CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

NPDES PERMIT NO. CA0038121
ORDER NO. R2-2004-0017

WASTE DISCHARGE REQUIREMENTS FOR:

TOWN OF YOUNTVILLE/CALIFORNIA VETERANS HOME JOINT WASTEWATER RECLAMATION FACILITY

YOUNTVILLE, NAPA COUNTY

Adopted: March 17, 2004
Effective: June 1, 2004

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
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REISSUING WASTE DISCHARGE REQUIREMENTS FOR:
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FINDINGS

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

1. *Discharger and Permit Application.* The Town of Yountville/California Veterans Home Joint Wastewater Reclamation Facility (hereinafter called the Discharger) has applied to the Board for reissuance of waste discharge requirements and a permit to discharge treated wastewater to waters of the State and the United States under the National Pollutant Discharge Elimination System (NPDES).

Facility Description

2. The Discharger operates a municipal wastewater treatment plant (WWTP) that serves the Town of Yountville and a Veterans Home operated by the State of California, which have populations of about 2,900 people and 2,100 people (including about 900 staff), respectively. The Town of Yountville contributes about 40% of the flow, with about 60% contributed by the Veterans Home. The WWTP, located at 7501 Solano Avenue, Yountville, provides secondary treatment of domestic wastewater. A location map is included as **Attachment A.** The collection system for the Town is owned and operated by the Town. Likewise, the collection system for the Veterans Home is owned and operated by the Veterans Home.

3. The United States Environmental Protection Agency (U.S. EPA) and the Board have classified this Discharge as a minor discharger.

Purpose of Order

4. This NPDES permit regulates the discharge of effluent from the WWTP. This discharge is currently governed by the Waste Discharge Requirements specified in Order No. 93-157, adopted by the Board on December 15, 1993 (the previous permit).

Discharge Description

5. *Discharge Volume and WWTP Capacity.* The WWTP has an average dry weather flow design capacity of 0.55 million gallons per day (MGD). Currently, the Discharger treats about 0.422 MGD of wastewater. The amount of treated effluent discharged to the Napa River depends on effluent reclaimed and the availability of adequate dilution at the discharge point as described further below.

6. *Discharge Period and Location.* During the wet weather period of October 1 through May 15, treated effluent may be discharged into the Napa River, a water of the State and United States, provided that the discharge receives a minimum 25:1 river to wastewater dilution. The WWTP's treated effluent discharges into a freshwater, non-tidally influenced section of the Napa River. The discharge point's name and coordinates are given in Table 1 below, and its location is shown on the facility map contained in Attachment A to this Order.

Table 1. Discharge Point Description and Location

Discharge Point Name	Code	Latitude	Longitude
E-1	E-1	38° 24' 30''	122°20'25''

7. *Reclamation Program.* During the dry weather season, May 16 through September 30, discharge to the Napa River is prohibited and treated effluent is either stored in wastewater ponds, or disposed to land through a reclamation program. Reclaimed water discharged to land is governed by Water Reclamation Requirements in Order No. 89-074, adopted by the Board on May 17, 1989, and amendments and/or revisions thereto. The Discharger is currently preparing a Notice of Intent to be covered by a region wide general reclamation order (Order 96-011) issued by the Board.

8. The attached Fact Sheet (hereby incorporated by reference) includes a table that presents the quality of the discharge, as indicated in the Discharger's effluent monitoring reports over the period from January 2000 through March 2003.

9. *Solids Treatment, Handling and Disposal.* Sludge from the various process units is returned to the primary clarifier, which is operated as a sludge thickener. Thickened sludges are processed in primary and secondary sludge digesters and then applied to one of two sludge-drying beds. Approximately 96 tons of digested sludge is disposed of annually at the Clover Flat landfill.

Treatment Process Description

10. The treatment process consists of an aerated grit chamber, comminutors, primary settling basin, primary trickling filter, intermediate settling basin, secondary trickling filter, aerated trickling filter solids contact reactor, final clarifier, an effluent polishing filter, disinfection with sodium hypochlorite, and dechlorination. In addition to the influent flow equalization pond, the WWTP has a treated effluent holding pond to allow for storage and subsequent discharge or land application. Treated effluent is either discharged to the Napa River or reclaimed through a spray irrigation system (See findings above). Attachment B shows a process diagram for the WWTP.

Treatment Plant Storm Water Discharges

11. *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 an NPDES permit and to implement Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to control pollutants in industrial storm water discharges.

12. *Exemption from Coverage under Statewide Storm Water General Permit.* The State Water Resources Control Board's (the State Board's) statewide NPDES permit for storm water discharges associated with industrial activities (NPDES General Permit CAS000001- the General Permit) was adopted on

November 19, 1991, amended on September 17, 1992, and reissued on April 17, 1997. Coverage under the General Permit is not required if storm water within the treatment plant area is contained and treated along with regular wastewater flows to the treatment plant or if the storm water is regulated under an individual NPDES permit.

13. During an NPDES compliance inspection performed in December 2002, storm water from some of the paved areas around the treatment system (trickling filters, clarifiers, other) was observed to be flowing untreated into a receiving stream. The Discharger plans to comply with the substantive requirements of the Statewide General Permit through this individual NPDES Permit. These requirements include: elimination of unauthorized non-storm water discharges; development and implementation of a storm water pollution prevention plan (SWPPP); and monitoring of storm water discharges and non-storm water discharges.

Regional Monitoring Program

14. On April 15, 1992, the Board adopted Resolution No. 92-043 directing the Executive Officer to implement a Regional Monitoring Program for the San Francisco Bay. Subsequent to a public hearing and various meetings, Board staff requested permit holders in this region, under authority of section 13267 of California Water Code, to report on the water quality of the San Francisco Bay Estuary. These permit holders, including the Discharger, responded to that request by participating in a collaborative effort, through the San Francisco Estuary Institute (formerly the Aquatic Habitat Institute). This effort is known as the San Francisco Bay Regional Monitoring Program for Trace Substances (the RMP). The Discharger has agreed to continue to participate in the RMP, which includes collection of data on pollutants and toxicity in water, sediment and biota of the estuary. This Order specifies that the Discharger shall continue to participate in the RMP, including collection of data on pollutants and toxicity in water, sediment and biota of the estuary.

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, documents, and guidance detailed in Section IV of the attached Fact Sheet .

Beneficial Uses

16. Beneficial uses for the Napa River, as identified in the Board's June 21, 1995 *Water Quality Control Plan San Francisco Bay Basin (Region 2)* (the Basin Plan) (Table 2-6), and based on known uses of the receiving waters in the vicinity of the discharge, are:

    a. Municipal and Domestic Water Supply
    b. Agricultural Water Supply
    c. Navigation
    d. Contact Water Recreation
    e. Non-Contact Water Recreation
    f. Warm Fresh Water Habitat
    g. Cold Fresh Water Habitat
    h. Wildlife Habitat
    i. Preservation of Rare and Endangered Species
    j. Fish Migration

k. Fish Spawning

Basis For Effluent Limitations

General Basis

Applicable WQOs/WQC

17. The WQOs and WQC applicable to the receiving waters for 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 the 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 freshwater, and cyanide, lead, mercury, nickel, silver, zinc, and PAHs in saltwater. 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"(BP, page 3-4). 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. " (BP, page 3-2). 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 and cyanide 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 discharge.

Basin Plan Receiving Water Salinity Policy

18. The Basin Plan states that the salinity characteristics of the receiving water shall be considered in determining the applicable WQOs. Freshwater objectives apply to discharges to waters both outside the zone of tidal influence and with salinities lower than 5 parts per thousand (ppt) at least 75 percent in a normal water year. Marine water objectives shall apply to discharges to waters with salinities greater than 5 ppt at least 75 percent in a normal water year. For discharges to waters with salinities in between these two categories or tidally influenced freshwaters that support estuarine beneficial uses, the objectives shall be the lower of the marine water or fresh water objectives, based on ambient hardness, for each substance (BP, page 4-13). For constituents with WQOs specified in the Basin Plan, it is appropriate to use the Basin Plan definition for determining whether the receiving water is freshwater, marine water, or estuarine.

CTR Receiving Water Salinity Policy

19. The CTR states that the salinity characteristics (i.e., freshwater vs. saltwater) of the receiving water shall be considered in determining the applicable water quality criteria. Freshwater criteria shall apply to discharges to waters with salinities equal to or less than 1 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 freshwaters that support estuarine beneficial uses, the criteria shall be the lower of the salt or freshwater criteria (the freshwater criteria are calculated based on ambient hardness), for each substance. In applying CTR criteria, it is appropriate to use the CTR definition for determining whether the receiving water is fresh, marine, or estuarine.

Receiving Water Salinity

20. The receiving water location for this discharge is within a non-tidally influenced section of the Napa River. Napa River salinity data, collected from the Yountville monitoring station in 1998, showed salinity values ranging from 0.1 ppt to 0.25 ppt. Therefore, by meeting both CTR and Basin Plan criteria for freshwater 100% of the time, the effluent limitations specified in this Order are based on freshwater WQOs/WQC.

Receiving Water Hardness

21. Some WQOs and WQC are hardness dependent. Hardness data collected through the Collaborative Napa River Receiving Water Evaluation are available for the Napa River. In calculating the WQOs and WQC for this Order, Board staff determined that a hardness value of 110 mg/L was representative of the receiving waters. This value represents the minimum hardness measured during four sampling events in 2002 at the Yountville monitoring station. This is the closest station to the discharge and represents the best available information for hardness of the receiving water. This Order requires continued monitoring of hardness in the collaborative program in order to generate more representative data for the next permit reissuance.

Technology-Based Effluent Limits.

22. Technology-*Based Effluent Limits.* 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 (when at least a 50:1 dilution was available) for the following constituents:

    1. Biochemical oxygen demand (BOD),
    2. BOD percent removal,
    3. Total suspended solids (TSS),
    4. TSS percent removal,
    5. pH,
    6. Settleable matter,
    7. Oil and grease, and
    8. Total chlorine residual.

    Technology-based effluent limits for the shallow water discharge condition in the previous permit (at least 10:1 but less than 50:1 dilution condition) are not included in this Order (See Finding 28).

Water Quality-Based Effluent Limitations (WQBELs)

23. Toxic substances are regulated by water quality based effluent limitations (WQBELs) derived from the Basin Plan, Tables 3-3 and 3-4, 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 CTR), the U.S. EPA's *National Toxics Rule* (NTR), and/or best professional judgment (BPJ) as defined 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 the 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 Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (the State Implementation Plan, or 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:

            (a) Maximum daily and average monthly discharge limitations for all discharges other than publicly owned treatment works (POTWs); and

            (b) Average weekly and average monthly discharge limitations for POTWs." (Emphasis added.)

        (2) The SIP (page 8, Section 1.4) requires WQBELs be expressed as maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).

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

            (a) 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.

(b) 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 WQBELs

24. 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 Town of Yountville, submitted the Collaborative Napa River Receiving Water Evaluation. Ambient data collected in 2002, from a location upstream and unaffected by the WWTP's discharge, were used in evaluating background water quality for this Order.

Constituents Identified on the 303(d) List

25. 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. The 2002-303(d) list includes the Napa River as impaired by sediment, pathogens, and nutrients. The impairment in San Pablo Bay is relevant for this discharge because Napa River is a tributary of San Pablo Bay. Discharges of conservative pollutants (pollutants that do no break down readily) to Napa River will reach San Pablo Bay through sediment transport or in the water column and contribute to impairment of San Pablo Bay.

Discharge Prohibition Exception

26. The Basin Plan contains a prohibition of discharge of any wastewater which has particular constituents of concern to beneficial uses (1) at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1; or (2) into any non-tidal water, dead-end slough, similar confined waters, or immediate tributaries thereof, or (3) to San Francisco Bay south of the Dumbarton Bridge. An exception to Prohibitions 1, 2, and 3 will be considered where, "[a] discharge is approved as part of a reclamation project" (1995 Basin Plan, pg. 4-5).

    In issuing the previous permit, Board staff determined that these three prohibitions did not apply to the discharge because the discharge is part of an approved reclamation project. The Discharger has an active water reclamation program for reclaiming treated effluent during the dry weather season without discharge to the Napa River. As stated previously, during the dry weather season, the treated effluent is reclaimed through irrigation of a hayfield on the Veterans Home property and the Chimney Rock Golf Course. In addition, under this permit, discharge is only allowed when the effluent receives a minimum of 25:1dilution.

Dilution: Old and New Discharge Strategy

27. *Old Discharge Strategy*. The Basin Plan classifies a deep water discharge as being discharged through an outfall with a diffuser designed to provide a minimum "initial dilution" of 10:1 in the receiving water. The Discharger does not have a diffuser on its outfall; however, the Discharger has previously been allowed to discharge its effluent to the Napa River only during the "wet weather"

season (October 1 through May 15), but with two sets of effluent limits dependent on the flow of the Napa River. The first set of effluent limits applied when the river to effluent ratio was 50:1 or greater. This scenario was considered comparable to a "deep water" discharge and therefore, the Board allowed a dilution credit of 10:1. The second set of effluent limits applied when the river to effluent ratio was greater than 10:1, but less than 50:1. No dilution credit was allowed for this second scenario. At all other times, treated effluent had to be stored or reclaimed.

During permit reapplication, the Board evaluated USGS flow-monitoring data both upstream (USGS Monitoring Station No. 11456000) and downstream (USGS Monitoring Station No. 11458000) from the discharge. The downstream flow monitoring data indicate that about sixteen percent of the time during the previous permit's allowed discharge period (October 1 through May 15), the discharge could not receive a minimum 50:1 "volumetric dilution" based on the average discharge flow. As a result, during certain days of the discharge season, the discharge would be classified as a "shallow water discharge." The Board has further determined that the Discharger cannot always meet the shallow water effluent limits that would apply at these times for several pollutants. Specifically, the Discharger would not be able to comply with the copper, zinc, and cyanide WQBELs (see findings under "Specific Pollutants" below, for detailed discussions).

28. *New Discharge Strategy.* The dilution credit granted in this Order follows the policy established in the SIP because the SIP supercedes the Basin Plan on this issue. However, the SIP does not supercede the Basin Plan's prohibition against discharges that do not receive at least 10:1 dilution, or into any nontidal water (Basin Plan Table 4-1, prohibition 1). As discussed in a previous finding, the Board granted the Discharge an exemption to this prohibition. One of the conditions for the exemption is that the discharge shall achieve at least a 10:1 dilution ratio.

This Order grants the Discharger a 10:1 dilution credit in calculating WQBELs, provided the discharge shall be completely mixed[1], and shall achieve at least an instream dilution ratio of 25:1 river to effluent flows. The SIP provides that dilution credits based on receiving water flows may be granted only for completely mixed discharges (SIP at 1.4.2.1). Incompletely mixed discharges are required to conduct mixing zone studies. The 25:1 instream dilution ratio requirement is necessary to account for uncertainties in stream flow measurements, and the assimilative capacity in the receiving water as further described in the following finding.

This Order specifies that the 25:1 dilution ratio shall be demonstrated based on Napa River flow as measured using a weighted average of the Napa River watershed areas of USGS Station No.11456000 (Napa River near St. Helena), which is upstream of the discharge outfall (with a tributary watershed area of 81.4 square miles) and USGS Station 11456800 (Napa River near Napa), which is downstream of the discharge outfall (with a tributary watershed of 218 square miles). The watershed tributary area to the Yountville discharge is 102 square miles. The Napa River flow at the effluent discharge point will therefore be calculated using the following proportional flow (Q) equation:

Q (Yountville) = 0.73 Q (Napa) + 0.27 Q (St. Helena).

[1] Completely mixed discharge condition means no more than five (5) percent difference, accounting for analytical variability, in the concentration of a pollutant across a transect of the water body at a point within two stream/river widths from the discharge point. SIP, Appendix 1.

A more detailed explanation and derivation of this equation can be found is in the attached Fact Sheet (Item IV.3.c.) of this Order. In addition, the Discharger has agreed to install a diffuser on its outfall prior to discharge occurring in the fall of 2005, barring any circumstances beyond their control. A diffuser will enable the discharge to be completely mixed.

Additionally, while the diffuser is being installed, an interim river to effluent ratio of 10:1 is required (although a 25:1 dilution ration is necessary for compliance with receiving water standards as described in a previous finding). This 10:1 is based on the fact that the permit limits for toxics are derived using a 10:1 dilution credit. The establishment of this interim limit is consistent with the SIP.

Assimilative Capacity

29. In response to the State Board's Order No. WQ 2001-06, the Board has evaluated the assimilative capacity of the receiving water for 2002 303(d)-listed pollutants for which the Discharger has reasonable potential in its discharge. The evaluation included a review of RMP data (Mouth of Napa River), fish contamination data, effluent data, and WQOs. Though the discharge is to an upper reach of the Napa River, data from the mouth of the Napa River are relevant and appropriate in assessing assimilative capacity and impairment of downstream waters for conservative pollutants (pollutants that do not break down readily) that will reach downstream areas through sediment transport or in the water column. From this evaluation, the Board has found that the assimilative capacity is highly variable due to the complex hydrology of the downstream receiving water. Therefore, there is uncertainty associated with the representative nature of the appropriate ambient background data to conclusively quantify the assimilative capacity of Napa River and San Pablo Bay downstream. Pursuant to Section 1.4.2.1 of the SIP, "dilution credit may be limited or denied on a pollutant-by-pollutant basis..."

    a. For bioaccumulative and impairing pollutants, based on BPJ, dilution credit is not included in calculating the final WQBELs. This determination is based on available data on concentrations of these pollutants in aquatic organisms, sediment, and the water column. At the present time, dilution credit is not included for several pollutants including mercury, dioxins and furans. Primarily, this determination is based on San Francisco Bay fish tissue data that show these pollutants exceed screening levels. The fish tissue data are contained in "*Contaminant Concentrations in Fish from San Francisco Bay 1997*", May 1997. Denial of dilution credits in the calculation of WQBELs for bioaccumulative pollutants that are 303(d)-listed is further justified by fish advisories to the San Francisco Bay. The office of Environmental Health and Hazard Assessment (OEHHA) performed a preliminary review of the data from the 1994 San Francisco Bay pilot study, *"Contaminated Levels in Fish Tissue from San Francisco Bay"*. The results of the study showed elevated levels of chemical contaminants in the fish tissues. Based on these results, OEHHA issued an interim consumption advisory covering certain fish species from the bay. The health advisory was first posted in December 1994. This interim consumption advice was issued and is still in effect due to health concerns based on exposure to sport fish from the bay contaminated with mercury, polychlorinated biphenyls (PCBs), dioxins, and pesticides (e.g., DDT). Based on these data, the Board placed selenium, mercury, and PCBs on the CWA Section 303(d) list. The U.S. EPA added dioxins and furans compounds, dieldrin, chlordane, and 4,4'-DDT on the CWA Section 303(d) list. Therefore, the Board must deny dilution credit unless there is pollutant-specific scientific evidence that clearly demonstrates the existence of assimilative capacity and no potential bioaccumulative problems.

b. Furthermore, Section 2.1.1 of the SIP states that for bioaccumulative compounds on the 303(d) list, the Board should consider whether mass-loading should be limited to representative current levels. The Board finds that mass loading limits are warranted for certain bioaccumulative compounds on the 303(d) list for the receiving waters of this discharge. This is to ensure that this discharge does not contribute further to impairment of the narrative objective for bioaccumulation.

c. For non-bioaccumulative constituents, a conservative allowance of 10:1 dilution for discharges to the Napa River is necessary for protection of beneficial uses. The basis for limiting the dilution credit is based on SIP provisions in Section 1.4.2. The following outlines the basis for derivation of the dilution credit.

   i. The receiving waterbody (Napa River) has highly variable, seasonal freshwater flows.

   ii. There has not been a dilution study to fully account for the cumulative effects of other wastewater discharges or withdrawals to the system.

   iii. The SIP allows limiting a mixing zone and dilution credit for persistent pollutants (e.g., copper, silver, nickel and lead).

The main justification for using a 10:1 dilution credit is uncertainty in accurately determining ambient background and uncertainty in accurately determining the mixing zone in a complex riverine system with multiple wastewater discharges. The detailed rationale is described in the Fact Sheet.

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

30. The Board plans to adopt Total Maximum Daily Loads (TMDLs) for San Pablo Bay for the above 303(d)-listed pollutants – except for dioxin and furan compounds (or TCDD TEQ) - no later than 2010. Completion of the pathogen TMDL for the Napa River is scheduled for Fall 2004. Completion of the sediment and nutrients TMDLs for Napa River are scheduled for June 2005. The Board defers development of the TMDLs for dioxin and furan compounds to the U.S. EPA. Future review of the 303(d) list for San Pablo Bay and Napa River may result in revision of the schedules and/or provide schedules for other pollutants.

    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 dischargers. If the TMDLs address the Discharger, the final effluent limitations for this discharge would be based on the applicable WLAs.

31. 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. 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 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.

Compliance Schedules

32. 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 RWQCB 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 mercury. 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.

33. On January 14, 2004, the Discharger submitted an infeasibility study that demonstrated, pursuant to Section 2.1 of the SIP that it is infeasible to immediately comply with the WQBELs calculated according to Section 1.4 of the SIP for mercury and dichlorobromomethane. The Board concurs with the infeasibility study.

