during wet season) Each occurrence if an emergency discharge lasts longer than 7 days but no more than once each quarter

- B. Conditions for Accelerated Monitoring: The Discharger shall accelerate the frequency of monitoring to monthly (or as otherwise specified by the Executive Officer) when there is an exceedance of either of the following conditions:

- (1) Wet season discharges:
 - a. three sample median value of 10 TUc, and
 - b. a single sample maximum value of 20 TUc.
- (2) Dry season discharges: a single sample maximum value of 1 TUc.

- C. Methodology: Sample collection, handling and preservation shall be in accordance with EPA protocols. The test methodology used shall be in accordance with the references cited in the

Permit, or as approved by the Executive Officer. A concurrent reference toxicant test shall be performed for each test.

- D. Dilution Series: The Discharger shall conduct tests at 100%, 50%, 25%, 12.5%, and 6.25%. The "%" represents percent effluent as discharged.

VI. CHRONIC TOXICITY REPORTING REQUIREMENTS

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

1. sample date(s)
2. test initiation date
3. test species
4. end point values for each dilution (e.g. number of young, growth rate, percent survival)
5. NOEC value(s) in percent effluent
6. IC₁₅, IC₂₅, IC₄₀, and IC₅₀ values (or EC₁₅, EC₂₅ ... etc.) in percent effluent
7. TUC values (100/NOEC, 100/IC₂₅, and 100/EC₂₅)
8. Mean percent mortality (\pm s.d.) after 96 hours in 100% effluent (if applicable)
9. NOEC and LOEC values for reference toxicant test(s)
10. IC₅₀ or EC₅₀ value(s) for reference toxicant test(s)
11. Available water quality measurements for each test (ex. pH, D.O., temperature, conductivity, hardness, salinity, ammonia)

- B. Compliance Summary: The results of the chronic toxicity testing shall be provided in the most recent self-monitoring report and shall include a summary table of chronic toxicity data from at least eleven of the most recent samples. The information in the table shall include the items listed above under Section A item numbers 1, 3, 5, 6(IC₂₅ or EC₂₅), 7, and 8.

VII. MONITORING METHODS AND MINIMUM DETECTION LEVELS

The Discharger may use the methods listed in Table 2, above, or alternative test procedures that have been approved by the U.S. EPA Regional Administrator pursuant to 40 CFR 136.4 and 40 CFR 136.5 (revised as of May 14, 1999).

VIII. SELF-MONITORING PROGRAM CERTIFICATION

I, Bruce H. Wolfe, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Board Order No. R2-2005-XXXX.
2. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the Discharger, and revisions will be ordered by the Executive Officer.

3. Is effective as of May 1, 2005.

BRUCE H. WOLFE
EXECUTIVE OFFICER

Attachment: Chronic Toxicity

CHRONIC TOXICITY

DEFINITION OF TERMS AND SCREENING PHASE REQUIREMENTS

I. Definition of Terms

- A. No observed effect level (NOEL) for compliance determination is equal to IC_{25} or EC_{25} . If the IC_{25} or EC_{25} cannot be statistically determined, the NOEL shall be equal to the NOEC derived using hypothesis testing.
- B. Effective concentration (EC) is a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Kärber. EC_{25} is the concentration of toxicant (in percent effluent) that causes a response in 25 percent of the test organisms.
- C. Inhibition concentration (IC) is a point estimate of the toxicant concentration that would cause a given percent reduction in a nonlethal, nonquantal biological measurement, such as growth. For example, an IC_{25} is the estimated concentration of toxicant that would cause a 25 percent reduction in average young per female or growth. IC values may be calculated using a linear interpolation method such as U.S. EPA's Bootstrap Procedure.
- D. No observed effect concentration (NOEC) is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. It is determined using hypothesis testing.

II. Chronic Toxicity Screening Phase Requirements

- A. The Discharger shall perform screening phase monitoring:
 - 1. Subsequent to any significant change in the nature of the effluent discharged through changes in sources or treatment, except those changes resulting from reductions in pollutant concentrations attributable to source control efforts, or
 - 2. Prior to permit reissuance. Screening phase monitoring data shall be included in the NPDES permit application for reissuance. The information shall be as recent as possible, but may be based on screening phase monitoring conducted within 5 years before the permit expiration date.
- B. Design of the screening phase shall, at a minimum, consist of the following elements:
 - 1. Use of test species specified in Tables 1 and 2 (attached), and use of the protocols referenced in those tables, or as approved by the Executive Officer.
 - 2. Two stages:
 - a. Stage 1 shall consist of a minimum of one battery of tests conducted concurrently. Selection of the type of test species and minimum number of tests shall be based on Table 3 (attached).