This Order establishes a compliance schedule until March 31, 2010, for mercury as the WQOs for mercury are from the Basin Plan. Since dichlorobromomethane is associated with the chlorination process, the source control of such disinfection byproducts (trihalomethanes or THMs) can be controlled by reducing the chlorine dose. In addition, the Discharger has requested to perform a bacterial limits study for alternate Basin Plan bacteriological limits. Therefore, this Order establishes up to three years compliance schedule for dichlorobromomethane from the effective date of this Order as the Discharger will perform a source control study and may perform an alternate bacterial limits study as required and described by Provisions E.5 and E.6 respectively.

In addition to interim mercury concentration limits, this Order establishes an interim performance-based mass limit to maintain the discharge's current mass loadings of mercury into the Napa River and San Pablo Bay. Mercury is a 303(d)-listed bioaccumulative pollutant. This interim performance-based mass limitation is based on recent treatment plant's performance. Specific bases for these interim limits are described in the findings below under mercury. The Board may take appropriate enforcement actions if interim limits and requirements are not met.

Antidegradation and Anti-backsliding

34. 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:

    a. For impairing pollutants, the revised final limitations will be in accordance with TMDLs and WLAs once they are established;

    b. For non-impairing pollutants, the final limitations are/will be consistent with current State WQOs/WQC.

c. Antibacksliding does not apply to the interim limitations established under previous Orders;

d. If antibacksliding policies apply to interim limitations under 402(o)(2)(c), a less stringent limitation is necessary because of events over which the Discharger has no control and for which there is no reasonable available remedy, and/or new information is available that was not available during previous permit issuance.

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

35. 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, Board staff has analyzed the effluent data to determine if 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, numeric 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.

36. *RPA Methodology.* 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. Effluent data for the period from March 2000 through March 2003 were used to conduct the RPA. The Discharger provided these data in discharge monitoring reports and in a 13267 Interim Report (dated May 15, 2003 and re-submitted on June 2, 2003) as required by the August 6, 2001 Letter. The Interim Report provided data for the period from February 2002 through March 2003 for priority pollutants. The RPA for all constituents is based on zero dilution, according to section 1.3 of the SIP. There are three triggers in determining reasonable potential:

a. The first trigger is activated when the MEC is greater than the lowest applicable WQO/WQC, which has been adjusted for pH, hardness (110 mg/L in this case), and translator data, if appropriate. If the MEC is greater than the adjusted WQO/WQC, then that pollutant has reasonable potential, and a WQBEL is required.

b. The second trigger 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 of the detection levels are greater than or equal to the adjusted WQO/WQC.

c. The third trigger 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. A limit is only required under certain circumstances required to protect beneficial uses.

Table 2, below, depicts the results of the RPA. The RPA findings, numeric final WQBELs where required, feasibility determinations, and interim limits and compliance schedules, as appropriate, are set out in more detail below.

37. *Summary of RPA Data and Results.* Effluent data collected during January 2000 through March 2003 were used to perform the RPA. Based on the RPA methodology described above and 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, zinc, cyanide, chlorodibromomethane, dichlorobromomethane, bis(2-ethylhexyl)phthalate, and TCDD TEQ.

38. *RPA Determinations.* The MECs, WQOs/WQC, bases for the WQOs/WQC, background concentrations used, and reasonable potential conclusions from the RPA are listed in the following table for all constituents analyzed. The RPA results for some of the constituents in the CTR were not able to be determined because of the lack of a WQO/WQC or effluent data. (Further details on the RPA can be found in the Fact Sheet.)

Table 2. Summary of Reasonable Potential Analysis Results

CTR #	Constituent	WQO/WQC (µg/L)	Basis [1]	MEC (µg/L)	Maximum Ambient Background Conc. (µg/L)	Reasonable Potential
2	Arsenic	190	BP, fw, H=110	1.1	6	No
4	Cadmium	1.22	BP, fw, H=110	0.2	<0.03	No
5b	Chromium (VI)	11	BP, fw, H=110	< 0.9	<0.15	No
6	Copper	12.83	BP, fw, H=110	55	1.1	**Yes** (Trigger 1)
7	Lead	3.592	BP, fw, H=110	0.76	0.21	No
8	Mercury*	0.025	BP, fw	0.028	0.015	**Yes** (Trigger 1)
9	Nickel*	56	BP, fw	4.2	4	No
10	Selenium*	5.0	NTR	0.7	<0.3	No
11	Silver	4.78	BP, fw, H=110	0.3	0.03	No
13	Zinc	58	BP, fw, H=110	160	<2	**Yes** (Trigger 1)
14	Cyanide	5.2	BP, fw	14	<0.1	**Yes** (Trigger 1)
	TCDD TEQ*	1.3×10^{-8}	BP, nar	1.4895×10^{-7}	6.57×10^{-10}	**Yes** (Trigger 1)
23	Chlorodibromo methane	0.401	CTR hh	0.8	<0.18	**Yes** (Trigger 1)
27	Dichlorobromo methane	0.56	CTR hh	5.8	<0.2	**Yes** (Trigger 1)

CTR #	Constituent	WQO/WQC (µg/L)	Basis [1]	MEC (µg/L)	Maximum Ambient Background Conc. (µg/L)	Reasonable Potential
68	Bis(2-Ethylhexyl) Phthalate	1.8	CTR hh	8	0.6	**Yes** (Trigger 1)
	CTR #s 1, 3, 5a, 12, 15-126, except 68	Various or NA	CTR	Non-detect, less than WQC, no WQC or NA	Less than WQC or NA	No

* = Constituents on 303(d) list for San Pablo Bay.

Footnote for Table 2.

[1] RPA based on the following: Hardness (H) is based on the lowest ambient hardness, 110 in mg/L as $CaCO_3$; BP = Basin Plan; CTR = California Toxics Rule; NTR=National Toxics Rule; fw = freshwater, hh = human health, for consumption of water and organisms.

39. *RPA Results for Impairing Pollutants.* While TMDLs and WLAs are being developed, effluent concentration limits are established in this permit for 303(d)-listed pollutants that have reasonable potential to cause or contribute to an excursion above the water quality standard. Mercury and TCDD TEQ are the only toxic constituents on the 303(d) list for San Pablo Bay for which the RPA determined a need for effluent limitations.

Specific Pollutants

40. *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 based on the WQOs for the protection of human health. Self-monitoring effluent data collected for the period from 2000-2003 indicated individual PAH levels (six samples) ranging from <0.02 µg/L to <5 µg/L. Based on the RPA for individual PAHs, none of the individual PAHs show reasonable potential. The previous Order included a WQBEL of 0.028 µg/L for the sum of 16 PAH compounds. However, there is no applicable total PAHs WQO/WQC for freshwater water bodies.

41. *Phenols.* This Order implements the policy and regulations of the CTR and SIP in regard to phenolic compounds. The previous Order contained a monthly average effluent limit for total phenols of 300 µg/L when river to wastewater dilution is at least 10:1 but less than 50:1, and 3000 µg/L when dilution is at least 50:1. Self-monitoring effluent data collected for the period from 2000 through 2003 indicate measured concentrations of total phenols of 5 µg/L and 13 µg/L, which are much lower than the existing limitations; and for individual phenols, concentrations range from <0.2 µg/L to <0.9 µg/L. The CTR specifies criteria for individual phenolic compounds, which are a subset of total phenols. The previous total phenols limit may be more restrictive for several phenolic compounds (e.g., phenol and 2,4-dimethylphenol) than the WQBELs calculated from the SIP, owing to their high CTR criteria. However, for most of the phenolic compounds in the CTR, the WQBELs would be more restrictive. Retaining limits for both total and individual phenolics would potentially limit and count the same pollutants twice. Therefore, this Order follows the requirements of the CTR and SIP in lieu of the Basin Plan limit because 1) the water quality considerations of the CTR and SIP are generally more restrictive, and 2) the low historic concentrations of total phenols in the discharge. Based on the available data for individual phenols, none of the individual phenolic compounds show reasonable potential. The Discharger is required to continue to collect data on individual phenol compounds in the effluent and the receiving water under the provisions in this Order. When these

additional data become available, the Board will reevaluate reasonable potential for individual phenolic compounds and determine the need for effluent limitations, if appropriate.

42. *Other* Organics *With Limited Data.* The Discharger has performed effluent sampling and analysis for the organic constituents listed in the CTR. This data set was used to perform the RPA. The full RPA is presented as an attachment to the Fact Sheet. In some cases, reasonable potential cannot be determined because ambient background concentration data are not available. Reasonable potential also cannot be determined for various organic constituents because accurate estimations are not possible due to the applicable WQOs/WQC being lower than current analytical techniques can measure. The Discharger will continue to monitor for these constituents using analytical methods that provide the best feasible detection limits. If detection limits improve to the point where it is feasible to evaluate compliance with applicable WQOs/WQC, another RPA will be conducted to determine whether there is a need to add numeric effluent limits to the permit or to continue monitoring.

43. *Permit Reopener.* This Order includes a reopener provision to allow numeric effluent limitations to be added or deleted for any constituent that exhibits or does not exhibit, respectively, reasonable potential. The Board will make this determination based on monitoring results.

Development of Effluent Limitations

44. *Copper*
    a. Copper *WQOs.* To protect fresh water aquatic life at a hardness of 110 mg/L, the Basin Plan specifies objectives for copper of 12.83 µg/L as a 4-day average and 19.39 µg/L as a 1-hour average.

    b. *Copper RPA Result.* The RP is confirmed by Trigger 1, as the MEC (55 µg/L) is greater than the lowest WQO (12.83 µg/L).

    c. *Copper WQBELs.* The previous Order provided two sets of limitations for copper as daily average effluent limitations of 11.8 µg/L for instream dilutions between 10:1 and 50:1, and 78 ug/l for instream dilutions of at least 50:1. Effluent monitoring data show copper levels ranging from 16 µg/L to 55 µg/L, indicating that the Discharger has not met the more stringent limitation during low dilution conditions. As described in previous findings, this Order grants a 10:1 dilution credit in calculating final WQBELs when the discharge receives an instream dilution ratio of at least 25:1 (river to effluent flow ratio). The final WQBELs calculated for copper are: AMEL of 102 µg/L and MDEL of 181 µg/L. These are less stringent than the previous permit limits. Because the Discharger has shown that it is infeasible to achieve compliance with the more stringent of the previous permit limits (11.8 µg/L), this Order establishes a final limit (78 ug/l) based on the less stringent of the previous permit limits.

    d. *Antibacksliding/Antidegradation.* Under CWA 303(d)(4)(b), a less stringent limitation is allowed as long as the revised permit is consistent with antidegredation. The limit established is consistent with antidegradation because it is based on the previous permit and is thus *also* performance based and will hold the Discharger to current performance so that there will be no change in the quality or quantity of the discharge to the receiving water.

45. *Mercury*
    a. *Mercury WQOs.* To protect fresh water aquatic life, the Basin Plan specifies objectives for mercury of 0.025 µg/L as a 4-day average and 2.4 µg/L as a 1-hour average for the protection of

aquatic life. The CTR specifies a long-term average criterion for the protection of human health of 0.051 µg/L.

b. *Mercury RPA Result.* The RP is confirmed by Trigger 1, as the MEC (0.028 µg/L) is greater than the lowest WQO (0.025 µg/L).

c. *Mercury Concentration-Based Interim Effluent Limitations* . The WQBELs for mercury are calculated as AMEL of 0.019 µg/L and MDEL of 0.045 µg/L. The Discharger submitted an infeasibility study and the Board concurred that it is infeasible to achieve immediate compliance with the final WQBELs. Therefore, this Order establishes an interim monthly average effluent limitation for mercury based on staff's analysis of the performance of over 25 municipal secondary and advanced-secondary treatment plants in the Bay Area as described in the June 11, 2001, Board staff report titled *Staff Report, Statistical Analysis of Pooled Data from Region-Wide Ultra-clean Mercury Sampling* (available in electronic form on the Board's website). The objective of the analysis was to develop interim performance-based limits (IPBLs) that characterized facility performance region-wide using only ultra-clean data. Compliance with the IPBLs will ensure no further degradation of the receiving water quality due to the discharge. The staff report's conclusions demonstrate that the statistically-based mercury IPBLs are 0.087 µg/L for a secondary plant, and 0.023 µg/L for an advanced secondary plant. The Discharger operates a secondary-level treatment plant; therefore, 0.087 µg/L applies to the WWTP, taken as a monthly average. Since the previous permit has a monthly average limit of 0.084 µg/L, which is more stringent than the pooled IPBL of 0.087µg/L, 0.084 µg/L is retained from the previous Order as the monthly average limit.

d. *Interim Mercury Mass Emission Limit.* In addition to the concentration-based mercury IPBL, this Order establishes an interim monthly mercury mass-loading limit of 0.018 kilograms per month (kg/mo). Based on treatment plant performance at the 99.87 percentile value (or average + 3* standard deviation) from effluent data gathered from January 2000 through March 2003, the total mass loadings were calculated using a 12-month moving average. This mass-based effluent limitation maintains current loadings until a TMDL is established and is consistent with state and federal anti-degradation and anti-backsliding requirements. The final mass-based effluent limitation will be based on the WLA derived from the mercury TMDL.

e. *Mass Trigger.* This Order establishes a mercury mass trigger of 0.006 kilograms per month (kg/mo). This mass trigger is based on the recent WWTP's performance (from January 2000 through March 2003) at the 99.87th percentile (or average + 3 standard deviation) for the 12-month moving average mass loadings calculated using the mercury monthly average concentration and the total flow discharged to the receiving water. The mass-loading trigger, if exceeded, requires the Discharger to initiate additional actions, as specified in Provision E.9.

f. Mercury *TMDL.* As noted in a finding above, the final mercury WQBELs will be derived from the *Discharger's* WLA contained in the adopted mercury TMDL, and the permit will be revised to include the final WQBELs as enforceable limitations. While the TMDL is being developed, the Discharger will comply with performance-based mercury mass emission limits to cooperate in maintaining current ambient receiving water conditions. Based on the June 30, 2000 Board staff report titled *Watershed Management of Mercury in the San Francisco Bay Estuary: Total Maximum Daily Load Report to U.S. EPA,* municipal sources are a very small contributor of the

mercury load to the Bay. Because of this, it is unlikely that the TMDL will require reduction efforts beyond the source controls required by this permit.

g. *Mercury Control Strategy.* As a prerequisite to being granted the compliance schedule and interim limits described above, the Discharger will implement mercury source control strategies as described in the infeasibility study.

h. *Treatment Plant Performance and Compliance Attainability.* The effluent monitoring data for mercury from March 2000 through March 2003 show concentrations ranging from <0.008 µg/L to 0.028 µg/L. All effluent data were below the interim limit.

i. *Antibacksliding/Antidegradation.* The Antibacksliding and antidegradation rule is satisfied, since the interim effluent limits based on performance and as stringent as the previous permit limit.

46. *Zinc*

a. *Zinc WQOs.* To protect fresh water aquatic life at a hardness of 110 mg/L, the Basin Plan specifies objectives for zinc of 58 µg/L as a 4-day average and 170 µg/L as a 1-hour average.

b. *Zinc RPA Result.* The RPA is confirmed by Trigger 1, as the MEC (160 µg/L) is greater than the lowest WQO (58 µg/L).

c. *Zinc WQBELs.* The previous Order provided two sets of limitations for zinc as daily average effluent limitations of 110 µg/L for instream dilutions between 10:1 and 50:1, and 1055 for instream dilutions of at least 50:1. Effluent monitoring data show zinc levels ranging from 50 µg/L to 160 µg/L, indicating that the Discharger has not met the more stringent limitation during low flow conditions. As described in previous findings, this Order grants a 10:1 dilution credit in calculating final WQBELs when the discharge receives an instream dilution of at least 25:1(river to effluent flow ratio). The final WQBELs calculated for zinc are: AMEL of 488 µg/L and MDEL of 833 µg/L. Historical effluent data show that the Discharger is able to meet the final WQBELs for zinc; therefore, interim limits are not necessary.

d. *Anti-backsliding/Anti-degradation.* The Antibacksliding and antidegradation rule is satisfied, since the WQBELs are more stringent than the previous permit limit (1055 µg/L as daily average).

47. *Cyanide*

a. *Cyanide WQOs.* To protect fresh water aquatic life, the Basin Plan specifies objectives for cyanide of 5.2 µg/L as a 4-day average and 22 µg/L as a 1-hour average.

b. *Cyanide RPA Result.* The RP is confirmed by Trigger 1, as the MEC (14 µg/L) is greater than the lowest WQO (5.2 µg/L).

c. *Cyanide WQBELs.* The previous Order provided two sets of limitations for Cyanide as daily average effluent limitations of 5.2 µg/L for instream dilutions between 10:1 and 50:1, and 52 for instream dilutions of at least 50:1. Effluent monitoring data show cyanide levels ranging from <3 µg/L to 14 µg/L, indicating that the Discharger has not met the more stringent limitation during low flow conditions. As described in previous findings, this Order grants a 10:1 dilution credit in calculating final WQBELs when the discharge receives an instream dilution ratio of at

least 25:1 (river to effluent flow ratio). The final WQBELs calculated for cyanide are: AMEL of 39 µg/L and MDEL of 88 µg/L. These are less stringent than one of the previous permit limits (5.2 µg/L). However, they are equivalent to the previous permit limit of 52 µg/L because they are based on the same Basin Plan Objective and same dilution credit. The only difference is that the SIP deploys a statistical methodology that results in an AMEL and MDEL. Because the Discharger has shown that it is infeasible to achieve compliance with the more stringent (5.2 µg/L)of the previous permit limit, this Order establishes the SIP derived WQBELs described above.

d. *Antibacksliding/Antidegradation.* Under CWA 303(d)(4)(b), a less stringent limitation is allowed as long as the revised permit is consistent with antidegradation. The interim limit established is consistent with antidegradation because it is equivalent to the previous permit and is thus also performance based and will hold the Discharger to current performance so that there will be no change in the quality or quantity of the discharge to the receiving water.

48. *Chlorodibromomethane*

a. *Chlorodibromomethane WQC.* In the CTR, the lowest criteria for chlorodibromomethane is the human health value of 0.401 µg/L for the consumption of water and organisms.

b. *RPA Results.* The RP is confirmed by Trigger 1, as the MEC (0.8 µg/L) is greater than the WQC (0.401 µg/L).

c. *WQBELs and Compliance Attainability.* As described in the previous finding, a 10:1 dilution credit is allowed in calculating final WQBELs. The final WQBELs calculated for chlorodibromomethane: AMEL of 2.4 µg/L and MDEL of 4.8 µg/L. Historical effluent data show that the Discharger is able to meet the final WQBELs for chlorodibromomethane; therefore, interim limits are not necessary.

d. *Antibacksliding/Antidegradation.* There were no WQBELs in the previous permit; therefore, anti-backsliding and anti-degradation provisions do not apply.

49. *Dichlorobromomethane*

a. *Dichlorobromomethane WQC.* In the CTR, the lowest criterion for dichlorobromomethane is the human health value of 0.56 µg/L for the consumption of water and organisms.

b. *RPA Results.* The RP is confirmed by Trigger 1, as the MEC (5.8 µg/L) is greater than the WQC (0.56 µg/L).

c. *Dichlorobromomethane WQBELs and interim limit.* As described in the previous finding, a 10:1 dilution credit is allowed in calculating final WQBELs. The final WQBELs calculated for dichlorobromomethane: AMEL of 3.8 µg/L and MDEL of 7.6 µg/L. The MEC is higher than the AMEL, the Discharge submitted an infeasibility study and the Board concurred that it is infeasible for the Discharger to immediately comply with the WQBELs. Since there are only four effluent data points available, it is not feasible to perform a meaningful statistical analysis for a performance-based effluent limit. Therefore, the interim limit is set as the MEC, which is 5.8 µg/L, as daily maximum.

d. *Source Control.* Provision E. 5 of this Order requires the Discharger to develop a program to maximize practicable control over the generation of trihalomethanes in the disinfection process.

e. *Anti-backsliding/Anti-degradation.* There were no WQBELs in the previous permit; therefore, anti-backsliding and anti-degradation provisions do not apply.

50. *Bis(2-Ethylhexyl)Phthalate*

a. *Bis(2-Ethylhexyl)Phthalate WQC.* The CTR establishes a human health value of 1.8 µg/L for bis(2-ethylhexyl)phthalate, based on consumption of water and organisms.

b. *Effluent Limitations.* As described in the previous finding, a 10:1 dilution credit is allowed in calculating final WQBELs. The final WQBELs calculated for bis(2-ethylhexyl)phthalate are: AMEL of 14 µg/L and MDEL of 28 µg/L. Historical effluent data show that the Discharger is able to meet the final WQBELs for bis(2-ethylhexyl)phthalate; therefore, interim limits are not necessary.

c. *Antibacksliding/Antidegradation.* There were no WQBELs in the previous permit; therefore, anti-backsliding and anti-degradation provisions do not apply.