- b. Stage 2 shall consist of a minimum of two test batteries conducted at a monthly frequency using the three most sensitive species based on the Stage 1 test results and as approved by the Executive Officer.
 3. Appropriate controls.
 4. Concurrent reference toxicant tests.
- C. The Discharger shall submit a screening phase proposal to the Executive Officer for approval. The proposal shall address each of the elements listed above.

Table 1. Critical Life Stage Toxicity Tests for Estuarine Waters

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

Toxicity Test References:

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

Table 2. Critical Life Stage Toxicity Tests for Fresh Waters

Species	(Scientific Name)	Effect	Test Duration	Reference
Fathead minnow	<i>(Pimephales promelas)</i>	Survival; growth rate	7 days	4
Water flea	<i>(Ceriodaphnia dubia)</i>	Survival; number of young	7 days	4
Alga	<i>(Selenastrum capricornutum)</i>	Cell division rate	4 days	4

Toxicity Test Reference:

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

Table 3. Toxicity Test Requirements for Stage One Screening Phase

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

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

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

[2](a) Marine/Estuarine refers to receiving water salinities greater than 1 ppt at least 95 percent of the time during a normal water year.

- (b) Fresh refers to receiving water with salinities less than 1 ppt at least 95 percent of the time during a normal water year.

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**ATTACHMENT D
PART I**

PRETREATMENT REQUIREMENTS

Napa Sanitation District
NPDES Permit No. CA 0037575
Tentative Order

**ATTACHMENT D
PART II**

**RESPONSE TO BOARD STAFF'S REVIEW OF
JULY 2003 SOSCOL WATER RECYCLING
FACILITY LOCAL LIMITS REPORT**

APRIL 11, 2005

Pretreatment Program Provisions

1. The Discharger shall implement all pretreatment requirements contained in 40 CFR 403, as amended. The Discharger shall be subject to enforcement actions, penalties, and fines as provided in the Clean Water Act (33 USC 1351 *et seq.*), as amended. The Discharger shall implement and enforce its Approved Pretreatment Program or modified Pretreatment Program as directed by the Board's Executive Officer or the EPA. The EPA and/or the State may initiate enforcement action against an industrial user for noncompliance with applicable standards and requirements as provided in the Clean Water Act.
2. The Discharger shall enforce the requirements promulgated under Sections 307(b), 307(c), 307(d) and 402(b) of the Clean Water Act. The Discharger shall cause industrial users subject to Federal Categorical Standards to achieve compliance no later than the date specified in those requirements or, in the case of a new industrial user, upon commencement of the discharge.
3. The Discharger shall perform the pretreatment functions as required in 40 CFR Part 403 and amendments or modifications thereto including, but not limited to:
 - i) Implement the necessary legal authorities to fully implement the pretreatment regulations as provided in 40 CFR 403.8(f)(1);
 - ii) Implement the programmatic functions as provided in 40 CFR 403.8(f)(2);
 - iii) Publish an annual list of industrial users in significant noncompliance as provided per 40 CFR 403.8(f)(2)(vii);
 - iv) Provide for the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR 403.8(f)(3); and
 - v) Enforce the national pretreatment standards for prohibited discharges and categorical standards as provided in 40 CFR 403.5 and 403.6, respectively.
4. The Discharger shall submit annually a report to the EPA Region 9, the State Board and the Regional Board describing its pretreatment program activities over the previous twelve months. In the event that the Discharger is not in compliance with any conditions or requirements of the Pretreatment Program, the Discharger shall also include the reasons for noncompliance and a plan and schedule for achieving compliance. The report shall contain, but is not limited to, the information specified in Appendix A entitled, "Requirements for Pretreatment Annual Reports," which is made a part of this Order. The annual report is due on the last day of February each year.
5. The Discharger shall submit semiannual pretreatment reports to the EPA Region 9, the State Board and the Board describing the status of its significant industrial users (SIUs). The report shall contain, but is not limited to, the information specified in Appendix B entitled, "Requirements for Semiannual Pretreatment Reports," which is made part of this Order. The semiannual reports are due July 31st (for the period January through June) and January 31st (for the period July through December) of each year. The Executive Officer may exempt a Discharger from the semiannual reporting requirements on a case by case basis subject to State Board and EPA's comment and approval.
6. The Discharger may combine the annual pretreatment report with the semiannual pretreatment report (for the July through December reporting period). The combined report shall contain all of the information requested in Appendices A and B and will be due on January 31st of each year.