51. *Dioxin or TCDD TEQ*

a. *Dioxin WQC.* The CTR establishes a numeric human health WQC of 0.013 picograms per liter (pg/L) for 2,3,7,8-tetrachlorinated dibenzo-p-dioxin (2,3,7,8-TCDD) based on consumption of water and aquatic organisms. The preamble of the CTR states that California NPDES permits should use toxicity equivalents (TEQs) where dioxin-like compounds have reasonable potential with respect to narrative criteria. The preamble further states that U.S. EPA intends to use the 1998 World Health Organization Toxicity Equivalence Factor (TEF) scheme in the future and encourages California to use this scheme in State programs. Additionally, the CTR preamble states U.S. EPA's intent to adopt revised WQC guidance subsequent to their health reassessment for dioxin-like compounds. Staff used TEQs to translate the narrative WQOs to numeric WQOs for the other 16 congeners.

b. *RPA Results.* The TCDD TEQ MEC is above the WQO, which triggers the RP using Trigger 1. There are insufficient data to determine interim limitations, therefore, this Order requires the Discharger to collect additional data. The permit will be re-opened, as needed, to determine interim limitations.

c. *Dioxin Effluent Limits.* The final limits for TCDD TEQ will be based on the waste load allocated to the Discharger from the TMDL. The detection limits historically used by the Discharger are insufficient to accurately determine the concentrations of the dioxin congeners in the discharge. The SIP does not specify an ML for dioxin analysis. This permit requires additional dioxin monitoring to complement a special dioxin project being conducted by Clean Estuary Partnership (CEP). The special dioxin project will consist of impairment assessment and a conceptual model for dioxin loading into the Bay. The report will be submitted by mid-2004.

Whole Effluent Acute Toxicity

52. This Order includes effluent limits for whole-effluent acute toxicity that are unchanged from the previous permit. Compliance evaluation is based on 96-hour static renewal bioassays. 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 Water, 5th Edition."

Whole Effluent Chronic Toxicity

53. Typically, in accordance with U.S. EPA and State Board Task Force guidance, Section 4 of the SIP, and based on BPJ, NPDES Permits include requirements for chronic toxicity monitoring based on the Basin Plan narrative toxicity objective. However, the Basin Plan also describes the type of facility that his applies to: one in which the dischargers have completed or are currently participating in the Effluent Toxicity Characterization Program; municipal facilities with pretreatment programs; all major industrial facilities; and selected groundwater dischargers. None of these situations or conditions apply to the Discharger.

    Additionally, and perhaps most importantly, this discharge will only occur when river conditions will allow. Effectively, once the diffuser is installed, this discharge will be well mixed and proportionately diluted to at least 25:1. Chronic toxicity testing of similar, dilute, or deep-water discharges have frequently exhibited confounding, low levels of chronic toxicity (1-4 TUc); however, toxicity identification evaluations of these discharges have generally, if not always, been inconclusive.

    Furthermore, given the small size of this discharge, and the relatively large expenditure of resources that would be required to complete chronic toxicity screening and monitoring, chronic toxicity screening and monitoring are not a requirement of this Order at this time. However, the State Board is in the process of developing a policy on chronic toxicity monitoring and screening requirements. Therefore, this permit may be amended in the future to incorporate this policy once it becomes effective.

Bacteria Limitations

54. This Order retains the same total coliform limitations included in the previous Order, which are based on Table 4-2 of the Basin Plan. This Order also allows the Discharger to conduct a bacteriological assessment study as specified in Provision E.6 of this Order, to evaluate the feasibility of using an alternate bacteria limitation, and grants a short-term exception to the total coliform limits during the study. Because the receiving water is currently listed as impaired by pathogens with a TMDL scheduled by end of 2004, the scope of the Discharger's study will be broadened to generate data to ensure alternate limits developed will be consistent with the TMDL.

Source Control and Pollution Prevention

55. 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 guiding principles in the Resolution include promoting watershed, cross-program and cross-media approaches to pollution prevention, and jointly developing tools to assess individual Discharger's program performance that may include peer reviews, self-audits or other formats.

56. 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. For constituents with compliance schedules under this permit, the applicable source control/pollutant minimization requirements of SIP Section 2.1 will also apply.

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

57. SIP- *Required Dioxin monitoring.* The SIP states that each Board shall require major and minor POTWs and industrial dischargers in its region to conduct effluent monitoring for the 2,3,7,8-TCDD congeners whether or not an effluent limit is required for 2,3,7,8-TCDD. The monitoring is intended to assess the presence and amounts of the congeners being discharged to inland surface waters, enclosed bays, and estuaries. The State Board will use these monitoring data to establish strategies for a future multi-media approach to control these chemicals.

58. 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. This formal request for technical information addresses the insufficient effluent and ambient background data, and the dioxin study. The letter (described above) is referenced throughout the permit as the "August 6, 2001 Letter".

59. Pursuant to the August 6, 2001 Letter from Board Staff, the Discharger has submitted workplans and sampling results for characterizing the levels of selected constituents in the effluent and ambient receiving water. This Order requires monitoring pursuant to the Discharger's workplans as approved by the Board's Executive Officer.

60. *Monitoring Requirements (Self-Monitoring Program).* The SMP includes monitoring at the outfall for conventional, non-conventional, toxic pollutants, acute toxicity, and chronic toxicity. This Order requires bi-weekly discharge season monitoring for TSS , monthly discharge season monitoring for settleable solids, quarterly discharge season monitoring for copper, mercury, zinc, and cyanide to demonstrate compliance with effluent limits. Annual monitoring is required for bis(2-ethylhexyl)phthalate, chlorodibromomethane, and dichlorobromomethane. For dioxins and furans, this Order further requires one monitoring event during the life of this Order using methods with lower detection limits than current EPA methods.

Storm Water Pollution Prevention Plan

61. As indicated in a finding above, industrial contact storm water from some of the paved areas around the treatment system (trickling filters, clarifiers, other) is discharged without treatment into a receiving stream. This Order, therefore, contains a provision requiring the Discharger by October 1, 2005, to develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP shall be designed in accordance with good engineering practices and shall address the following objectives:

    (a) to identify pollutant sources that may affect the quality of storm water discharges; and
    (b) to identify, assign, and implement control measures and management practices to reduce pollutants in storm water discharges.

62. If the Discharger notifies the Board that it will direct storm water to the treatment plant, this Order requires submittal of documentation showing completion of system construction within 6 months of the adoption of this Order.

Operations and Maintenance Manual

63. *Operations and Maintenance Manual.* An Operations and Maintenance (O&M) Manual is maintained by the Discharger for purposes of providing plant and regulatory personnel with a source of information describing all key equipment, recommended operation strategies, process control monitoring, and maintenance activities. In order to remain a useful and relevant document, the manual shall be kept updated to reflect significant changes in treatment facility equipment and operation practices.

Optional Mass Offset

64. *Optional Mass Offset.* This Order contains requirements to prevent further degradation of the impaired waterbody. Such requirements include the adoption of interim mass limits that are based on WWTP performance, provisions for aggressive source control, feasibility studies for wastewater reclamation, and WWTP 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 only be achieved through a mass offset program. This Order includes an optional provision for a mass offset program.

NPDES Permit and CEQA

65. *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.

Notification

66. 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.

Public Hearing

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

2. Average dry weather flow to the treatment plant greater than 0.55 mgd is prohibited. The average dry weather flow shall be determined over three consecutive dry weather months each year.

3. Discharge of treated wastewater at any point where it does not receive an initial dilution ratio of at least 25:1 is prohibited except as explained further below in 3.a. The available dilution shall be determined by the weighted average flow at USGS Station No. 11456000 and USGS Station No. 11458000.

   a) Interim Dilution Ratio During Diffuser Construction - During the design of installation of its diffuser, the discharge of treated wastewater, during the construction phase of the diffuser, at any point where it does not receive an initial dilution of at least 10:1 is prohibited. This interim dilution ratio shall not last beyond October 1, 2005. Extensions beyond this date may be granted by the Executive Officer, provided the Discharger submit a written request that demonstrates that the delays are beyond its control.

4. The bypass or overflow of untreated or partially treated wastewater to waters of the State, either at the WWTP or from the collection system or pump stations tributary to the WWTP, is prohibited, except as provided for bypasses under the conditions stated in 40 CFR 122.41(m)(4) and in Standard Provisions A.13.

   The discharge of blended wastewater, that is biologically treated wastewater blended with wastewater that has been diverted around biological treatment units or advanced treatment units, is allowable only 1) during wet weather, and 2) when the discharge complies with the effluent and receiving water limitations contained in this Order. Furthermore, the Discharger shall operate the facility as designed and in accordance with the Operation and Maintenance Manuals developed for the facility. This means that the Discharger shall optimize storage and use of equalization units, and shall fully utilize the biological treatment units, and advanced treatment units if applicable. The Discharger shall report these incidents of blended effluent discharges in routine monitoring reports, and shall conduct monitoring of this discharge as specified elsewhere in this Order.

5. Discharge to the Napa River is prohibited during the period from May 16 through September 30 of each year. Discharge to the Napa River prior to September 30 or later than May 15 may be authorized by the Executive Officer, for a specified period not to exceed 1 month, based on written request from the Discharger demonstrating that adequate dilution is available at the discharge point and that the discharge would be in compliance with WQOs for the receiving water. In the event of an emergency discharge, the Discharger shall initiate a phone call, fax or email to provide immediate notification of the action. The Executive Officer may authorize a specific time frame for the discharge.

B. EFFLUENT LIMITATIONS

The term 'effluent' in the following limitations means the fully treated wastewater effluent from the Discharger's wastewater treatment facility, as discharged to the Napa River. The effluent discharged to the Napa River shall not exceed the following limits:

1. Conventional pollutants effluent limits are listed in Table 3 below.

Table 3. Effluent Limits for Conventional Pollutants

Constituent	Units	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum
a. Biochemical Oxygen Demand (BOD)	mg/L	30	45	--	--
b. Total Suspended Solids (TSS)	mg/L	30	45	--	--
c. Oil & Grease	mg/L	10	--	20	--
d. Settleable Matter	ml/l-hr	0.1	--	0.2	--
e. Total Chlorine Residual [1]	mg/L	--	--	--	0.0

[1] This effluent limit is defined as below the limit of detection in standard test methods defined in the 18th edition of the *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 (including a safety factor) 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 limit.

2. The pH of the discharge shall not exceed 9.0 nor be less than 6.0. The Discharger may elect to use a continuous on-line monitoring system(s) for measuring pH. If the Discharger employs continuous monitoring, then the Discharger shall be in compliance with the pH limitation specified herein, provided that both of the following conditions are satisfied: (i) The total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (ii) No individual excursion from the range of pH values shall exceed 60 minutes.

3. 85 Percent Removal, BOD_5 and TSS. The arithmetic mean of the biochemical oxygen demand (5-day, 20 °C) and total suspended solids values for effluent samples collected 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.

4. Total Coliform Bacteria:

   The treated wastewater, at some point in the treatment process prior to discharge, shall meet the following limits of bacteriological quality:

   a. The 5-day moving median value for the most probable number (MPN) of total coliform bacteria shall not exceed 23 MPN/100 mL; and

   b. Any single sample shall not exceed 240 MPN/100 mL when verified by a repeat sample taken within 48 hours.

   c. The Discharger may conduct a bacteriological assessment study, as specified in Provision E.6 of this Order, to evaluate the feasibility of using an alternate bacteria limitation.

      During the study period, the Discharger is exempt from coliform limit in 4a. and 4b.above for the term of the study as long as the Discharger can demonstrate that the exceedances of the total coliform limits are solely due to the study, and that there is compliance in the

receiving water with the bacteriological objectives specified in the Basin Plan. Strategies to address compliance will be addressed in the work plan.

5. Whole Effluent Acute Toxicity:

Representative samples of the effluent shall meet the following limits for acute toxicity. Compliance with these limits shall be achieved in accordance with Provision E.7 of this Order:

a. The survival of bioassay test organisms in 96-hour bioassays of undiluted effluent shall be:

(1) A three-sample median value of not less than 90 percent survival; and

(2) Any single sample maximum of not less than 70 percent survival.

b. The 3-sample median acute toxicity limit is further defined as follows:

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 one of the past two or fewer bioassay tests also show less than 90 percent survival.

c. Bioassays shall be performed using the most up-to-date U.S. EPA protocol and fathead minnows and rainbow trout for the test species. Bioassays shall be conducted in compliance with "Methods for Measuring The Acute Toxicity of Effluents and Receiving Water To Freshwater and Marine Organisms", currently 5th Edition, with exceptions granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP) upon the Discharger's request with justification.

6. Toxic Substances:
The discharge of effluent to the Napa River shall not exceed the following limitations in Table 4 below:

Table 4. Effluent Limits for Toxic Pollutants [1][5]

Constituent	Maximum Daily (MDEL)	Monthly Average (AMEL)	Interim Limits		Units
			Daily Maximum	Monthly Average	
Copper	78				µg/L
Mercury [2]				0.084	µg/L
Zinc	833	488			µg/L
Cyanide [3]	39	88			µg/L
Chlorodibromomethane	2.4	4.8			µg/L
Dichlorobromomethane[4]			5.8		µg/L
Bis(2-ethylhexyl)phthalate	14	28			µg/L

Footnotes for Table 4:

[1] (a) Compliance with these limits is intended to be achieved through wastewater 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
(c) Limits apply to the average concentration of all samples collected during the averaging period (Daily = 24-hour period; Monthly = calendar month).

[2] Mercury: the interim limit shall remain in effect until March 31, 2010, or until the Board amends the limit based on additional data, site-specific objectives, or the WLAs in respective TMDLs. Effluent mercury monitoring shall be performed by using ultraclean sampling and analysis techniques to the maximum extent practicable, with a minimum level of 0.002 µg/l, or lower.

[3] Cyanide: compliance may be demonstrated by measurement of weak acid dissociable cyanide or U.S. EPA Method OIA 1677.

[4] Dichlorobromomethane: the interim limit shall remain in effect until March 31, 2007.

[5] A daily maximum or average monthly value for a given constituent shall be considered non-compliance with the effluent limits only if it exceeds the effluent limitation and the reported ML for that constituent.

7. Mercury Mass Limit and Mass Trigger

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 annual load for mercury shall not exceed 0.018 kg/month. This limit was calculated using the monthly average total flow (in MGD) times the corresponding monthly average mercury concentration.

b. Mass trigger: If the 12-month moving average monthly mass loading for mercury exceeds 0.006 kg/month, the actions specified in Provision E.9 shall be initiated. This load was calculated using the monthly average discharge flow (in MGD) times the corresponding monthly average mercury concentration.

c. Compliance with this limit and trigger shall be evaluated using monthly moving averages of total mass load from flows discharged to surface waters and concentrations, 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).

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 using the method described in section B.8.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 this interim mass emission limitation upon their 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 TMDL and WLA, if the requirements for an exception to the rule are met.

C. RECEIVING WATER LIMITATIONS

1. The discharges shall not cause the following conditions to exist in waters of the State at any place:

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

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

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

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

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

2. The discharges shall not cause nuisance, or adversely affect the beneficial uses of the receiving water.

3. The discharges shall not cause the following limits to be violated in waters of the State at any one place within one foot of the water surface:

   a. Dissolved Oxygen: 7.0 mg/L, minimum

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

   b. Dissolved Sulfide: 0.1 mg/L, maximum

   c. pH: The pH shall not be depressed below 6.0 nor raised above 9.0, nor caused to vary from normal ambient pH by more than 0.5 pH units.

   d. Un-ionized Ammonia: 0.025 mg/L as N, annual median; and
      a. 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.

4. The discharges shall not cause a violation of any particular 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, the Board will revise and modify this Order in accordance with such more stringent standards.

D. 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 RWQCB 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 result in groundwater contamination.

3. Duty 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 sewage sludge shall not cause waste material to be in a position where it is, or can be carried from the sludge treatment and storage site and deposited in 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 sewage sludge 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.

E. PROVISIONS

1. **Permit Compliance and Rescission of Previous Waste Discharge Requirements**
The Discharger shall comply with all sections of this Order beginning on the effective date of this Order. Requirements prescribed by this Order supersede the requirements prescribed by Order No. 93-157. Order No. 93-157 is hereby rescinded upon the effective date of this permit.

2. **Effluent Characterization for Selected Constituents**
The Discharger shall continue its effort to monitor and evaluate the discharge from Outfall E-1 annually for all 126 priority pollutants in the CTR as indicated in the workplan submitted pursuant to the August 6, 2001, letter from the Board's Executive Officer. Interim reports shall be submitted annually. A final report is due with the NPDES permit renewal application (180 days before permit expiration).

3. **Receiving Water Monitoring**
The Discharger shall collect or participate in collecting background ambient receiving water monitoring for priority pollutants that is required to perform RPA and 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.

4. **Storm Water Pollution Prevention Plan (SWPPP)**
The Discharger is required to demonstrate compliance with State requirements that govern storm water discharges associated with industrial activity. By October 1, 2005, the Discharger shall develop a SWPPP and submit a copy to the Executive Officer. The SWPPP shall be designed in accordance with good engineering practices and shall address the following objectives:

    a. to identify pollutant sources that may affect the quality of storm water discharges; and
    b. to identify, assign, and implement control measures and management practices to reduce pollutants in storm water discharges.

    The required elements of the SWPPP are described in Section B of Standard Provisions and Reporting Requirements, August 1993.

5. **Chlorodibromomethane and Dichlorobromomethane Source Control and Compliance Schedule**

The Discharger shall comply with the following tasks and deadlines:

Task	Deadline
a. The Discharger shall submit annual progress reports on the status of chlorodibromomethane and dichlorobromomethane source control and compliance. Upon approval by the Executive Officer, the Discharger shall implement the work plan described in Section b. below within 90 days. After the work plan is prepared, annual reports shall be submitted documenting the progress of the studies by February 28 of each year or by the date specified in the approved proposal. The Discharger will submit to the Board a final report detailing all monitoring activities, potential cost-effective control measures, and recommended actions to comply with the final effluent limitations by the date specified in the approved proposal.	Annual Status Reports due on February 28
b. The Discharger shall submit a work plan that will include tasks intended to define the correlation between chlorine dosages and formation of chlorodibromomethane and dichlorobromomethane, such as conducting monitoring throughout the treatment process and analyzing chlorine dosage histories. If sampling of trihalomethanes during reduced chlorine dosages associated with the Optional Bacteriological Assessment in Provision E.6 shows a reduction in dichlorobromomethane concentration to below final limits, then this requirement for a work plan (and associated activity) is waived.	Within 3 years after the effective date of this permit.
c. Conduct evaluation of compliance attainability with appropriate final limitations	Within 3 years of permit effective date.

6. **Optional Bacteriological Assessment Study**

In order to develop information that may be used in a subsequent permit amendment to establish alternate bacteria limits that are consistent with a TMDL for pathogens, the Discharger may, at its option, conduct a bacteriological assessment study, acceptable to the Executive Officer. The study will evaluate impacts of the Discharger's effluent on the receiving waters (including worst case conditions). The Basin Plan allows alternate bacteria limitations provided that the Discharger conclusively demonstrates "through a program approved by the Regional Board that such substitution will not result in unacceptable adverse impacts on the beneficial uses of the receiving waters". If the study demonstrates that the exceedances of the total coliform limits are solely due to the study, and that there is compliance in the receiving water with the bacteriological objectives specified in the Basin Plan, the Board may consider establishing alternate bacteria limitations.

7. **Installation of Diffuser on Discharge Outfall**

The Discharger is required to install a diffuser in order to achieve complete mixing in the Napa River. The Discharger shall comply with the following tasks and deadlines:

Task	Deadline
a. The Discharger shall complete the design of a diffuser.	December 15, 2004
b. The Discharger shall initiate and facilitate the	January 15, 2005, to initiate the

environmental review process, which is expected to include permits required from at least the State Lands Commission, State Fish and Game, and the Regional Water Quality Control Board.	environmental review process
c. The Discharger shall complete construction of the diffuser after approval of necessary environmental and other permits. Construction is expected to take 8 to 9 months, and should be completed in the dry season when river flows are low.	Starting in the month of May, following approval of necessary environmental and other permits, and ending no later than the following December 15.
d. The Discharger shall provide progress reports on the status of the diffuser installation by February 28 of each year, until the project is completed.	Annually on February 28

8. **Submittal and Implementation of a Pollutant Minimization Program (PMP).**
The PMP is required by the SIP (Section 2.4.5.1). The goal of the PMP shall be to reduce all potential sources of priority pollutant(s) through pollutant minimization (control) strategies to maintain the effluent concentration at or below a WQBEL. In the absence of effluent limits, the Discharger shall implement a waste minimization plan to achieve the water quality standards. The program shall include, but not limited to, the following actions and submittals:

Task	Deadline
(a) Pollution Minimization Program Plan. The plan shall include, but is not limited to: (1) an annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling, or alternative measures approved by the Executive Officer if it is demonstrated source monitoring is unlikely to produce useful analytical data; (2) quarterly monitoring for the priority pollutant(s) in the influent to the wastewater treatment system, or alternative measures approved by the Executive Officer if it is demonstrated influent monitoring is unlikely to produce useful analytical data; (3)control strategy design to proceed toward the goal of maintaining concentrations of the priority pollutant(s) in the effluent at or below the effluent limitation, (4) implementation of appropriate cost-effective control measures for the priority pollutant(s), consistent with the control strategy.	Within 6 months, after reasonable potential has been determined and notification by the Executive Officer.
(b) Implementation of Plan. The Discharger shall implement an approved PMP in order to reduce pollutant loadings to the treatment plant, and subsequently, to receiving waters.	30 days after approval by Executive Officer
(c) Quarterly Monitoring. The Discharger will conduct quarterly monitoring for the priority pollutant(s)in the influent to the wastewater treatment system.	90 days after implementation of PMP, and quarterly thereafter

Task	Deadline
(d) Annual Report The Discharger shall submit an Annual Status Report to the Board acceptable to the Executive Officer. The report should include the following: (1) All PMP monitoring results of the previous year, (including quarterly monitoring results); (2)A list of potential sources of the priority pollutant(s); (3)A summary of all actions undertaken pursuant to the control strategy; and a description of actions to be taken in the following year.	within 12 months after implementation of the PMP and annually thereafter

9. **Mercury Mass Loading Reduction**

If mass loading for mercury exceeds the trigger level specified in B.8 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.8.b. shall be reported to the Board in accordance with Section E.6.b. in the Standard Provisions and Reporting Requirements (August, 1993).

b. *Identification of the problem.* Immediately 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 is related to changes in reclamation, increase in the number of sewer connections, increases in infiltration and inflow (I/I), wet weather conditions or unknown sources. If the exceedance is concentration-related, identify whether it is related to industrial, commercial, residential or unknown sources.

c. *Investigation of corrective action.* Investigate the feasibility of the following actions:

(1) Reducing inflow and infiltration (I/I)

(2) Increasing reclamation

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.8.b.

d. *Investigation of aggressive prevention/reduction measures.* In the event the exceedance is related to growth and the plan required under (c) above is not expected to keep mercury loads below the mass load 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 after approval of the plan by the Executive Officer.

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. **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, 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 submit an Annual Report to the Board a report describing the current status of its wastewater facility review and evaluation, including any recommended or planned actions and an estimated time schedule for these actions. This report shall include a description or summary of review and evaluation procedures, and applicable wastewater facility programs or capital improvement projects. This report shall be submitted in accordance with the Annual Status Report Provision below.

12. **Operations & Maintenance Manual Review and Status Reports**
    a. The Discharger shall maintain an Operations and Maintenance Manual (O & M Manual) for the Discharger's wastewater facilities. The O & M Manual shall be maintained in useable condition, and available for reference and use by all applicable personnel.
    b. The Discharger shall regularly review, and revise or update as necessary, the O & M Manual(s) in order for the document(s) to 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. Annually, the Discharger shall submit to the Board a letter describing the current status of its O & M Manual review and updating. This letter shall include an estimated time schedule for completion of any revisions determined necessary, a description of any completed revisions, or a statement that no revisions are needed.

13. **Contingency Plan Review and Status Reports**
    a. The Discharger shall maintain a Contingency Plan as required by Board Resolution 74-10 (attached), and as prudent in accordance with current industrial 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 in order for the plan to remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and updates shall be completed as necessary.
    c. Each year the Discharger shall submit to the Board a letter describing the current status of its Contingency Plan review and update. This letter shall include a description or copy of any completed revisions, or a statement that no changes are needed.

14. **Annual Status Reports**
    The annual reports identified in Provisions 11.c, 12.c, and 13.c, above, shall be submitted to the Board by February 28 of each year. Modification of report submittal dates may be authorized, in writing, by the Executive Officer.

15. **303(d)-listed Pollutants Site-Specific Objective and TMDL Status Review**
The Discharger shall participate in the development of TMDLs or SSOs for mercury in San Pablo Bay. If the Discharger pursues the alternate bacteria study, the study must be designed to collect data that will demonstrate that the limit is consistent with the TMDL and WLA for pathogens in the Napa River. By January 31 of each year, the Discharger shall submit an update to the Board to document efforts made in participation in the development of TMDLs and/or site-specific objectives. Participation by the Discharger in the Clean Estuary Partnership (CEP) will be considered to fulfill the requirements of this provision as it applies to San Pablo Bay. The Discharger, along with other CEP partners, may elect to annually report TMDL progress collectively through the partnership. 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.

16. **Self-Monitoring Program**
The Discharger shall comply with the Self-Monitoring Program (SMP) for this Order as adopted by the Board. The SMP may be amended by the Executive Officer pursuant to U.S. EPA regulations 40 CFR 122.63.

17. **Standard Provisions and Reporting Requirements**
The Discharger shall comply with all applicable items of the Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993 (which is available online), 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 'Standard Provisions', the specifications of this Order shall apply.

18. **Change in Control or Ownership**
    a. 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.
    b. To assume responsibility of 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 & Reporting Requirements, August 1993, Section E.4.). Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code.

19. **Permit Reopener**
The Board may modify or reopen this Order and Permit prior to its expiration date in any of the following circumstances:
    a. If present or future investigations demonstrate that the discharge(s) governed by this Order and Permit will or have a reasonable potential to cause or contribute to adverse impacts on water quality and/or beneficial uses of the receiving waters;

    b. New or revised WQOs come into effect for the San Francisco Bay estuary and contiguous water bodies (whether statewide, regional, or site-specific). In such cases, effluent limits in this permit will be modified as necessary to reflect updated WQOs. Adoption of effluent limits contained in this Order and Permit 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;

c. If translator or other water quality studies provide a basis for determining that a permit condition(s) should be modified the Discharger may request permit modification on this basis. The Discharger shall include in any such request an anti-degradation and anti-backsliding analysis.

20. **Effective Date of NPDES Permit**

This Order shall serve as a National Pollutant Discharge Elimination System (NPDES) permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective on June 1, 2004, provided the U.S. EPA Regional Administrator has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

21. **Order Expiration and Reapplication**

a. This Order expires on April 30, 2009.

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.

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 March 17, 2004.

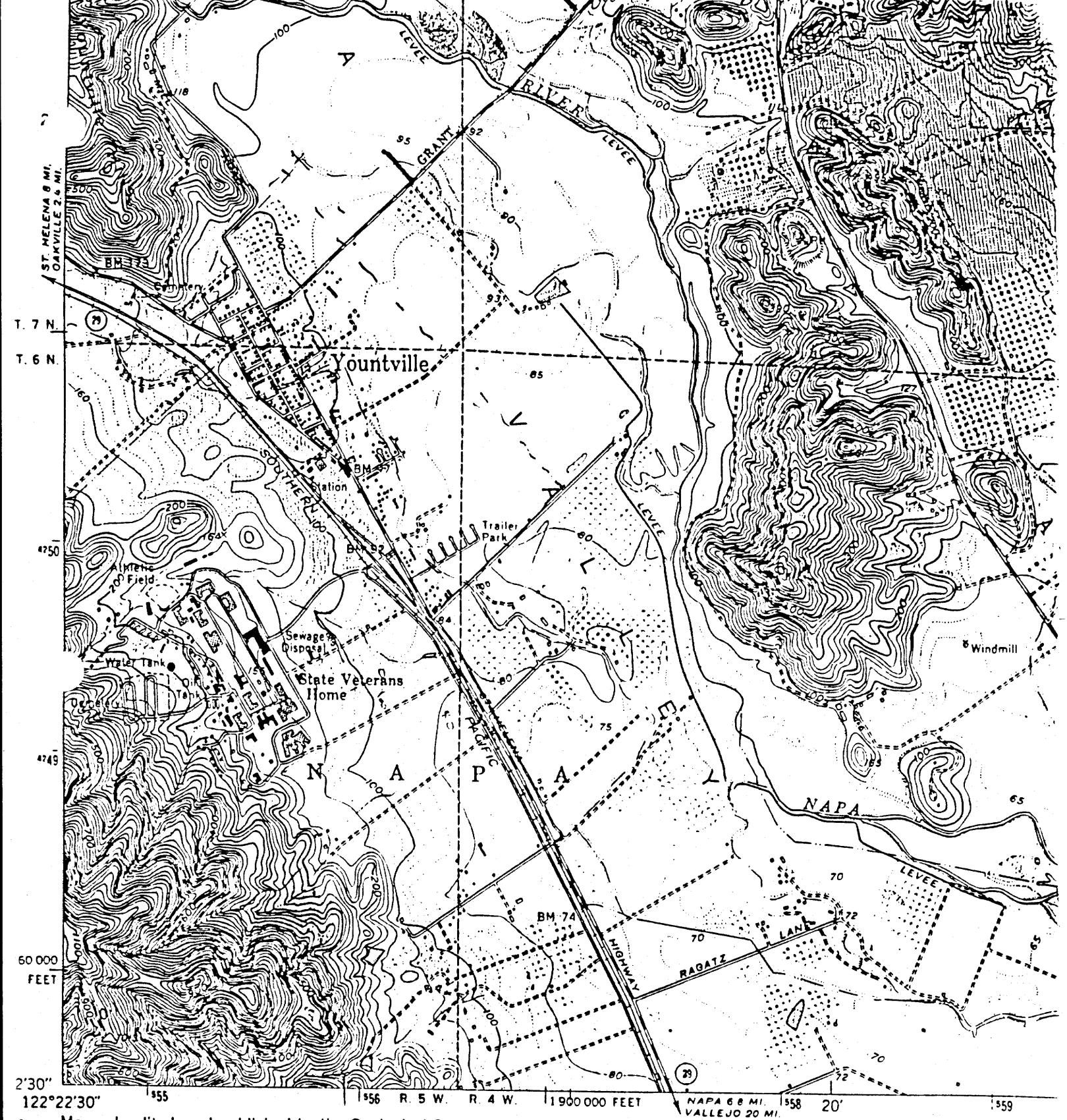
BRUCE H. WOLFE
EXECUTIVE OFFICER

Attachments:

A. Discharge Facility Location Map
B. Discharge Facility Treatment Process Diagram
C. Self-Monitoring Program (SMP), Part B
D. Infeasibility Study
E. The following documents are part of this Permit, but are not physically attached due to the volume. They are available on the Internet at www.swrcb.ca.gov/rwqcb2/Download.htm:
   - Self-Monitoring Program, Part A
   - Standard Provisions and Reporting Requirements, August 1993
   - Board Resolution No. 74-10

Attachment A

Discharge Facility Location Map



Mapped, edited, and published by the Geological Survey

Control by USGS, USC&GS, and USCE

Topography from aerial photographs by multiplex methods and by plane-table surveys 1951. Aerial photographs taken 1948

yconic projection. 1927 North American datum
10,000-foot grid based on California coordinate system, zone 2

Dashed land lines indicate approximate locations

Unchecked elevations are shown in brown

1000-meter Universal Transverse Mercator grid ticks, zone 10, shown in blue

GN MN
0°26' 8 MILS
18° 320 MILS

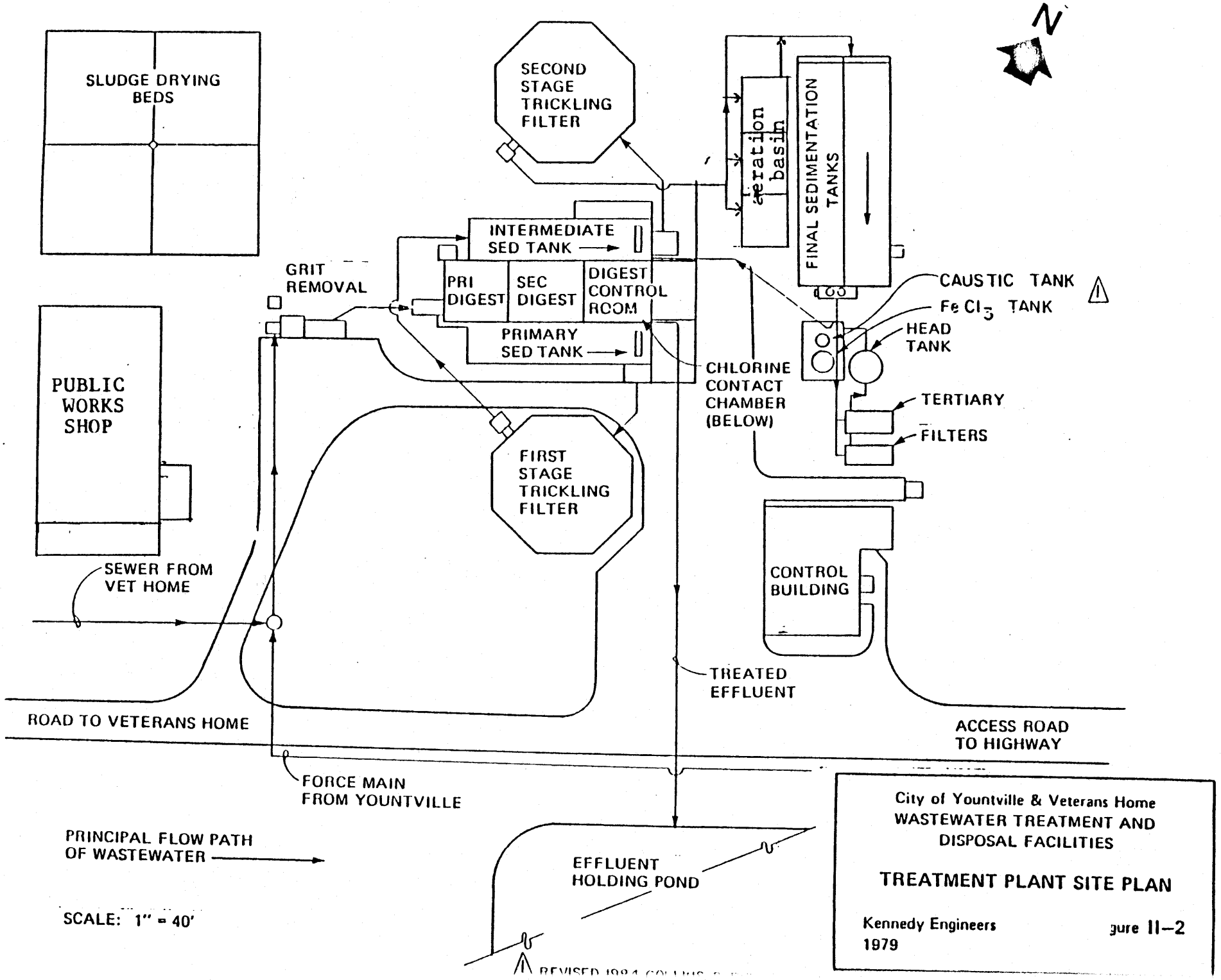
UTM GRID AND 1968 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

1000 0

THIS M

Attachment B

Discharge Facility Treatment Process Design



City of Yountville & Veterans Home
WASTEWATER TREATMENT AND DISPOSAL FACILITIES

TREATMENT PLANT SITE PLAN

Kennedy Engineers
1979

gure II–2

Attachment C

Self-Monitoring Program (SMP), Part B

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

TOWN OF YOUNTVILLE/CALIFORNIA VETERANS HOME JOINT WASTEWATER RECLAMATION FACILITY
YOUNTVILLE, NAPA COUNTY

NPDES PERMIT NO. CA0038121

ORDER NO. R2-2004-0017

Consists of:
Part A (not attached)
Adopted August 1993

and

Part B (Attached)
Adopted: March 17, 2004
Effective: June 1, 2004

Note: Part A (dated August 1993, 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 www.swrcb.ca.gov/rwqcb2.

SELF-MONITORING PROGRAM – Part B

I. DESCRIPTION OF SAMPLING AND OBSERVATION STATIONS

Station	Description
A. INFLUENT	
A-1	At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment, and exclusive of any return flows or process side-streams.
B. EFFLUENT	
E-1	At any point in the outfall from the treatment facilities between the point of discharge and the point at which all waste tributary to the effluent is present and representative of the discharge, prior to the point of discharge (may be the same as E-1-D).
E-1-D	At any point in the effluent from the treatment facilities at which point adequate contact with the disinfectant is assured. The sample point for residual chlorine shall be at a point downstream of the chlorination point.
C. RECEIVING WATERS	
C-1	At a point in the Napa River, located near the point of discharge.
C-2	The flow of the Napa River shall be determined by measuring the weighted average flow based on the watershed area tributary to the outfall. The weighted average shall be determined based on the ratio of the watershed areas tributary to the Napa River flows at USGS monitoring stations, Napa River – Near St. Helena (USGS Station No. 11456000), and Napa River - Near Napa (USGS Station No. 11458000) in the California Data Exchange Center database (maintained by the California Department of Natural Resources and the USGS).
D. LAND OBSERVATIONS	
L-1 thru L- 'n'	Points located along the perimeter levee of each sludge drying lagoon, at equidistant intervals not to exceed 100 feet.

P-1 thru P- 'n' — Points located at the corners and mid-points of the perimeter boundary of the waste treatment facilities site, at equidistant intervals not to exceed 500 feet.

(Note : A sketch showing the locations of these stations shall accompany each report)

D. GROUNDWATER

G-1 thru G-3 — Groundwater monitoring wells located above and below gradient of the sludge drying lagoons, as shown on the attached map.

E. OVERFLOWS AND BYPASSES

OV-1 through OV-'n' — At any points in the collection system including manholes, pump stations, or any other location where overflows or bypasses occur.

NOTE : — Each occurrence of a bypass or overflow shall be reported to the Regional Board in accordance with the reporting requirements specified in Part A. Each annual report shall include a map and description of the location(s) of each known bypass or overflow occurred within the calendar year.

II. SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSIS

(a) The schedule of sampling, measurements, and analysis shall be that given in Table 1 (attached).

Table 1. Schedule For Sampling, Measurements, And Analyses

Sampling Station:	**A-1**		**E-1**			**C-1**	**C-2**	**P**	**G**	**OV**
Type of Sample: [notes]	**C-24**	**Cont.**	**G**	**C-24**	**Cont.**	**G**	**G**	**O**	**O**	**O**
Sampling Required:	Year-round		While Discharging to Napa River			While Discharging to Napa River		Year-round	Year-round	Year-round
Flow Rate (mgd) [1]		D			D					
Dilution Ratio (river:effluent)					D [2]		D [2]			
BOD, 5-day, 20 deg. C (mg/l)	W [3]			W [3]						
Total Susp. Solids (mg/l)	2/W [3]			2/W [3]						
Settleable Solids (ml/l-hr)			M							
Oil and Grease (mg/l & kg/d)				2M [4]						
Chlorine Residual (mg/l)				Cont/2H [5]						

Sampling Station:	A-1		E-1			C-1	C-2	P	G	OV
Type of Sample: [notes]	**C-24**	**Cont.**	**G**	**C-24**	**Cont.**	**G**	**G**	**O**	**O**	**O**
Total Coliform (MPN/100 ml)			3/W						Q	
pH (Standard Units)			D							
Turbidity (NTU)				D						
Dissolved Oxygen (mg/l & %-Saturation)			W							
Dissolved Sulfides (mg/l) (if DO < 2)			W [6]							
Acute Toxicity (% Survival)				2/A [7]						
Copper (µg/l & kg/month)				Q						
Cyanide (µg/l & kg/month)			Q [9]							
Mercury (µg/l, kg/d & kg/month)			Q [10]							
Zinc (µg/l & kg/month)				Q						
2,3,7,8-TCDD and Congeners (µg/l)			[11]							
Chlorodibromomethane			A							
Dichlorobromomethane			A							
Bis(2-Ethylhexyl)Phthalate (µg/l)			A							
Nitrate Nitrogen									Q	
Total Organic Carbon									Q	
Table 1 Selected Constituents (except those listed above)			As specified in August 6, 2001 Letter [12]							
Standard Observations								W		E

LEGEND FOR TABLE 1:

Types of Samples

Cont	=	Continuous
C-24	=	24-hour Composite
G	=	Grab

Frequency of Sampling

D	=	Once each day
W	=	Once each week
M	=	Once each month
A	=	Once each year
Q	=	Once each calendar quarter (with at least 2 month intervals)
E	=	Each occurrence
2H	=	Every 2 hours
4H	=	Every 4 hours
2M	=	every 2 months
2/W	=	Two times per week

Types of Stations

A	=	Treatment Plant Influent
E	=	Treatment Plant Effluent
C	=	Receiving Water
P	=	Pond Levee
L	=	Treatment Facilities Perimeter
G	=	Groundwater monitoring well
OV	=	Overflow and Bypass Points
C	=	Receiving Waters

FOOTNOTES FOR TABLE 1

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

   a. Influent, average daily flow (A-1);
   b. Influent, maximum and minimum flow rates and times of occurrence (A-1); and
   c. Effluent, daily flow (E-1).

2. The dilution shall be calculated and reported once per day as long as the discharge continues. The dilution shall be reported as the ratio of the instantaneous flow at the discharge compared to the corresponding instantaneous flows at USGS Station No. 11456000 and USGS Station No 11458000. The Napa River flow at the effluent discharge point will therefore be calculated using the equation

$$Q_Y = 0.73 \times Q_N + 0.27 \times Q_S$$

   where
   Q_Y = Weighted average Napa River flow at Yountville outfall;
   Q_N = Napa River flow near Napa (Station No. 11458000); and
   Q_S = Napa River flow near St. Helena (Station No. 11456000)

3. The percent removal for BOD and TSS shall be reported for each calendar month, in accordance with Effluent Limitation B.3.