7. The Discharger shall conduct the monitoring of its treatment plant's influent, effluent, and sludge as described in Appendix C entitled, "Requirements for Influent, Effluent and Sludge Monitoring," which is made part of this Order. The results of the sampling and analysis, along with a discussion of any trends, shall be submitted in the semiannual reports. A tabulation of the data shall be included in the annual pretreatment report. The Executive Officer may require more or less frequent monitoring on a case by case basis.

APPENDIX A
REQUIREMENTS FOR PRETREATMENT ANNUAL REPORTS

The Pretreatment Annual Report is due each year on the last day of February. [If the annual report is combined with the semiannual report (for the July through December period) the submittal deadline is January 31st of each year.] The purpose of the Annual Report is 1) to describe the status of the Publicly Owned Treatment Works (POTW) pretreatment program and 2) to report on the effectiveness of the program, as determined by comparing the results of the preceding year's program implementation. The report shall contain at a minimum, but is not limited to, the following information:

1) **Cover Sheet**

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

2) **Introduction**

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

3) **Definitions**

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

4) **Discussion of Upset, Interference and Pass Through**

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

- a) a description of what occurred;
- b) a description of what was done to identify the source;
- c) the name and address of the IU responsible
- d) the reason(s) why the incident occurred;
- e) a description of the corrective actions taken; and
- f) an examination of the local and federal discharge limits and requirements for the purposes of determining whether any additional limits or changes to existing

requirements may be necessary to prevent other Upset, Interference or Pass Through incidents.

5) **Influent, Effluent and Sludge Monitoring Results**

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

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

6) **Inspection and Sampling Program**

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

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

7) **Enforcement Procedures**

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

8) **Federal Categories**

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

9) **Local Standards**

This section shall include a table presenting the local limits.

10) **Updated List of Regulated SIUs**

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

11) **Compliance Activities**

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

- (1) the number of inspections and sampling events conducted for each SIU;
 - (2) the quarters in which these activities were conducted; and
 - (3) the compliance status of each SIU, delineated by quarter, and characterized using all applicable descriptions as given below:
 - (a) in consistent compliance;
 - (b) in inconsistent compliance;
 - (c) in significant noncompliance;
 - (d) on a compliance schedule to achieve compliance, (include the date final compliance is required);
 - (e) not in compliance and not on a compliance schedule;
 - (f) compliance status unknown, and why not.
- b) **Enforcement Summary:** This section shall contain a summary of the compliance and enforcement activities during the past year. The summary shall include the names of all the SIUs affected by the following actions:
- (1) Warning letters or notices of violations regarding SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.
 - (2) Administrative Orders regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.
 - (3) Civil actions regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.
 - (4) Criminal actions regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.
 - (5) Assessment of monetary penalties. Identify the amount of penalty in each case and reason for assessing the penalty.
 - (6) Order to restrict/suspend discharge to the POTW.
 - (7) Order to disconnect the discharge from entering the POTW.

12) **Baseline Monitoring Report Update**

This section shall provide a list of CIUs that have been added to the pretreatment program since the last annual report. This list of new CIUs shall summarize the status of the respective Baseline Monitoring Reports (BMR). The BMR must contain all of the information specified in 40 CFR 403.12(b). For each of the new CIUs, the summary shall indicate when the BMR was due; when the CIU was notified by the POTW of this requirement; when the CIU submitted the report; and/or when the report is due.

13) **Pretreatment Program Changes**

This section shall contain a description of any significant changes in the Pretreatment Program during the past year including, but not limited to: legal authority, local limits, monitoring/inspection program and frequency, enforcement protocol, program's administrative structure, staffing level, resource requirements and funding mechanism. If the manager of the pretreatment program changes, a revised organizational chart shall be included. If any element(s) of the program is in the process of being modified, this intention shall also be indicated.

14) **Pretreatment Program Budget**

This section shall present the budget spent on the Pretreatment Program. The budget, either by the calendar or fiscal year, shall show the amounts spent on personnel, equipment, chemical analyses and any other appropriate categories. A brief discussion of the source(s) of funding shall be provided.