4. Oil and grease: Each Oil & Grease sample 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 2 hours. Report, on a daily basis, both maximum and minimum concentrations, for samples taken both prior to, and following dechlorination. If a violation is detected, the maximum and average

concentrations and duration of each non-zero residual event shall be reported, along with the cause and corrective actions taken. Total chlorine dosage (kg/day) shall be recorded on a daily basis.

6. Sulfide analysis shall be run when dissolved oxygen concentrations fall below 5.0 mg/L.

7. The Discharger is required to conduct acute toxicity testing for both fathead minnow and rainbow trout once per year (during the same event) for three years. Then, after three events with two species, the most sensitive species of the two will be tested twice per year (quarterly during the wet season) for the remainder of the permit term.

   Bioassays: Effluent used for fish bioassays must be dechlorinated prior to testing. Monitoring of the bioassay water shall include, on a daily basis, the parameters specified in the 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% or if the control fish survival rate is less than 90%, bioassay test shall be restarted with new batches of fish and continue back to back until compliance is demonstrated.

8. Cyanide: the Discharger may, at their option, analyze for cyanide as Weak Acid Dissociable Cyanide using protocols specified in Standard Method Part 4500-CN-I, or equivalent alternatives in latest edition. Alternative methods of analysis must be approved by the Executive Officer.

9. The Discharger may, at its option, sample effluent mercury either as grab or 24-hr composite. Use ultra-clean sampling (EPA 1669) to the maximum extent practicable, and ultra-clean analytical methods (EPA 1631) for mercury monitoring. The Discharger may use alternative methods of analysis (such as EPA 245), if that alternate method has a Minimum Level of 2 ng/L or less.

10. Chlorinated Dibenzodioxins and Chlorinated Dibenzofurans shall be analyzed using the latest version of USEPA Method 1613; the analysis shall be capable of achieving one half the EPA MLs and the Discharger shall collect 4-liter samples to lower the detection limits to the greatest extent practicable. At a minimum, the Discharger is required to monitor once for the life of this permit. Alternative methods of analysis must be approved by the Executive Officer.

11. Sampling for Table 1 Selected Constituents 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.swrcb.ca.gov/rwqcb2).

Table 2 lists the Minimum Levels (SIP) of the priority constituents included in Table 1. For compliance monitoring, analyses shall be conducted using the lowest commercially available and reasonably achievable detection levels. The objective is to provide quantification of constituents sufficient to allow evaluation of observed concentrations with respect to the Minimum Levels given below. All Minimum Levels are expressed as µg/L, approximately equal to parts per billion (ppb).

Table 2. Minimum Levels (µg/l or ppb)

CTR #	Constituent [a]	Types of Analytical Methods [b]											
		GC	GCMS	LC	Color	FAA	GFAA	ICP	ICPMS	SPGFAA	HYDRIDE	CVAA	DCP
6.	Copper					25	5	10	0.5	2			1000
8.	Mercury [c]											0.2	
13.	Zinc					20		20	1	10			
14.	Cyanide				5								
68.	Bis(2-Ethylhexyl) Phthalate	10	5										
23	Chloro-dibromomethane	0.5	2										
27	Dichlorobromomethane	0.5	2										
16.	2,3,7,8-TCDD (d)												

FOOTNOTES FOR TABLE 2:

(a) According to the SIP, method-specific factors (MSFs) can be applied. In such cases, this additional factor must be applied in the computation of the reporting limit. Application of such factors will alter the reported ML (as described in section 2.4.1). Dischargers are to instruct laboratories to establish calibration standards so that the ML value is the lowest calibration standard. At no time is the discharger to use analytical data derived from the extrapolation beyond the lowest point of the calibration curve.

(b) Laboratory techniques are defined as follows: GC = Gas Chromatography; GCMS = Gas

(c) Chromatography/Mass Spectrometry; LC = High Pressure Liquid Chromatography; Color = Colorimetric; FAA = Flame Atomic Absorption; GFAA = Graphite Furnace Atomic Absorption; Hydride = Gaseous Hydride Atomic Absorption; CVAA = Cold Vapor Atomic Absorption; ICP = Inductively Coupled Plasma; ICPMS = Inductively Coupled Plasma/Mass Spectrometry; SPGFAA = Stabilized Platform Graphite Furnace Atomic Absorption (i.e. EPA 200.9); DCP = Direct Current Plasma.

(d) Use ultra-clean sampling (EPA 1669) to the maximum extent practicable, and ultra clean analytical methods (EPA 1631) for mercury monitoring. The Discharger may use alternative methods of analysis (such as EPA 245), if the alternate method has a Minimum Limit of 2 ng/L or less.

(e) The SIP does not contain an ML for this constituent.

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.d. shall be amended as follows:

If two consecutive samples of a constituent monitored on a weekly or monthly basis in a 30 day period exceed the monthly average effluent limit for any parameter, (or if the required sampling frequency is once per month and the monthly sample exceeds the monthly average limit), the sampling frequency shall be repeated once within 24 hours after results are received that indicate an exceedance of the monthly average effluent limit for that parameter. Repeat sampling shall occur daily until the additional sampling shows two consecutive samples are in compliance with the monthly average limit.

C. 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 4, samples shall be collected on a daily basis in accordance with proper sampling techniques for all constituents at all affected discharge points that have effluent limits for the duration of the bypass.

When bypassing occurs from any treatment process (primary, secondary, chlorination, dechlorination, etc.) in the treatment facilities that is consistent with Prohibition 3, during high wet weather inflow, the self-monitoring program shall include the following sampling and analyses in addition to the Table 1 schedule:

i. When bypassing occurs from any primary or secondary treatment unit(s), composite samples shall be collected for the duration of the bypass event for BOD and TSS analyses, and continuous monitoring of flow. Samples in accordance with proper sampling techniques for all other limited pollutant parameters shall also be collected and retained for analysis if necessary. If BOD or TSS values exceed the effluent limits, daily analysis of the retained samples shall be conducted for all constituents that have effluent limits for the duration of the bypass, until the BOD and TSS are in compliance with effluent limitations.

ii. When bypassing the chlorination process, grab samples shall be collected at least daily for bacteria analyses; and continuous monitoring of flow.

iii. When bypassing the dechlorination process, grab samples shall be collected hourly for chlorine residual; and continuous monitoring of flow.

D. Sections C.3. and C.5. are satisfied by participation in the Regional Monitoring Program.

E. Modify Regional Board contact information in 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 Regional Board at its current telephone number: (510) 622 – 2300, (510) 622-2460 (FAX).

F. Modify Section F.2 as follows:

Reports of Plant Bypass, Treatment Unit Bypass and Permit 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: . . .

G. Modify Section F.4 as follows:

Self-Monitoring Reports
For each calendar month, a self-monitoring report (SMR) shall be submitted to the Regional 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 no later than the first day of the second month after the reporting period ends.

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

g. 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 supercede.

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

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

I. Add as Section F.6 the following:

Reports of Overflows

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 Regional Board in accordance with the following:

1. *Overflows in excess of 1,000 gallons*

Overflows in excess of 1,000 gallons shall be reported by telephone and written report, as follows:

a. Overflows shall be reported by telephone as soon as possible and no later than 24 hours following occurrence or discharger's knowledge of occurrence. Notification shall be made as follows:

i. Notify the current Board staff inspector, or case handler, by phone conversation or message, or by facsimile:

- current staff inspector: Ray Balcom, phone number (510) 622 –2312;
- current staff case handler: Richard Hiett , phone number (510) 622 – 2359
- current Regional Board Fax number: (510) 622 – 2460.

Notify the State Office of Emergency Services, phone number: (800) 852 - 7550.

b. Submit a written report of the incident in follow-up to telephone notification. The written report shall be submitted along with the regular self-monitoring report for the reporting period of the incident, unless directed otherwise by Board staff, and shall include the following:

- Estimated date and time of overflow start and end.
- Location of overflow (street address or description of location).
- Estimated volume of overflow.
- Disposition of overflowed wastewater (to land, storm drain, surface water body).
- Include the name of any receiving water body affected.
- Cause of overflow.
- Observed impacts to receiving waters if any (e.g., discoloration, fish kill).
- Corrective actions that were taken to contain, minimize or cleanup the overflow.
- Future corrective actions planned to be taken to prevent recurrence and time schedule of implementation.
- Persons or agencies contacted.

2. *Overflows less than 1,000 gallons*

Overflows less than 1,000 gallons shall be reported by written report, as follows:

a. The discharge shall prepare and retain records of such overflows, with records available for review by Board staff upon request.

b. The records for these overflows shall include the information as listed in 1.e, above.

c. A summary of these overflows shall be submitted to the Regional Board annually, as part of the Discharger's Self-Monitoring Program Annual Report.

IV. ADDITIONS TO PART A OF SELF-MONITORING PROGRAM

1. 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) 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."

      (6) 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.
      (7) Results of Analyses and Observations.
      (8) Tabulations of all required analyses and observations, including parameter, sample date, sample station, and test result.
      (9) 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.

(10) Calculations for all effluent limits that require averaging of measurements shall utilize an arithmetic mean, unless specified otherwise in this permit or SMP.

V. 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 self-monitoring program 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 three 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 the US EPA, Region IX.

Records to be maintained shall include the following:

A. Parameter Sampling and Analyses, and Observations.

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

1. Identity of parameter
2. Identity of sampling or observation station, consistent with the station descriptions given in this SMP.
3. Date and time of sampling or observation.
4. Method of sampling (grab, composite, other method). Date and time analysis started and completed, and name of personnel or contract laboratory performing the analysis.
5. Reference or description of procedure(s) used for sample preservation and handling, and analytical method(s) used.
6. Calculations of results.
7. Analytical method detection limits and related quantitation parameters.
8. Results of analyses or observations.

B. Flow Monitoring Data.

For all required flow monitoring (e.g., influent and effluent flows), records shall include the following:

1. Total flow or volume, for each day.
2. Maximum, minimum and average daily flows for each calendar month.

C. Wastewater Treatment Process Solids.

1. For each treatment unit process which involves solid removal from the wastewater stream, records shall include the following:

a. Total volume and/or mass quantification of solids removed from each unit (e.g., grit, skimmings, undigested sludge), for each calendar month; and
b. Final disposition of such solids (e.g., landfill, other subsequent treatment unit).

2. For final dewatered sludge from the treatment plant as a whole, records shall include the following:
   a. Total volume and/or mass quantification of dewatered sludge, for each calendar month; Solids content of the dewatered sludge; and
   b. Final disposition of dewatered sludge (point of disposal location and disposal method).

D. Disinfection Process.

For the disinfection process, records shall be maintained documenting process operation and performance, including the following:

1. For bacteriological analyses:
   a. Date and time of each sample collected;
   b. Wastewater flow rate at the time of sample collection;
   c. Results of sample analyses (coliform count);
   d. Required statistical parameters of cumulative coliform values (e.g., moving median or geometric mean for number of samples or sampling period identified in waste discharge requirements).

2. For chlorination process, at least daily average values for the following:
   a. Chlorine residual in contact basin (mg/L);
   b. Chlorine dosage (kg/day);
   c. Dechlorination chemical dosage (kg/day)

E. Treatment Process Bypasses.

A chronological log of all treatment process bypasses, other than wet weather bypasses addressed elsewhere in this permit and SMP, including the following:

1. Identification of treatment process bypassed;
2. Date(s) and times of bypass beginning and end;
3. Total bypass duration;
4. Estimated total volume;
5. Description of, or reference to other report(s) describing, bypass event, cause, corrective actions taken, and any additional monitoring conducted.

F. Collection System Overflows

A chronological log of all collection system overflows, including the following:

1. Location of overflow;
2. Date(s) and times of overflow beginning and end;

3. Total overflow duration;
4. Estimated total volume;
5. Description of, or reference to other report(s) describing, overflow event, cause, corrective actions taken, and any additional monitoring conducted.

VI. MISCELLANEOUS REPORTING

A. The Discharger shall retain and submit (when required by the Executive Officer) the following information concerning the monitoring program for organic and metallic pollutants.

1. Description of sample stations, times, and procedures.
2. Description of sample containers, storage, and holding time prior to analysis.
3. Quality assurance procedures together with any test results for replicate samples, sample blanks, and any quality assurance tests, and the recovery percentages for the internal surrogate standard.

B. The Discharger shall submit in the monthly self-monitoring report the metallic and organic test results together with the detection limits (including unidentified peaks). All unidentified (non-Priority Pollutant) peaks detected in the U.S. EPA 624, 625 test methods shall be identified and semi-quantified. Hydrocarbons detected at <10 µg/L based on the nearest internal standard may be appropriately grouped and identified together as aliphatic, aromatic and unsaturated hydrocarbons. All other hydrocarbons detected at > 10 µg/L based on the nearest internal standard shall be identified and semi-quantified.

VII. SELECTED CONSTITUENTS MONITORING

A. Effluent monitoring shall include evaluation for all constituents listed in Table 1 by sampling and analysis of final effluent.

B. Analyses shall be conducted using the lowest commercially available and reasonably achievable detection levels. The objective is to provide quantification of constituents sufficient to allow evaluation of observed concentrations with respect to respective water quality objectives.

VIII. MONITORING METHODS AND MINIMUM DETECTION LEVELS

The Discharger may use the methods listed in Table 2, above, or alternate 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).

IX. SELF-MONITORING PROGRAM CERTIFICATION

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

A. 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. R2-2004-0017.

B. 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.

C. Is effective as of June 1, 2004.

BRUCE H. WOLFE
EXECUTIVE OFFICER

Attachment D

Infeasibility Study

Town of Yountville
2004 NPDES Permit Renewal

Infeasibility Analysis

January 14, 2004

Introduction

This infeasibility analysis and resulting requests for compliance schedule and interim limits are submitted to the Regional Water Quality Control Board (RWQCB) by the Town of Yountville to demonstrate the Town's inability to comply with the proposed water-quality based effluent limits for mercury and dichlorobromomethane, as indicated in Finding 32 of the administrative draft permit provided on December 19, 2003.

Background

The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (known as the State Implementation Policy (SIP), March, 2000) establishes statewide policy for National Pollutant Discharge Elimination System (NPDES) permitting. The SIP provides for the situation where an existing NPDES discharger cannot immediately comply with an effluent limitation derived from a California Toxics Rule (CTR) or Basin Plan criterion. The SIP allows for the adoption of interim effluent limits and a schedule to come into compliance with the final limit in such cases. To qualify for interim limits and a compliance schedule, the SIP requires that an existing discharger demonstrate that it is infeasible to achieve immediate compliance with the CTR- or Basin Plan-based limit.

The term "infeasible" is defined in the SIP as "not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors."

The SIP requires that the following information be submitted to the Regional Board to support a finding of infeasibility:

(a) documentation that diligent efforts have been made to quantify pollutant levels in the discharge and sources of the pollutant in the waste stream, including the results of those efforts;
(b) documentation of source control and/or pollution minimization efforts currently under way or completed;
(c) a proposed schedule for additional or future source control measures, pollutant minimization or waste treatment; and
(d) a demonstration that the proposed schedule is as short as practicable.

The following analysis pertains to the water-quality-based effluent limits proposed in the administrative draft NPDES permit dated December 12, 2003.

Pollutants to be Evaluated

The pollutants included in this infeasibility analysis are as follows:

- mercury
- dichlorobromomethane

Effluent Limit Attainability

The proposed final effluent limits contained in the draft permit for mercury and dichlorobromomethane are compared to the maximum observed effluent concentrations for these constituents in Table 1.

Table 1. Proposed Effluent Limits for Town of Yountville

Pollutant	Water Quality Based Effluent Limits		Yountville Effluent Quality
	AMEL[1]	MDEL[2]	MEC[3]
Mercury	0.019	0.045	0.028
Dichlorobromomethane	3.8	7.6	5.8

All values in µg/L.
[1]AMEL: average monthly effluent limit
[2]MDEL: maximum daily effluent limit
[3]MEC: maximum effluent concentration

The final effluent limits shown above are calculated using procedures described in Section 1.4 of the SIP. Background values were based on monitoring conducted in the Napa River in 2002. Dilution was taken as zero for mercury and 10:1 for dichlorobromomethane. The receiving water was classified as freshwater and hardness was assumed to be 110 mg/L. Other variables in the effluent limit calculation included coefficients of variation for different pollutants.

Maximum observed effluent concentrations are based on recent plant effluent quality data (March 2000 – March 2003). As shown in the table above, the Town will not be able to immediately comply with proposed effluent limits for mercury and dichlorobromomethane. The feasibility analysis for these constituents is discussed below.

Source Control and Pollution Prevention Efforts

The Town of Yountville has a population of approximately 3,500 and no permitted industries. The Town is not required to have a Federal Pretreatment Program. The Town does provide information regarding wastewater topics such as proper grease disposal to its residents through flyers enclosed in the water bills. In addition, the treatment plant is open to the public with school tours being conducted when requested. For example, a group from Justin Sienna High School tours the plant each year. In addition, the Town is a member of the Bay Area Clean Water Agencies (BACWA) and the Bay Area Pollution Prevention Group (BAPPG).

Additional information on pollution prevention activities targeting each constituent requiring interim effluent limits is discussed below.

Mercury

The maximum observed effluent concentration for mercury is 0.028 µg/L (measured in April 2002) which exceeds the proposed final Average Monthly Effluent Limitation (AMEL) of 0.019 µg/L but is less than the proposed Maximum Daily Effluent Limitation (MDEL) of 0.045 µg/L. The effluent concentration has exceeded 0.019 µg/L twice since 2002. Prior to 2002, the detection limit was 0.2 µg/L. While the data set is limited, it appears that the Town will have difficulty consistently complying with the proposed effluent limits.

Mercury is a 303(d)-listed parameter and is the subject of a Total Maximum Daily Load (TMDL) that is currently nearing completion. Final effluent limits for this pollutant will be derived from the wasteload allocation established under the TMDL. The final effluent limit listed above for this pollutant is projected to change based on the results of the TMDL and wasteload allocation. Available information indicates that mercury is a legacy pollutant in San Francisco Bay resulting from past activities and that ongoing loadings from POTWs are not a significant source of this pollutant. As a result, costly measures for either advanced treatment or zero discharge to control mercury loading from POTWs are not expected to be required.

The Town has not previously identified mercury as a pollutant of concern and, therefore, has not conducted pollution prevention activities targeting mercury. The Town plans to publicize thermometer exchange programs already available in Napa County and to work with the hospital at the California Veterans Home to identify mercury reduction opportunities.

Dichlorobromomethane

The maximum observed effluent concentration for dichlorlobromomethane is 5.8 µg/L (measured in August 2002) which exceeds the proposed AMEL of 3.8 µg/L but not the proposed MDEL of 7.8 µg/L. While the data set is limited, it appears that the Town will have difficulty consistently complying with the final limits.

Dichlorobromomethane is generated as a byproduct from chlorination of water and wastewater and does not typically have influent sources. The Town has not previously identified dichlorobromomethane as a pollutant of concern and, therefore, has not conducted pollution prevention activities for this constituent. While influent monitoring has not been conducted for dichlorobromomethane, it is expected that the Town's experience will be similar to other communities and significant sources of dichlorobromomethane would not be found in the influent. Therefore, source investigations and source control activities are unlikely to be fruitful. However, the Town will conduct a bacteria study to show that an alternate bacteria indicator will protect the beneficial uses of the Napa River, which will in turn result in reduced chlorine dosages and an expected reduction in dichlorobromomethane production. Sampling for dichlorobromomethane will be conducted during the reduced chlorine dosages to confirm this expected result. If the concentration of dichlorobromomethane is not reduced with reduced chlorine dosages, further investigations at the plant will be conducted.

Summary

This evaluation indicates that immediate compliance with projected final effluent limits for mercury and dichlorobromomethane is not feasible for the Town.

In accordance with the requirements of the SIP, the Town requests that the Regional Board refrain from the adoption of final effluent limits for these constituents. In lieu of final limits, the NPDES permit should include the interim performance based limits with which the Town can comply. The Town will implement the source control actions listed in Table 2 for the constituents receiving interim limits.

Table 2. Proposed Source Control Actions

Constituent	Proposed Action	Estimated Time to Complete
Mercury	• Publicize thermometer exchange events in Napa County to residents • Work with the California Veterans Home to identify mercury reduction opportunities at the hospital	• December 2004 • December 2005
Dichlorobromomethane	• Conduct bacteria study and sample for dichlorobromomethane at reduced chlorine dosages.	• 3 years of permit adoption

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION
1515 CLAY STREET, SUITE 1400
OAKLAND, CA 94612
(510) 622 - 2300 Fax: (510) 622 - 2460

FACT SHEET
for

NPDES PERMIT and WASTE DISCHARGE REQUIREMENTS for
TOWN OF YOUNTVILLE/CALIFORNIA VETERANS HOME
JOINT WASTEWATER RECLAMATION PLANT
YOUNTVILLE, NAPA COUNTY
NPDES Permit No. CA0038121
ORDER NO. R2-2004-0017

PUBLIC NOTICE:

Written Comments

- Interested persons are invited to submit written comments concerning this draft permit.
- Written comments must be submitted to the Regional Board no later than 5:00 p.m. on **February 23, 2004.**
- Send comments to the Attention of Richard Hiett.

Public Hearing

- The draft permit will be considered for adoption by the Board at a public hearing during the Board's regular monthly meeting at: Elihu Harris State Office Building, 1515 Clay Street, Oakland, CA; 1st floor Auditorium.
- This meeting will be held on: **March 17, 2004**, starting at 9:00 am.

Additional Information

- For additional information about this matter, interested persons should contact Regional Board staff member: Mr. Richard Hiett, Phone: (510) 622-2359; email: rh@rb2.swrcb.ca.gov

This Fact Sheet contains information regarding reissuance of waste discharge requirements and National Pollutant Discharge Elimination System (NPDES) permit for the Town of Yountville and California Veteran's Home (Discharger) for discharges from the joint wastewater treatment and reclamation facility. The Fact Sheet describes the factual, legal, and methodological basis for the proposed permit and provides supporting documentation to explain the rationale and assumptions used in deriving the limits.

I. INTRODUCTION

The Discharger applied to the Board for reissuance of waste discharge requirements and a permit to discharge municipal wastewater to waters of the State and the United States under the NPDES. The application and Report of Waste Discharge is dated February 1, 1999.

1. Facility Description

The Discharger operates a municipal wastewater treatment plant (WWTP) that serves the town of Yountville and a Veterans Home operated by the State of California, which respectively have populations of about 2,900 people and 2,100 people (including about 900 staff). The Town

contributes about 40% of the flow and waste loading with the remainder contributed by the Veterans Home. The Plant, located at 7501 Solano Avenue, Yountville, provides secondary treatment of domestic wastewater. Currently, the Discharger treats about 0.422 million gallons per day (mgd) of wastewater, which is below the WWTP's design capacity of 0.62 mgd. The amount of treated effluent discharged to the Napa River depends on effluent reclaimed and the availability of adequate dilution at the discharge point. The U.S. EPA and the Board have classified this Discharger as a minor discharger.

2. Treatment Process Description

The treatment process consists of an aerated grit chamber, comminutors, primary settling basin, primary trickling filter, intermediate settling basin, secondary trickling filter, aerated trickling filter, solids contact reactor, final clarifier, an effluent polishing filter, disinfection with sodium hypochlorite, and dechlorination. In addition to the influent flow equalization pond, the WWTP has a treated effluent holding pond to allow for storage and subsequent discharge or land application. Treated effluent is either discharged to the Napa River or reclaimed through a spray irrigation system.

3. Receiving Water Beneficial Uses

The receiving waters for the subject discharges are the waters of the Napa River, which is tributary to San Pablo Bay. Beneficial uses for the Napa River, as identified in the Basin Plan and based on known uses of the receiving waters near the discharge, are:

a. Municipal and Domestic Water Supply
b. Agricultural Water Supply
c. Navigation
d. Contact and Non-Contact Water Recreation
e. Warm and Cold Fresh Water Habitat
f. Wildlife Habitat
g. Preservation of Rare and Endangered Species
h. Fish Migration and Spawning

II. DESCRIPTION OF EFFLUENT

The table below presents the quality of the discharge, as indicated in the Discharger's self-monitoring reports submitted for the period from January 2000 through March 2003 during the discharge season (October 1 through May 15). Average values represent the average of actual detected values only.

Table A. Summary of Discharge Data

Parameter	Average	Range of Reported Values
pH, standard units	--	6.6 – 7.2
Temperature, degrees C	19.2	2.0 – 24.0
Total Coliform Bacteria (MPN/100 mL)		<2 – 13
BOD_5, mg/L	9.2	1.2 – 24
Percent Removal, BOD_5	97.1	91.3 – 99
Chlorine, mg/L	0.0	0.0

Parameter	Average	Range of Reported Values
TSS, mg/L	10.4	3 – 21
Percent Removal, TSS	97.2	93.1 – 99
Settleable Solids, ml/L	--	<0.1 – 0.0
DO, mg/L	7.0	4 – 9.6
Turbidity, NTU	9.3	1.5 – 20
Oil and Grease, mg/L	5.75	<5 – 8
Acute Toxicity, Percent Survival	--	15[1] – 100
Antimony, µg/L	--	0.3[2]
Arsenic, µg/L	0.87	<4 – 1.1
Beryllium, µg/L	--	<0.06[2]
Cadmium, µg/L	0.13	<1 – 0.2
Chromium, µg/L	0.6	<5 – 0.8
Chromium (VI), µg/L	--	<0.9[2]
Copper, µg/L	28.7	18 – 55
Lead, µg/L	0.58	<3 – 0.76
Mercury, µg/L	--	<0.008 – 0.018
Nickel, µg/L	3.7	<5 – 4.2
Selenium, µg/L	0.7	<0.3 – 0.7
Silver, µg/L	0.23	<0.5 – 0.3
Thallium, µg/L	0.06[2]	0.06[2]
Zinc, µg/L	89.5	50 – 160
Cyanide, µg/L	11	<3 – 14
Phenols, µg/L	8	3 – 13
Total PAHs, µg/L	--	<0.2 – <5

[1] The test conducted December 2001 indicated 15% survival, which exceeded the effluent limitation. The Discharger re-tested in January 2002 and achieved 95% survival.
[2] Only one data point was available.

III. GENERAL RATIONALE AND REGULATORY BASES

Provisions of the Order and methods used by the Regional Board to establish those provisions are requirements of or are derived from many sources, including the following:

- Sections 301 through 305, and 307 of the Federal *Water Pollution Control Act*, and amendments thereto, as applicable;

- The Regional Board's June 21, 1995, *Water Quality Control Plan San Francisco Bay Basin (Region 2)* (the Basin Plan);

- The State Board's March 2, 2000, *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (the State Implementation Plan or SIP), as approved by the Office of Administrative Law and the U.S. EPA;

- 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 – the CTR, as codified at 40 CFR 131.38);

- U.S. EPA's National Toxics Rule (the NTR, as codified at 40 CFR 131.36).

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

- Applicable U.S. EPA regulations from 40 CFR Parts 122 through 135;

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

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

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

- Regional Board staff's Best Professional Judgment (BPJ), as defined by the Basin Plan, involves consideration of many factors, including the following:

  - the Basin Plan;

  - U.S. EPA Region 9 February 1994 Guidance For NPDES Permit Issuance;

  - U.S. EPA's March 1991 Technical Support Document for Water Quality-Based Toxics Control (the TSD);

  - U.S. EPA's October 1, 1993 Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria;

  - U.S. EPA's July 1994 Whole Effluent Toxicity (WET) Control Policy;

  - U.S. EPA's August 14, 1995 National Policy Regarding Whole Effluent Toxicity Enforcement;

  - U.S. EPA's April 10, 1996 Clarifications Regarding Flexibility in 40 CFR Part 136 Whole Effluent Toxicity (WET) Test Methods;

  - U.S. EPA Regions 9 & 10's May 31, 1996 Guidance for Implementing Whole Effluent Toxicity Programs Final;

  - U.S. EPA's February 19, 1997 Draft Whole Effluent Toxicity (WET) Implementation Strategy.

IV. SPECIFIC RATIONALE

Several specific factors affecting the development of limitations and requirements in the proposed

Order are discussed as follows:

1. Recent Plant Performance

Section 402(o) of the Federal Clean Water Act and 40 CFR § 122.44(l) requires that WQBELs in re-issued permits be at least as stringent as those in the previous permit. The SIP specifies that interim effluent limitations, if required, must be based on current treatment facility performance or on previous permit limitations, whichever is more stringent (unless anti-backsliding requirements are met). In determining what constitutes "recent plant performance," BPJ, as defined above, was used. Effluent monitoring data collected for the discharge seasons from January 2000 through March 2003 are considered representative of recent plant performance.

2. Impaired Water Bodies on the 303(d) List

On June 6, 2003, the U.S. EPA approved a revised list of impaired water bodies prepared by the State (the 2002 303(d) list) pursuant to provisions of Clean Water Act Section 303(d) requiring identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. The pollutants impairing San Pablo Bay are chlordane, DDT, diazinon, dieldrin, dioxin compounds, exotic species, furan compounds, mercury, nickel, PCBs, dioxin-like PCBs, and selenium. Copper, which was previously identified as impairing San Pablo Bay, was not included as an impairing pollutant in the 2002-303(d) list and has been placed on the new Monitoring List. The Napa River is listed as impaired by pathogens, sediment, and nutrients.

The SIP requires final effluent limitations for all 303(d)-listed pollutants to be based on total maximum daily loads (TMDLs) and associated waste load allocations (WLAs). The SIP and U.S. EPA regulations also require that final concentration-based WQBELs be included for all pollutants having reasonable potential to cause or contribute to an exceedance of applicable water quality standards (having reasonable potential or RP). The SIP requires that where the discharger has demonstrated infeasibility to meet the final WQBELs, interim performance-based limitations (IPBLs) or previous permit limitations (whichever is more stringent) be established in the permit, together with a compliance schedule in effect until final effluent limitations are adopted. The SIP also requires the inclusion of appropriate provisions for waste minimization and source control where interim limitations are established.

3. Basis for Prohibitions

a). Prohibition A.1 (no discharges other than as described in the permit): This prohibition is based on the Basin Plan and previous permit.

b). Prohibition A.2 (flow limit): This prohibition is based on the reliable treatment capacity of the plant. Exceedance of the treatment plant's average dry weather flow design capacity may result in lowering the reliability of compliance with water quality requirements, unless the Discharger demonstrates otherwise through an antidegradation study. This prohibition is based on 40 CFR 122.41(l).

c). Prohibition A.3 (minimum 25:1 dilution): The dilution credit granted in this Order follows the policy established in the SIP because the SIP supercedes the Basin Plan on this issue. However, the SIP does not supercede the Basin Plan's prohibition against discharges that do not receive at

least 10:1 dilution, or into any nontidal water (Basin Plan Table 4-1, prohibition 1). This Order grants the Discharger a 10:1 dilution credit in calculating WQBELs, provided the discharge shall be completely mixed[1], and shall achieve an instream dilution ratio of at least 25:1 river to effluent flows. The SIP provides that dilution credits based on receiving water flows may be granted only for completely mixed discharges (SIP at 1.4.2.1). Incompletely mixed discharges are required to conduct mixing zone studies. The 25:1 instream dilution ratio requirement is necessary to account for uncertainties in stream flow measurements, and the assimilative capacity of the receiving water. The ambient background data were collected at a cleaner location in the Napa River, at a location upstream of this and several other wastewater dischargers to allow these dischargers to collaborate and share monitoring costs. A cleaner background will yield less stringent effluent limits than might be necessary to protect water quality as compared to background data directly upstream of the Discharger. The 25:1 was derived based loosely on a steady state mass balance. The two other dischargers that share this stretch of the Napa River with Yountville are St. Helena and Calistoga. Yountville's permitted discharge flow is roughly the same as the flows of St. Helena and Calistoga combined. As such, about twice the amount of instream dilution ratio is necessary to offset the pollutant addition by St Helena and Calistoga, Hence, a minimum 20:1 is necessary to justify a 10:1 dilution credit, and a higher 25:1 is necessary to account for uncertainty.

Historically, the Discharger has collected flow data downstream from the discharge to determine available dilution. However, the Board believes that a more representative approach for determining the allowable flow at the outfall location is by computing a flow based on the watershed area tributary to the outfall. In particular, the weighted average flow was determined based on the ratio of the watershed areas tributary to the Napa River flows at USGS Station No. 11456000, USGS Station No. 11458000, and the Discharger's outfall, as follows:

$$\frac{A_Y - A_S}{A_N - A_Y} = \frac{Q_Y - Q_S}{Q_N - Q_Y}$$

Where:
A_Y = Napa River watershed area tributary to the Discharger's outfall (102 square miles);
A_S = Napa River watershed area tributary to the USGS Station near St. Helena (81.4 square miles);
A_N = Napa River watershed area tributary to the USGS Station near Napa (218 square miles);
Q_Y = Napa River flow at the Discharger's outfall;
Q_S = Napa River flow at the USGS Station near St. Helena; and
Q_N = Napa River flow at the USGS Station near Napa.

Solving for Q_y yields the following weighted average flow at the Yountville outfall:

$$Q_Y = 0.73 \times Q_N + 0.27 \times Q_S$$

This weighted average flow will be used to determine whether a 25:1 river to effluent ratio is available, to allow for discharge.

[1] Completely mixed discharge condition means no more than five (5) percent difference, accounting for analytical variability, in the concentration of a pollutant across a transect of the water body at a point within two stream/river widths from the discharge point. SIP, Appendix 1.

d). Prohibition A.4 (Bypass or overflow is prohibited). This prohibition is retained from the previous Order and is based on the U.S. EPA prohibition and/or restrictions regarding bypass and overflow contained in 40 CFR 122.41(m). The paragraph allowing blending is consistent with the current draft EPA policy on blending.

e). Prohibition A.5 (no discharge during dry weather): The Basin Plan contains a prohibition of discharge of any wastewater which has particular constituents of concern to beneficial uses (1) at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1; or (2) into any non-tidal water, dead-end slough, similar confined waters, or immediate tributaries thereof. In issuing the previous permit, the Board determined that the Discharger is exempt from these because the discharge is part of an approved reclamation project, and during wet weather, there is sufficient flow in the river to achieve greater than 10:1 dilution. Consistent with this finding, no discharge is allowed, i.e., complete reclamation/reuse is required, during the dry season. This prohibition is unchanged from the previous permit.

4. Basis for Effluent Limitations

a) Effluent limits for conventional and non-conventional pollutants.

Constituent	Monthly Units	Weekly Average	Daily Average	Instantaneous Maximum	Instantaneous Maximum
B.1.a. Biochemical Oxygen Demand (BOD)	mg/L	30	45	--	--
B.2.b Total Suspended Solids (TSS)	mg/L	30	45	--	--
B.3.c Oil & Grease	mg/L	10	--	20	--
B.4.d Settleable Matter	ml/l-hr	0.1	--	0.2	--
B.5.d Total Chlorine Residual (1)	mg/L	--	--	--	0.0

Effluent Limitations B.1.a through B.1.e:

These limits are technology-based limits representative of, and intended to ensure, adequate and reliable secondary level wastewater treatment. These limits are based on the Basin Plan (Chapter 4, pg 4-8, and Table 4-2, at pg 4-69). The limits are unchanged from the previous permit, except that 7-day average limits for BOD and TSS have been added to the permit, and daily average limits for BOD and TSS are removed to be consistent with Federal regulations (40 CFR 122.45 (d)(2)). Compliance has been demonstrated by existing plant performance.

b) Effluent Limitation B.2 (pH, minimum 6.0, maximum 9.0):

This effluent limitation is a technology-based limit and is unchanged from the previous permit. The limitation is based on the Basin Plan (Chapter 4, Table 4-2), which is derived from federal requirements at 40 CFR 133.102. This is a previous permit effluent limitation and compliance has been demonstrated by existing plant performance.

c) Effluent Limitation B.3 (BOD_5 and TSS monthly average 85 percent removal).

The 85 percent removal efficiency requirements for BOD_5/CBOD and suspended solids are technology-based, standard secondary treatment requirements, and are retained from the previous permit. These requirements are based on Basin Plan requirements (Table 4-2, pg. 4–69), which are derived from U.S. EPA requirements at 40 CFR 133.102. Compliance has been demonstrated

by existing plant performance for ordinary flows (dry weather flows and most wet weather flows). During the past few years, the Discharger has consistently met these removal efficiency limits.

d) Effluent Limitation B.4 (Total Coliform Bacteria):

The purpose of this effluent limitation is to ensure adequate disinfection of the discharge in order to protect beneficial uses of the receiving waters. Effluent limits are based on WQOs for bacteriological parameters for receiving water beneficial uses. WQOs are given in terms of parameters, which serve as surrogates for pathogenic organisms. These limits are the same as the previous permit effluent limitations and compliance has been demonstrated by existing plant performance.

e) Effluent Limitation B.5 (Whole Effluent Acute Toxicity):

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters shall be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental response on aquatic organisms. Detrimental response includes but is not limited to decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alternations in population, community ecology, or receiving water biota. These effluent toxicity limits are necessary to ensure that this objective is protected. The whole effluent acute toxicity limits for a three-sample median and single sample maximum are consistent with the previous permit and are based on the Basin Plan (Table 4-4, pg. 4–70). A review of the Discharger's monitoring data from 2000-2002 indicates that survival rates ranged from 95 to 100 percent, with the exception of one violation of the acute toxicity effluent limitation in December 2001; a result of 15% survival was reported. The Discharger re-tested in January 2002 as required by the previous Order and the test indicated 95% survival.

f) Effluent Limitation B.6 (Whole Effluent Chronic Toxicity):

The chronic toxicity objective/limit is based on the Basin Plan's narrative toxicity objective on page 3-4.

g) Effluent Limitation B.7 (Toxic Substances):

1. Reasonable Potential Analysis (RPA)

At 40 CFR 122.44(d)(1)(i), the U.S. EPA requires that permits 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" (have reasonable potential). Thus, assessing whether a pollutant has reasonable potential (reasonable potential analysis – RPA) is the fundamental step in determining whether WQBELs are required. The following sections describe the RPA methodology and the RPA results for the pollutants identified in the Basin Plan and the CTR.

i) *WQOs and WQC*: The RPA uses Basin Plan WQOs, including narrative toxicity objectives in the Basin Plan, and applicable WQC in the CTR/NTR. The Basin Plan WQOs and NTR/CTR WQC are shown in Attachment 2 of this Fact Sheet.

ii) *Methodology*: The RPA uses the methods and procedures prescribed in Section 1.3 of the SIP. Board staff has analyzed the effluent and background data and the nature of facility operations to determine if the discharge shows reasonable potential with respect to the governing WQOs or WQC. Attachment 1 of this Fact Sheet shows the step-wise process described in Section 1.3 of the SIP.

iii) *Effluent and background data*: The RPA was based on effluent monitoring data collected for the period from January 2000 through March 2003 (see Attachment 3 of this Fact Sheet). On March 5, 2003, a group of five dischargers to the Napa River, including the Town of Yountville, submitted the Collaborative Napa River Receiving Water Evaluation. Ambient data collected at a station in Calistoga was used in evaluating background water quality for this Order.

iv) *RPA determination*: The RPA results are shown below in Table B and Attachment 1 of this Fact Sheet. The pollutants that exhibit RP are copper, mercury, zinc, cyanide, dioxin TCDD, dichlorobromomethane, chlorodibromomethane, and Bis(2-Ethylhexyl)Phthalate.