15) **Public Participation Summary**

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

16) **Sludge Storage and Disposal Practice**

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

17) **PCS Data Entry Form**

The annual report shall include the PCS Data Entry Form. This form shall summarize the enforcement actions taken against SIUs in the past year. This form shall include the following information: the POTW name, NPDES Permit number, period covered by the report, the number of SIUs in significant noncompliance (SNC) that are on a pretreatment compliance schedule, the number of notices of violation and administrative orders issued against SIUs, the number of civil and criminal judicial actions against SIUs, the number of SIUs that have been published as a result of being in SNC, and the number of SIUs from which penalties have been collected.

18) **Other Subjects**

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

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

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

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

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

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

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

1) Influent, Effluent and Sludge Monitoring

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

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

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

2) Industrial User Compliance Status

This section shall contain a list of all Significant Industrial Users (SIUs) that were not in consistent compliance with all pretreatment standards/limits or requirements for the reporting period. The compliance status for the previous reporting period shall also be included. Once the SIU has determined to be out of compliance, the SIU shall be included in the report until consistent compliance has been achieved. A brief description detailing the actions that the SIU undertook to come back into compliance shall be provided.

For each SIU on the list, the following information shall be provided:

- a. Indicate if the SIU is subject to Federal categorical standards; if so, specify the category including the subpart that applies.
- b. For SIUs subject to Federal Categorical Standards, indicate if the violation is of a categorical or local standard.
- c. Indicate the compliance status of the SIU for the two quarters of the reporting period.
- d. For violations/noncompliance occurring in the reporting period, provide (1) the date(s) of violation(s); (2) the parameters and corresponding concentrations exceeding the limits and the discharge limits for these parameters and (3) a brief summary of the noncompliant event(s) and the steps that are being taken to achieve compliance.

3) POTW's Compliance with Pretreatment Program Requirements

This section shall contain a discussion of the Discharger's compliance status with the Pretreatment Program Requirements as indicated in the latest Pretreatment Compliance Audit (PCA) Report, Pretreatment Compliance Inspection (PCI) Report or Pretreatment Performance Evaluation (PPE) Report. It shall contain a summary of the following information:

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

The reports shall be signed by a principal executive officer, ranking elected official, or other duly authorized employee who is responsible for the overall operation of the Publicly Owned Treatment Works (POTW) (40 CFR 403.12(j)). Signed copies of the reports shall be submitted to the Regional Administrator at U.S. EPA, the State Water Resources Control Board and the Regional Board at the following addresses:

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

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

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

APPENDIX C
REQUIREMENTS FOR INFLUENT, EFFLUENT AND SLUDGE MONITORING

The Discharger shall conduct sampling of its treatment plant's influent, effluent and sludge at the frequency as shown in Table 5 on Page 8 of the Self-Monitoring Program (SMP).

The monitoring and reporting requirements of the POTW's Pretreatment Program are in addition to those specified in Table 1 of the SMP. Any subsequent modifications of the requirements specified in Table 1 shall be adhered to and shall not affect the requirements described in this Appendix unless written notice from the Regional Board is received. When sampling periods coincide, one set of test results, reported separately, may be used for those parameters that are required to be monitored by both Table 1 and the Pretreatment Program. The Pretreatment Program monitoring reports shall be sent to the Pretreatment Program Coordinator.

1. Influent and Effluent Monitoring

The Discharger shall monitor for the parameters using the required test methods listed in Table 4 on page 7 of the SMP. Any test method substitutions must have received prior written Regional Board approval. Influent and Effluent sampling locations shall be the same as those sites specified in the Self-Monitoring Program.

The influent and effluent sampled should be taken during the same 24-hour period. All samples must be representative of daily operations. A grab sample shall be used for volatile organic compounds, cyanide and phenol. In addition, any samples for oil and grease, polychlorinated biphenyls, dioxins/furans, and polynuclear aromatic hydrocarbons shall be grab samples. For all other pollutants, 24-hour composite samples must be obtained through flow-proportioned composite sampling. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto. For effluent monitoring, the reporting limits for the individual parameters shall be at or below the minimum levels (MLs) as stated in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (2000) [also known as the State Implementation Policy (SIP)]; any revisions to the MLs shall be adhered to. If a parameter does not have a stated minimum level, then the Discharger shall conduct the analysis using the lowest commercially available and reasonably achievable detection levels.