Table B. Summary of Reasonable Potential Results

# in CTR	Priority Pollutants	Governing WQOs/WQC (ug/L)	MEC or Minimum DL (ug/L) [1]	Maximum Background or Minimum DL (ug/L) [1]	RPA Results [2]
1	Antimony	4300	**0.3**	**0.7**	No
2	Arsenic	190	**1.1**	**6**	No
3	Beryllium	No Criteria	0.05	0.06	Uo
4	Cadmium	1.22	**0.2**	0.03	No
5a	Chromium (III)	224	**1**	**0.6**	No
5b	Chromium (VI)	11	**2.6**	0.15	No
6	Copper	12.83	**55**	**1.1**	**Yes**
7	Lead	3.59	**0.76**	**0.21**	No
8	Mercury (303d listed)	0.025	**0.028**	**0.015**	**Yes**
9	Nickel (303d listed)	56	**4.2**	**4**	No
10	Selenium (303d listed)	5	**1**	0.3	No
11	Silver	4.78	**0.3**	**0.03**	No
12	Thallium	6.3	**0.06**	**0.2**	No
13	Zinc	58	**160**	**2**	**Yes**
14	Cyanide	5.2	**14**	**0.197**	**Yes**
15	Asbestos	No Criteria	**NA**	0.19	Uo
16	2,3,7,8 TCDD (303d listed)	1.3E-08	**1.4895E-07**	**6.57E-10**	**Yes**
17	Acrolein	320	1	1	No
18	Acrylonitrile	0.059	1	1	No
19	Benzene	1.2	0.27	0.27	No
20	Bromoform	4.3	0.1	0.1	No
21	Carbon Tetrachloride	0.25	0.42	0.42	No
22	Chlorobenzene	680	0.19	0.19	No
23	Chlorodibromomethane	0.401	**0.8**	0.18	**Yes**

# in CTR	Priority Pollutants	Governing WQOs/WQC (ug/L)	MEC or Minimum DL (ug/L) [1]	Maximum Background or Minimum DL (ug/L) [1]	RPA Results [2]
24	Chloroethane	No Criteria	0.34	0.34	Uo
25	2-Chloroethylvinyl ether	No Criteria	0.31	0.31	Uo
26	Chloroform	No Criteria	**20**	0.24	Uo
27	Dichlorobromomethane	0.56	**5.8**	0.2	**Yes**
28	1,1-Dichloroethane	No Criteria	0.28	0.28	Uo
29	1,2-Dichloroethane	0.38	0.18	0.18	No
30	1,1-Dichloroethylene	0.057	0.37	0.37	No
31	1,2-Dichloropropane	0.52	0.2	0.2	No
32	1,3-Dichloropropylene	10	0.47	0.42	No
33	Ethylbenzene	3100	0.3	0.3	No
34	Methyl Bromide	48	0.42	0.42	No
35	Methyl Chloride	No Criteria	0.36	0.36	Uo
36	Methylene Chloride	4.7	0.38	0.38	No
37	1,1,2,2-Tetrachloroethane	0.17	0.3	0.3	No
38	Tetrachloroethylene	0.8	0.32	0.32	No
39	Toluene	6800	0.25	0.25	No
40	1,2-Trans-Dichloroethylene	700	0.3	0.3	No
41	1,1,1-Trichloroethane	No Criteria	0.35	0.3	Uo
42	1,1,2-Trichloroethane	0.6	0.27	0.27	No
43	Trichloroethylene	2.7	0.29	0.29	No
44	Vinyl Chloride	2	0.34	0.34	No
45	2-Chlorophenol	120	0.4	0.4	No
46	2,4-Dichlorophenol	93	0.3	0.3	No
47	2,4-Dimethylphenol	540	0.3	0.3	No
48	2-Methyl- 4,6-Dinitrophenol	13.4	0.4	0.4	No
49	2,4-Dinitrophenol	70	0.3	0.3	No
50	2-Nitrophenol	No Criteria	0.3	0.3	Uo
51	4-Nitrophenol	No Criteria	0.2	0.2	Uo
52	3-Methyl 4-Chlorophenol	No Criteria	0.3	0.3	Uo
53	Pentachlorophenol	0.28	0.4	0.4	No
54	Phenol	21000	0.2	0.2	No
55	2,4,6-Trichlorophenol	2.1	0.2	0.2	No
56	Acenaphthene	1200	0.17	0.17	No
57	Acenaphthylene	No Criteria	0.03	0.03	Uo
58	Anthracene	9600	0.16	0.16	No
59	Benzidine	0.00012	0.3	0.3	No
60	Benzo(a)Anthracene	0.0044	0.12	0.12	No
61	Benzo(a)Pyrene	0.0044	0.09	0.09	No
62	Benzo(b)Fluoranthene	0.0044	0.11	0.11	No
63	Benzo(ghi)Perylene	No Criteria	0.06	0.06	Uo
64	Benzo(k)Fluoranthene	0.0044	0.16	0.16	No
65	Bis(2-Chloroethoxy)Methane	No Criteria	0.3	0.3	Uo
66	Bis(2-Chloroethyl)Ether	0.031	0.3	0.3	No

# in CTR	Priority Pollutants	Governing WQOs/WQC (ug/L)	MEC or Minimum DL (ug/L) [1]	Maximum Background or Minimum DL (ug/L) [1]	RPA Results [2]
67	Bis(2-Chloroisopropyl)Ether	1400	0.6	0.6	No
68	Bis(2-Ethylhexyl)Phthalate	1.8	**8**	**0.6**	**Yes**
69	4-Bromophenyl Phenyl Ether	No Criteria	0.4	0.4	Uo
70	Butylbenzyl Phthalate	3000	0.4	0.4	No
71	2-Chloronaphthalene	1700	0.3	0.3	No
72	4-Chlorophenyl Phenyl Ether	No Criteria	0.4	0.4	Uo
73	Chrysene	0.0044	0.14	0.14	No
74	Dibenzo(a,h)Anthracene	0.0044	0.04	0.04	No
75	1,2-Dichlorobenzene	2700	0.52	0.52	No
76	1,3-Dichlorobenzene	400	0.36	0.36	No
77	1,4-Dichlorobenzene	400	0.42	0.42	No
78	3,3 Dichlorobenzidine	0.04	0.3	0.3	No
79	Diethyl Phthalate	23000	0.4	0.4	No
80	Dimethyl Phthalate	313000	0.4	0.4	No
81	Di-n-Butyl Phthalate	2700	0.4	0.4	No
82	2,4-Dinitrotoluene	0.11	0.3	0.3	No
83	2,6-Dinitrotoluene	No Criteria	0.3	0.3	Uo
84	Di-n-Octyl Phthalate	No Criteria	0.4	0.4	Uo
85	1,2-Diphenylhydrazine	0.04	0.3	0.3	No
86	Fluoranthene	300	0.03	0.03	No
87	Fluorene	1300	0.02	0.02	No
88	Hexachlorobenzene	0.00075	0.4	0.4	No
89	Hexachlorobutadiene	0.44	0.2	0.2	No
90	Hexachlorocyclopentadiene	240	0.1	0.1	No
91	Hexachloroethane	1.9	0.2	0.2	No
92	Indeno(1,2,3-cd)Pyrene	0.0044	0.04	0.04	No
93	Isophorone	8.4	0.3	0.3	No
94	Naphthalene	No Criteria	0.05	0.05	Uo
95	Nitrobenzene	17	0.3	0.3	No
96	N-Nitrosodimethylamine	0.00069	0.4	0.4	No
97	N-Nitrosodi-n-Propylamine	0.005	0.3	0.3	No
98	N-Nitrosodiphenylamine	5	0.4	0.4	No
99	Phenanthrene	No Criteria	0.03	0.03	Uo
100	Pyrene	960	0.03	0.03	No
101	1,2,4-Trichlorobenzene	No Criteria	0.3	0.3	Uo
102	Aldrin	0.00013	0.003	0.003	No
103	alpha-BHC	0.0039	0.002	0.002	No
104	beta-BHC	0.014	0.001	0.001	No
105	gamma-BHC	0.019	0.001	0.001	No
106	delta-BHC	No Criteria	0.001	0.001	Uo
107	Chlordane (303d listed)	0.00057	0.005	0.005	No
108	4,4'-DDT (303d listed)	0.00059	0.001	0.001	No

# in CTR	Priority Pollutants	Governing WQOs/WQC (ug/L)	MEC or Minimum DL (ug/L) [1]	Maximum Background or Minimum DL (ug/L) [1]	RPA Results [2]
109	4,4'-DDE (linked to DDT)	0.00059	0.001	0.001	No
110	4,4'-DDD	0.00083	0.001	0.001	No
111	Dieldrin (303d listed)	0.00014	0.002	0.002	No
112	alpha-Endosulfan	0.056	0.002	0.002	No
113	beta-Endolsulfan	0.056	0.001	0.001	No
114	Endosulfan Sulfate	110	0.001	0.001	No
115	Endrin	0.036	0.002	0.002	No
116	Endrin Aldehyde	0.76	0.002	0.002	No
117	Heptachlor	0.00021	0.003	0.003	No
118	Heptachlor Epoxide	0.0001	0.002	0.002	No
119-125	PCBs sum (2)	0.00017	0.34	0.34	No
126	Toxaphene	0.0002	0.2	0.2	No
	Tributylin	0.01	0.00144	0.00139	No

1) Maximum Effluent Concentration (MEC) or background concentration in bold is the actual detected value, otherwise the values shown is the minimum detection level.
NA = Not Available (there is no effluent monitoring data for this constituent).
2) RP =Yes, if (1) either MEC or Background > WQO/WQC.
RP = No, if (1) both MEC and background < WQO/WQC or (2) no background and all effluent data non-detect, or no background and MEC<WQO/WQC (per WQ 2001-16 Napa Sanitation District Remand Order)
RP = Uo (undetermined if no objective promulgated).

v) *Pollutants with no reasonable potential*: WQBELs are not included in the permit for constituents that do not have reasonable potential to cause or contribute to exceedance of applicable WQOs or WQC. However, monitoring for those pollutants is still required, under the provisions of the August 6, 2001 letter. If concentrations of these constituents are found to have increased significantly, the Discharger will be required to investigate the source(s) of the increase(s). Remedial measures are required if the increases pose a threat to water quality in the receiving water.

vi) *Permit Reopener:* The permit includes a reopener provision to allow numeric effluent limits to be added for any constituent that in the future exhibits reasonable potential to cause or contribute to exceedance of a WQO or WQC. This determination, based on monitoring results, will be made by the Board.

2. Final WQBELs

The final WQBELs were developed for the toxic and priority pollutants that were determined to have reasonable potential to cause or contribute to exceedances of the WQOs or WQC. Final effluent limitations were calculated based on appropriate WQOs/WQC and the appropriate procedures specified in Section 1.4 of the SIP (See Attachment 2 of this Fact Sheet). For the purpose of the Proposed Order, final WQBELs refer to all non-interim effluent limitations. The WQO or WQC used for each pollutant with reasonable potential is indicated in Table C below as well as in Attachment 1.

Table C. Water Quality Objectives/Criteria for Pollutants with RP

Pollutant	Chronic WQO/WQC (µg/L)	Acute WQO/WQC (µg/L)	Basis of Lowest WQO/WQC Used in RP Analysis
Copper	12.83	19.39	Basin Plan, fw, hardness=110 mg/L
Mercury	0.025	2.4	Basin Plan, fw
Zinc	58	170	Basin Plan, fw
Cyanide	5.2	22	Basin Plan, fw
TCDD TEQ	$1.3x10^{-8}$		Basin Plan, narrative
Chlorodibromomethane	0.401		CTR, human health
Dichlorobromomethane	0.56		CTR, human health
Bis(2-Ethylhexyl)Phthalate	1.8		CTR, human health

3. Dilution

The Board believes a conservative 10:1 dilution credit for discharges of non-bioaccumulative pollutants to the Napa River is necessary for protection of beneficial uses. The basis for limiting the dilution credit is based on SIP provisions in Section 1.4.2. The following outlines the basis for derivation of the dilution credit:

a. The receiving waterbody (Napa River) has highly variable, seasonal freshwater flows.

b. There has not been a dilution study to fully account for the cumulative effects of other wastewater discharges or withdrawals to the system.

c. The SIP allows limiting a mixing zone and dilution credit for persistent pollutants (e.g., copper, silver, nickel and lead).

The main justification for using a 10:1 dilution credit is uncertainty in accurately determining ambient background and uncertainty in accurately determining the mixing zone in a complex riverine system with multiple wastewater discharges. To account for uncertainties in stream flow measurements, and the assimilative capacity in the receiving water as discussed above under basis for Prohibition A.3, the 10:1 dilution credit is only granted when a minimum 25:1 instream dilution ratio is achieved. This permit further specifies that the 25:1 dilution ratio shall be demonstrated based on a the weighted average Napa River flow as measured by USGS Station No.11456000 and USGS Station No. 11458000.

4. Assimilative Capacity for Bioaccumulative Pollutants

The permit contains a mass emission limitation for mercury because the Regional Board has determined that there is no additional assimilative capacity for mercury in the Napa River, tributary to the San Pablo Bay. Therefore, no dilution credit was allowed when the WQBELs for mercury were calculated. This determination is consistent with SIP Section 2.1.1 requirements that the Regional Board consider whether additional assimilative capacity exists for 303(d)-listed bioaccumulative pollutants. This determination was based, in part, on the fact that a fish consumption advisory currently exists to protect human health from elevated mercury concentrations in fish taken from San Francisco Bay.

5. Compliance Schedules and Infeasibility Analysis

As existing self-monitoring data are insufficient to perform a meaningful statistical analysis to confirm if it is feasible for the Discharger to comply with WQBELs, Board staff compared the MEC to the lowest WQBEL (both in µg/L) to determine if the Discharger can achieve immediate compliance with the final limits (see Table D below).

Table D. Summary of Infeasibility Analysis

Constituent	AMEL µg/L	MDEL µg/L	MEC µg/L	Is MEC > AMEL	Feasible to Comply
Copper		78*	55	No	Yes
Mercury	0.019	0.045	0.028	Yes	**No**
Zinc	488	833	160	No	Yes
Cyanide	39	88	14	No	Yes
Chlorodibromomethane	2.4	4.8	0.8	No	Yes
Dichlorobromomethane	3.8	7.6	5.8	Yes	**No**
Bis(2-Ethylhexyl) Phthalate	14	28	8	No	Yes

* This value represents the daily average effluent limitation in the previous permit for copper. It is more stringent than either the AMEL or MDEL calculated according to the SIP methodology.

It is infeasible to immediately comply with the mercury WQBELs calculated according to Section 1.4 of the SIP. Therefore, this permit establishes a compliance schedule of March 31, 2010, for mercury since the final limits are based on the Basin Plan WQOs. The March 31, 2010, compliance schedule exceeds the length of the permit, therefore, these calculated final limits are intended for point of reference for the feasibility demonstration and are only included in the permit findings by reference to the Fact Sheet.

It is infeasible to immediately comply with the dichlorobromomethane WQBELs calculated according to Section 1.4 of the SIP. Since dichlorobromomethane is associated with the chlorination process, the generation of disinfection byproducts (trihalomethanes or THMs) can be controlled by better managing the disinfection process. Therefore, this Order establishes a three-year compliance schedule for dichlorobromomethane from the effective date of this permit as the Discharger will perform source control as required by Provision E.5 of this permit.

During the compliance schedules, interim limits are included based on current treatment facility performance. For mercury, the interim limit is based on the pooled data from treatment plants with similar treatment technology within the area and is more stringent than the previous permit limit. For dichlorobromomethane, the interim limit is the MEC and the previous permit does not include dichlorobromomethane limits. The Board may take appropriate enforcement actions if interim limits and requirements are not met.

The general basis for maximum compliance dates is provided in Attachment 5.

h) Effluent Limitation B.8 (Mercury Mass Emission Limit and Mass Trigger).

This Order includes an interim mercury mass-based effluent limitation of 0.018 kilograms per month (kg/mo) and a mass trigger of 0.006 kg/mo. The mass limit and mass trigger were calculated using ultra-clean mercury data collected from January 2000 through March 2003 as shown in Attachment 4. If the mass trigger is exceeded, then the actions specified in Provision E.9 are required. The mass limit and trigger will maintain current loadings until a TMDL is established for San Pablo Bay. If the Discharger is found to be contributing to mercury impairment in San Pablo Bay, the final mercury effluent limitations will be based on the Discharger's WLA in the TMDL.

The inclusion of interim performance-based mass limits for bioaccumulative pollutants such as mercury is consistent with the guidance described in section 2.1.1 of the SIP. Because of their bioaccumulative nature, an uncontrolled increase in the total mass loads of these pollutants in the receiving water will have significant adverse impacts on the aquatic ecosystem.

5. Basis for Receiving Water Limitations

a) Receiving Water Limitations C.1, C.2, and C.3 (conditions to be avoided): These limits are based on the previous permit and the narrative/numerical objectives contained in Chapter 3 of the Basin Plan, page 3-2 – 3-5.

b) Receiving Water Limitation C.4 (compliance with State Law): This requirement is in the previous permit, requires compliance with Federal and State law, and is self-explanatory.

6. Basis for Sludge Management Practices

These requirements are based on Table 4.1 of the Basin Plan and 40 CFR 503.

7. Basis for Self-Monitoring Requirements

The SMP includes monitoring at the outfall for conventional, non-conventional, toxic pollutants, acute toxicity, and chronic toxicity. For most of the conventional and non-conventional pollutants, the monitoring is the same as required by the previous permit, except TSS has been changed to twice weekly and settable matter sampling frequency is reduced from daily to monthly. For copper, zinc, mercury, and cyanide, which have effluent limitations, quarterly monitoring is required for compliance determination. Annual monitoring is required for dichlorobromomethane and chlorodibromomethane (the Discharger may perform accelerated monitoring for these two constituents during the source control study as required by Provision E.5). Annual monitoring for bis(2-ethyhexyl)phthalate is also required for compliance determination. For dioxins and furans, this permit requires monitoring once during the life of this permit using methods with low detection limits. This Order also contains chronic toxicity monitoring requirements to ensure compliance with chronic toxicity provisions. In lieu of near field discharge specific ambient monitoring, it is acceptable that the Discharger participate in collaborative receiving water monitoring with other dischargers under the provisions of the August 6, 2001 letter. The RMP does not apply here.

8. Basis for Provisions

a) Provisions E.1. (Permit Compliance and Rescission of Previous Permit): Time of compliance is based on 40 CFR 122. The basis of this permit superceding and rescinding the previous permit is 40 CFR 122.46.

b) Provision E.2. (Effluent Monitoring): This provision, which requires the Discharger to conduct effluent water monitoring as provided for in the August 6, 2001 letter, is based on the Basin Plan and the SIP.

c) Provision E.3 (Receiving Water Monitoring): This provision, which requires the Discharger to continue to conduct receiving water monitoring, is based on the Basin Plan and the SIP.

d) Provision E.4 (Storm Water Pollution Prevention Plan (SWPPP)): This provision has been included because a recent inspection showed that not all storm water from the plant area was being directed to the treatment system. It requires the Discharger to demonstrate compliance with State requirements that govern storm water discharges associated with industrial activity. The Discharger is required to develop and implement a SWPPP.

e) Provision E.5 (Chlorodibromomethane and Dichlorobromomethane Source Control and Compliance Schedule): This provision is required as the Discharger cannot currently comply with final WQBELs for dichlorobromomethane. SIP 2.2.1 requires the establishment of interim requirements and dates for their achievement in the permit. Since chlorodibromomethane and dichlorobromomethane are both associated with chlorination process, the source control study should address both pollutants and other disinfection byproducts.

f) Provision E.6 (Optional Bacteriological Assessment Study): This provision the Discharger may, at its option, conduct a bacteriological assessment study, acceptable to the Executive Officer. The study will evaluate impacts of the Discharger's effluent on the receiving waters (including worst case conditions). The Basin Plan allows alternate bacteria limitations provided that the Discharger conclusively demonstrates "through a program approved by the Regional Board that such substitution will not result in unacceptable adverse impacts on the beneficial uses of the receiving waters". If the study demonstrates that the exceedances of the total coliform limits are solely due to the study, and that there is compliance in the receiving water with the bacteriological objectives specified in the Basin Plan, the Board may consider establishing alternate bacteria limitations.

g) Provision E.7 (Installation of Diffuser on Discharge Outfall) The Discharger is required to install a diffuser in order to achieve complete mixing in the Napa River.

h) Provision E.8. (Pollutant Minimization Program): This provision is based on the Basin Plan, page 4-25 – 4-28, and the SIP, Section 2.1, Compliance Schedules.

i) Provision E.9. (Mercury Mass Loading Reduction): This provision will help to ensure no increases in mercury mass loadings until a TMDL and WLA are established. The Board's determination of the need to maintain mass loadings at current levels for this bioaccumulative pollutant is based on Section 2.1.1 of the SIP.

j) Provision E.10. (Optional Mass Offset): This option is provided to encourage the Discharger to further implement aggressive reduction of mass loads to Napa River and San Pablo Bay.

k) Provision E.11. (Wastewater Facilities, Review and Evaluation, Status Reports): This Provision is based on the previous permit and Basin Plan.

l) Provision E.12. (Operations and Maintenance Manual): These provisions are based on the Basin Plan, requirements of 40 CFR 122 and the previous permit.

m) Provision E.13. (Contingency Plan Update): The Contingency Plan provision is based on the requirements stipulated in Board Resolution No. 74-10 and the previous permit.

n) Provision E.14. (Annual Status Reports): This provision is based on the Basin Plan, the requirements of 40 CFR 122, and the previous Order.

o) Provision E.15. (303(d)-listed Pollutants Site-Specific Objective and TMDL Status Review): Consistent with the SIP, the Discharger shall participate in the development of TMDLs and SSOs for mercury, selenium, 4,4'-DDE, dieldrin, dioxin, and PCBs. By January 31 of each year, the Discharger shall submit an update to the Board to document progress made on source control and pollutant minimization measures and development of TMDL or SSO. Regional 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.

p) Provision E.16. (Self-Monitoring Program): The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are contained in the Self Monitoring Program (SMP) of the Permit. This provision requires compliance with the SMP, and is based on 40 CFR 122.44(i), 122.62, 122.63 and 124.5. The SMP is a standard requirement in almost all NPDES permits issued by the Board, including this Order. It contains definitions of terms, specifies general sampling and analytical protocols, and sets out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Board's policies. The SMP also contains a sampling program specific for the facility. It defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents, for which no effluent limitations are established, is also required to provide data for future completion of RPAs for them.

q) Provision E.17. (Standard Provisions and Reporting Requirements): The purpose of this provision is to require compliance with the standard provisions and reporting requirements given in this Board's document titled *Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993* (the Standard Provisions), or any amendments thereafter. That document is incorporated in the permit as an attachment to it. Where provisions or reporting requirements specified in the permit are different from equivalent or related provisions or reporting requirements given in the Standard Provisions, the permit specifications shall apply. The standard provisions and reporting requirements given in the above document are based on various state and federal regulations with specific references cited therein.

r) Provision E.18. (Change in Control or Ownership): This provision is based on 40 CFR 122.61.

s) Provision E.19. (Permit Reopener): This provision is based on 40 CFR 123.

t) Provision E.20. (NPDES Permit /U.S. EPA concurrence): This provision is based on 40 CFR 123 and California's Memorandum of Agreement with U.S. E./P.A..

u) Provision E.21. (Permit Expiration and Reapplication): This provision is based on 40 CFR 122.46(a).