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

- A. Sampling Procedures – This section shall include a brief discussion of the sample locations, collection times, how the sample was collected (i.e., direct collection using vials or bottles, or other types of collection using devices such as automatic samplers, buckets, or beakers), types of containers used, storage procedures and holding times. Include description of prechlorination and chlorination/dechlorination practices during the sampling periods.
- B. Method of Sampling Dechlorination – A brief description of the sample dechlorination method prior to analysis shall be provided.
- C. Sample Compositing – The manner in which samples are composited shall be described. If the compositing procedure is different from the test method specifications, a reason for the variation shall be provided.

- D. Data Validation – All quality assurance/quality control (QA/QC) methods to be used shall be discussed and summarized. These methods include, but are not limited to, spike samples, split samples, blanks and standards. Ways in which the QA/QC data will be used to qualify the analytical test results shall be identified. A certification statement shall be submitted with this discussion stating that the laboratory QA/QC validation data has been reviewed and has met the laboratory acceptance criteria. The QA/QC validation data shall be submitted to the Regional Board upon request.
- E. A tabulation of the test results shall be provided.
- F. Discussion of Results – The report shall include a complete discussion of the test results. If any pollutants are detected in sufficient concentration to upset, interfere or pass through plant operations, the type of pollutant(s) and potential source(s) shall be noted, along with a plan of action to control, eliminate, and/or monitor the pollutant(s). Any apparent generation and/or destruction of pollutants attributable to chlorination/dechlorination sampling and analysis practices shall be noted.

2. **Sludge Monitoring**

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

- A. Sludge lagoons – 20 grab samples collected at representative equidistant intervals (grid pattern) and composited as a single grab, or
- B. Dried stockpile – 20 grab samples collected at various representative locations and depths and composited as a single grab, or
- C. Dewatered sludge- daily composite of 4 representative grab samples each day for 5 days taken at equal intervals during the daily operating shift taken from a) the dewatering units or b) from each truckload, and shall be combined into a single 5-day composite.

The U.S. EPA manual, POTW Sludge Sampling and Analysis Guidance Document, August 1989, containing detailed sampling protocols specific to sludge is recommended as a guidance for sampling procedures. The U.S. EPA manual Analytical Methods of the National Sewage Sludge Survey, September 1990, containing detailed analytical protocols specific to sludge, is recommended as a guidance for analytical methods.

In determining if the sludge is a hazardous waste, the Dischargers shall adhere to Article 2, “Criteria for Identifying the Characteristics of Hazardous Waste,” and Article 3, “Characteristics of Hazardous Waste,” of Title 22, California Code of Regulations, Sections 66261.10 to 66261.24 and all amendments thereto.

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

- A. Sampling procedures – Include sample locations, collection procedures, types of containers used, storage/refrigeration methods, compositing techniques and holding

times. Enclose a map of sample locations if sludge lagoons or stockpiled sludge is sampled.

- B. Data Validation – All quality assurance/quality control (QA/QC) methods to be used shall be discussed and summarized. These methods include, but are not limited to, spike samples, split samples, blanks and standards. Ways in which the QA/QC data will be used to qualify the analytical test results shall be identified. A certification statement shall be submitted with this discussion stating that the laboratory QA/QC validation data has been reviewed and has met the laboratory acceptance criteria. The QA/QC validation data shall be submitted to the Regional Board upon request.
- C. Test Results – Tabulate the test results and include the percent solids.
- D. Discussion of Results – The report shall include a complete discussion of test results. If the detected pollutant(s) is reasonably deemed to have an adverse effect on sludge disposal, a plan of action to control, eliminate, and/or monitor the pollutant(s) and the known or potential source(s) shall be included. Any apparent generation and/or destruction of pollutants attributable to chlorination/ dechlorination sampling and analysis practices shall be noted.

The Discharger shall also provide any influent, effluent or sludge monitoring data for nonpriority pollutants that the permittee believes may be causing or contributing to Interference, Pass Through or adversely impacting sludge quality.

ATTACHMENT E

FACT SHEET

ATTACHMENT F

DISCHARGER'S FEASIBILITY ANALYSIS

(Dated January 24, 2005 and March 18, 2005)

ATTACHMENT G
SWRCB TECHNICAL REPORT