VI. SELF-MONITORING PROGRAM REQUIREMENTS

General Basis

Part A of the monitoring program is a standard requirement in almost all NPDES permits issued by the Board. Most of the requirements are also existing requirements for the discharger. Part A contains definitions, specifies general sampling and analytical protocols, and specifies reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Board policy. Part B of the monitoring program is specific for the discharger. It defines the stations, constituents, and frequency of monitoring, and additional reporting requirements. The constituents required to be monitored include all parameters for which permit limits are specified. This is to allow determination of compliance with each of the limited constituents in accordance with 40 CFR 122.44(i).

VII. WRITTEN COMMENTS

- Interested persons are invited to submit written comments concerning this draft permit.
- Comments should be submitted to the Board no later than 5:00 P.M. on February 23, 2004.
- Comments received after this date may not receive full consideration in the formulation of final determinations of permit conditions.
- Comments should be submitted to the Board at the address given on the first page of this fact sheet, and addressed to the attention of: Mr. Richard Hiett

VIII. PUBLIC HEARING

- The draft permit will be considered for adoption by the Board at a public hearing during the Board's regular monthly meeting to be held on: March 17, 2004, starting at 9:00 a.m.

- This meeting will be held at:

Main Floor Auditorium
Elihu Harris State Office Building,
1515 Clay Street, Oakland, California

IX. WASTE DISCHARGE REQUIREMENT APPEALS

Any person may petition the State Water Resources Control Board to review the decision of the Board regarding the Waste Discharge Requirements. A petition must be made within 30 days of the Board public hearing.

X. ADDITIONAL INFORMATION

For additional information about this matter, interested persons should contact the following Regional Board staff member: Mr. Richard Hiett, Phone number: (510) 622-2359, or by email at rh@rb2.swrcb.ca.gov.

XI. ATTACHMENTS

Attachment 1: RPA Results for Priority Pollutants
Attachment 2: Calculation of Final WQBELs
Attachment 3: Effluent Monitoring Data (January 2000 through March 2003)
Attachment 4: Calculation of Mercury Mass Limit and Mass Trigger

Attachment 1

RPA Results for Priority Pollutants

Draft Reasonable Potential Analysis
Town of Yountville

Green highlight checks for input inconsistency
Yellow highlights are user input

Beginning			Step 2	Step 3					Step 4	Step 2	Step 3		Step 5			Step 6	Steps 7 & 8	Final Result	
	Constituent name	C (ug/L) Lowest (most stringent) Criteria (Enter "No Criteria" for no criteria)	Effluent Data Available (Y/N)?	Are all data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL) (ug/L)	Enter the pollutant effluent detected max conc (ug/L)	If all data points are ND and MinDL>C, interim monitoring is required	Concentration from the effluent (MEC) (MEC= detated max value; if all ND & MDL<C then MEC = MDL)	MEC vs. C 1. If MEC> or =C, effluent limitation is required; 2. If MEC<C, go to Step 5	B Available (Y/N)?	Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL) (ug/L)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	B vs. C If B>C, effluent limitation is required	7) Review other information in the SIP page 4. If information is unavailable or insufficient: 8) the RWQCB shall establish interim monitoring requirements.	RPA Result	Reason
1	Antimony	14	Y	N		0.3		0.3	MEC<C, go to Step 5	Y	N		0.7		B<C, Step 7		No	MEC<C & B<C
2	Arsenic [b]	190	Y	N		1.1		1.1	MEC<C, go to Step 5	Y	N		6		B<C, Step 7		No	MEC<C & B<C
3	Beryllium	No Criteria	Y	Y	0.05		No Criteria	No Criteria	No Criteria	Y	Y	0.06		N	No Criteria	No Criteria	Uo	No Criteria
4	Cadmium [b]	1.22	Y	N		0.2		0.2	MEC<C, go to Step 5	Y	Y	0.03		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
5a	Chromium (III)	223.79	Y	N		1		1	MEC<C, go to Step 5	Y	N		0.6		B<C, Step 7		No	MEC<C & B<C
5b	Chromium (VI) [b]	11	Y	N		2.6		2.6	MEC<C, go to Step 5	Y	Y	0.15		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
6	Copper (303d listed) [c]	12.83	Y	N		55		55	MEC>=C, Effluent Limits Required	Y	N		1.1		B<C, Step 7		Yes	MEC>C
7	Lead [b]	3.59	Y	N		0.76		0.76	MEC<C, go to Step 5	Y	N		0.21		B<C, Step 7		No	MEC<C & B<C
8	Mercury (303d listed) [b]	0.025	Y	N		0.028		0.028	MEC>=C, Effluent Limits Required	Y	N		0.015		B<C, Step 7		Yes	MEC>C
9	Nickel [b]	56	Y	N		4.2		4.2	MEC<C, go to Step 5	Y	N		4		B<C, Step 7		No	MEC<C & B<C
10	Selenium (303d listed) [b]	5	Y	N		1		1	MEC<C, go to Step 5	Y	Y	0.3		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
11	Silver [b]	4.78	Y	N		0.3		0.3	MEC<C, go to Step 5	Y	N		0.03		B<C, Step 7		No	MEC<C & B<C
12	Thallium	1.7	Y	N		0.06		0.06	MEC<C, go to Step 5	Y	N		0.2		B<C, Step 7		No	MEC<C & B<C
13	Zinc [b]	58	Y	N		160		160	MEC>=C, Effluent Limits Required	Y	N		2		B<C, Step 7		Yes	MEC>C
14	Cyanide [b]	5.2	Y	N		14		14	MEC>=C, Effluent Limits Required	Y	N		0.197		B<C, Step 7		Yes	MEC>C
15	Asbestos	No Criteria	N				No Criteria	No Criteria	No Criteria	Y	Y	0.19		N	No Criteria	No Criteria	Uo	No Criteria
16	2,3,7,8-TCDD(303d listed	0.000000013	Y	N		1.4895E-07		1.4895E-07	MEC>=C, Effluent Limits Required	Y	N		6.57E-10		B<C, Step 7		Yes	MEC>C
17	Acrolein	320	Y	Y	1		All ND, MDL<C, MEC=MDL	1	MEC<C, go to Step 5	Y	Y	1		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
18	Acrylonitrile	0.059	Y	Y	1		All ND, MinDL>C, Go to Step 5,			Y	Y	1		Y	No detected value of B, Step		No	UD; effluent data and B are ND
19	Benzene	1.2	Y	Y	0.27		All ND, MDL<C, MEC=MDL	0.27	MEC<C, go to Step 5	Y	Y	0.27		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
20	Bromoform	4.3	Y	Y	0.1		All ND, MDL<C, MEC=MDL	0.1	MEC<C, go to Step 5	Y	Y	0.1		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
21	Carbon Tetrachloride	0.25	Y	Y	0.42		All ND, MinDL>C, Go to Step 5,			Y	Y	0.42		Y	No detected value of B, Step		No	UD; effluent data and B are ND
22	Chlorobenzene	680	Y	Y	0.19		All ND, MDL<C, MEC=MDL	0.19	MEC<C, go to Step 5	Y	Y	0.19		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
23	Chlorodibromomethane	0.401	Y	N		0.8		0.8	MEC>=C, Effluent Limits Required	Y	Y	0.18		N	No detected value of B, Step		Yes	MEC>C
24	Chloroethane	No Criteria	Y	Y	0.34		No Criteria	No Criteria	No Criteria	Y	Y	0.34		N	No Criteria	No Criteria	Uo	No Criteria
25	2-Chloroethylvinyl ether	No Criteria	Y	Y	0.31		No Criteria	No Criteria	No Criteria	Y	Y	0.31		N	No Criteria	No Criteria	Uo	No Criteria
26	Chloroform	No Criteria	Y	N		20	No Criteria	No Criteria	No Criteria	Y	Y	0.24		N	No Criteria	No Criteria	Uo	No Criteria
27	Dichlorobromomethane	0.56	Y	N		5.8		5.8	MEC>=C, Effluent Limits Required	Y	Y	0.2		N	No detected value of B, Step		Yes	MEC>C
28	1,1-Dichloroethane	No Criteria	Y	Y	0.28		No Criteria	No Criteria	No Criteria	Y	Y	0.28		N	No Criteria	No Criteria	Uo	No Criteria
29	1,2-Dichloroethane	0.38	Y	Y	0.18		All ND, MDL<C, MEC=MDL	0.18	MEC<C, go to Step 5	Y	Y	0.18		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
30	1,1-Dichloroethylene	0.057	Y	Y	0.37		All ND, MinDL>C, Go to Step 5,			Y	Y	0.37		Y	No detected value of B, Step		No	UD; effluent data and B are ND
31	1,2-Dichloropropane	0.52	Y	Y	0.2		All ND, MDL<C, MEC=MDL	0.2	MEC<C, go to Step 5	Y	Y	0.2		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
32	1,3-Dichloropropylene	10	Y	Y	0.47		All ND, MDL<C, MEC=MDL	0.47	MEC<C, go to Step 5	Y	Y	0.42		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
33	Ethylbenzene	3100	Y	Y	0.3		All ND, MDL<C, MEC=MDL	0.3	MEC<C, go to Step 5	Y	Y	0.3		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
34	Methyl Bromide	48	Y	Y	0.42		All ND, MDL<C, MEC=MDL	0.42	MEC<C, go to Step 5	Y	Y	0.42		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
35	Methyl Chloride	No Criteria	Y	Y	0.36		No Criteria	No Criteria	No Criteria	Y	Y	0.36		N	No Criteria	No Criteria	Uo	No Criteria
36	Methylene Chloride	4.7	Y	Y	0.38		All ND, MDL<C, MEC=MDL	0.38	MEC<C, go to Step 5	Y	Y	0.38		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
37	1,1,2,2-Tetrachloroethane	0.17	Y	Y	0.3		All ND, MinDL>C, Go to Step 5,			Y	Y	0.3		Y	No detected value of B, Step		No	UD; effluent data and B are ND
38	Tetrachloroethylene	0.8	Y	Y	0.32		All ND, MDL<C, MEC=MDL	0.32	MEC<C, go to Step 5	Y	Y	0.32		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
39	Toluene	6800	Y	Y	0.25		All ND, MDL<C, MEC=MDL	0.25	MEC<C, go to Step 5	Y	Y	0.25		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
40	1,2-Trans-Dichloroethyler	700	Y	Y	0.3		All ND, MDL<C, MEC=MDL	0.3	MEC<C, go to Step 5	Y	Y	0.3		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
41	1,1,1-Trichloroethane	No Criteria	Y	Y	0.35		No Criteria	No Criteria	No Criteria	Y	Y	0.3		N	No Criteria	No Criteria	Uo	No Criteria
42	1,1,2-Trichloroethane	0.6	Y	Y	0.27		All ND, MDL<C, MEC=MDL	0.27	MEC<C, go to Step 5	Y	Y	0.27		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
43	Trichloroethylene	2.7	Y	Y	0.29		All ND, MDL<C, MEC=MDL	0.29	MEC<C, go to Step 5	Y	Y	0.29		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
44	Vinyl Chloride	2	Y	Y	0.34		All ND, MDL<C, MEC=MDL	0.34	MEC<C, go to Step 5	Y	Y	0.34		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
45	2-Chlorophenol	120	Y	Y	0.4		All ND, MDL<C, MEC=MDL	0.4	MEC<C, go to Step 5	Y	Y	0.4		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
46	2,4-Dichlorophenol	93	Y	Y	0.3		All ND, MDL<C, MEC=MDL	0.3	MEC<C, go to Step 5	Y	Y	0.3		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
47	2,4-Dimethylphenol	540	Y	Y	0.3		All ND, MDL<C, MEC=MDL	0.3	MEC<C, go to Step 5	Y	Y	0.3		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
48	2-Methyl- 4,6-Dinitrophen	13.4	Y	Y	0.4		All ND, MDL<C, MEC=MDL	0.4	MEC<C, go to Step 5	Y	Y	0.4		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
49	2,4-Dinitrophenol	70	Y	Y	0.3		All ND, MDL<C, MEC=MDL	0.3	MEC<C, go to Step 5	Y	Y	0.3		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
50	2-Nitrophenol	No Criteria	Y	Y	0.3		No Criteria	No Criteria	No Criteria	Y	Y	0.3		N	No Criteria	No Criteria	Uo	No Criteria
51	4-Nitrophenol	No Criteria	Y	Y	0.2		No Criteria	No Criteria	No Criteria	Y	Y	0.2		N	No Criteria	No Criteria	Uo	No Criteria
52	3-Methyl 4-Chlorophenol	No Criteria	Y	Y	0.3		No Criteria	No Criteria	No Criteria	Y	Y	0.3		N	No Criteria	No Criteria	Uo	No Criteria
53	Pentachlorophenol	0.28	Y	Y	0.4		All ND, MinDL>C, Go to Step 5,			Y	Y	0.4		Y	No detected value of B, Step		No	UD; effluent data and B are ND
54	Phenol	21000	Y	Y	0.2		All ND, MDL<C, MEC=MDL	0.2	MEC<C, go to Step 5	Y	Y	0.2		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
55	2,4,6-Trichlorophenol	2.1	Y	Y	0.2		All ND, MDL<C, MEC=MDL	0.2	MEC<C, go to Step 5	Y	Y	0.2		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
56	Acenaphthene	1200	Y	Y	0.17		All ND, MDL<C, MEC=MDL	0.17	MEC<C, go to Step 5	Y	Y	0.17		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
57	Acenaphthylene	No Criteria	Y	Y	0.03		No Criteria	No Criteria	No Criteria	Y	Y	0.03		N	No Criteria	No Criteria	Uo	No Criteria
58	Anthracene	9600	Y	Y	0.16		All ND, MDL<C, MEC=MDL	0.16	MEC<C, go to Step 5	Y	Y	0.16		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
59	Benzidine	0.00012	Y	Y	0.3		All ND, MinDL>C, Go to Step 5,			Y	Y	0.3		Y	No detected value of B, Step		No	UD; effluent data and B are ND
60	Benzo(a)Anthracene	0.0044	Y	Y	0.12		All ND, MinDL>C, Go to Step 5,			Y	Y	0.12		Y	No detected value of B, Step		No	UD; effluent data and B are ND
61	Benzo(a)Pyrene	0.0044	Y	Y	0.09		All ND, MinDL>C, Go to Step 5,			Y	Y	0.09		Y	No detected value of B, Step		No	UD; effluent data and B are ND
62	Benzo(b)Fluoranthene	0.0044	Y	Y	0.11		All ND, MinDL>C, Go to Step 5,			Y	Y	0.11		Y	No detected value of B, Step		No	UD; effluent data and B are ND
63	Benzo(ghi)Perylene	No Criteria	Y	Y	0.06		No Criteria	No Criteria	No Criteria	Y	Y	0.06		N	No Criteria	No Criteria	Uo	No Criteria
64	Benzo(k)Fluoranthene	0.0044	Y	Y	0.16		All ND, MinDL>C, Go to Step 5,			Y	Y	0.16		Y	No detected value of B, Step		No	UD; effluent data and B are ND
65	Bis(2-Chloroethoxy)Methe	No Criteria	Y	Y	0.3		No Criteria	No Criteria	No Criteria	Y	Y	0.3		N	No Criteria	No Criteria	Uo	No Criteria
66	Bis(2-Chloroethyl)Ether	0.031	Y	Y	0.3		All ND, MinDL>C, Go to Step 5,			Y	Y	0.3		Y	No detected value of B, Step		No	UD; effluent data and B are ND
67	Bis(2-Chloroisopropyl)Eth	1400	Y	Y	0.6		All ND, MDL<C, MEC=MDL	0.6	MEC<C, go to Step 5	Y	Y	0.6		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
68	Bis(2-Ethylhexyl)Phthalate	1.8	Y	N		8		8	MEC>=C, Effluent Limits Required	Y	N		0.6		B<C, Step 7		Yes	MEC>C
69	4-Bromophenyl Phenyl Et	No Criteria	Y	Y	0.4		No Criteria	No Criteria	No Criteria	Y	Y	0.4		N	No Criteria	No Criteria	Uo	No Criteria
70	Butylbenzyl Phthalate	3000	Y	Y	0.4		All ND, MDL<C, MEC=MDL	0.4	MEC<C, go to Step 5	Y	Y	0.4		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
71	2-Chloronaphthalene	1700	Y	Y	0.3		All ND, MDL<C, MEC=MDL	0.3	MEC<C, go to Step 5	Y	Y	0.3		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
72	4-Chlorophenyl Phenyl Et	No Criteria	Y	Y	0.4		No Criteria	No Criteria	No Criteria	Y	Y	0.4		N	No Criteria	No Criteria	Uo	No Criteria
73	Chrysene	0.0044	Y	Y	0.14		All ND, MinDL>C, Go to Step 5,			Y	Y	0.14		Y	No detected value of B, Step		No	UD; effluent data and B are ND
74	Dibenzo(a,h)Anthracene	0.0044	Y	Y	0.04		All ND, MinDL>C, Go to Step 5,			Y	Y	0.04		Y	No detected value of B, Step		No	UD; effluent data and B are ND
75	1,2-Dichlorobenzene	2700	Y	Y	0.52		All ND, MDL<C, MEC=MDL	0.52	MEC<C, go to Step 5	Y	Y	0.52		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
76	1,3-Dichlorobenzene	400	Y	Y	0.36		All ND, MDL<C, MEC=MDL	0.36	MEC<C, go to Step 5	Y	Y	0.36		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
77	1,4-Dichlorobenzene	400	Y	Y	0.42		All ND, MDL<C, MEC=MDL	0.42	MEC<C, go to Step 5	Y	Y	0.42		N	No detected value of B, Step		No	Ud;MEC<C & B is ND

Draft Reasonable Potential Analysis
Town of Yountville

Beginning			Step 2	Step 3					Step 4	Step 2	Step 3		Step 5		Step 6	Steps 7 & 8	Final Result	
	Constituent name	C (ug/L) Lowest (most stringent) Criteria (Enter "No Criteria" for no criteria)	Effluent Data Available (Y/N)?	Are all data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL) (ug/L)	Enter the pollutant effluent detected max conc (ug/L)	If all data points are ND and MinDL>C, interim monitoring is required	Concentration from the effluent (MEC) (MEC= deteted max value; if all ND & MDL<C then MEC = MDL)	MEC vs. C 1. If MEC> or =C, effluent limitation is required; 2. If MEC<C, go to Step 5	B Available (Y/N)?	Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL) (ug/L)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	B vs. C If B>C, effluent limitation is required	7) Review other information in the SIP page 4. If information is unavailable or insufficient: 8) the RWQCB shall establish interim monitoring requirements.	RPA Result	Reason
78	3,3 Dichlorobenzidine	0.04	Y	Y	0.3		All ND, MinDL>C, Go to Step 5			Y	Y	0.3		Y	No detected value of B, Step		No	UD; effluent data and B are ND
79	Diethyl Phthalate	23000	Y	Y	0.4		All ND, MDL<C, MEC=MDL	0.4	MEC<C, go to Step 5	Y	Y	0.4		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
80	Dimethyl Phthalate	313000	Y	Y	0.4		All ND, MDL<C, MEC=MDL	0.4	MEC<C, go to Step 5	Y	Y	0.4		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
81	Di-n-Butyl Phthalate	2700	Y	Y	0.4		All ND, MDL<C, MEC=MDL	0.4	MEC<C, go to Step 5	Y	Y	0.4		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
82	2,4-Dinitrotoluene	0.11	Y	Y	0.3		All ND, MinDL>C, Go to Step 5			Y	Y	0.3		Y	No detected value of B, Step		No	UD; effluent data and B are ND
83	2,6-Dinitrotoluene	No Criteria	Y	Y	0.3		No Criteria	No Criteria	No Criteria	Y	Y	0.3		N	No Criteria	No Criteria	Uo	No Criteria
84	Di-n-Octyl Phthalate	No Criteria	Y	Y	0.4		No Criteria	No Criteria	No Criteria	Y	Y	0.4		N	No Criteria	No Criteria	Uo	No Criteria
85	1,2-Diphenylhydrazine	0.04	Y	Y	0.3		All ND, MinDL>C, Go to Step 5			Y	Y	0.3		Y	No detected value of B, Step		No	UD; effluent data and B are ND
86	Fluoranthene	300	Y	Y	0.03		All ND, MDL<C, MEC=MDL	0.03	MEC<C, go to Step 5	Y	Y	0.03		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
87	Fluorene	1300	Y	Y	0.02		All ND, MDL<C, MEC=MDL	0.02	MEC<C, go to Step 5	Y	Y	0.02		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
88	Hexachlorobenzene	0.00075	Y	Y	0.4		All ND, MinDL>C, Go to Step 5			Y	Y	0.4		Y	No detected value of B, Step		No	UD; effluent data and B are ND
89	Hexachlorobutadiene	0.44	Y	Y	0.2		All ND, MDL<C, MEC=MDL	0.2	MEC<C, go to Step 5	Y	Y	0.2		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
90	Hexachlorocyclopentadier	240	Y	Y	0.1		All ND, MDL<C, MEC=MDL	0.1	MEC<C, go to Step 5	Y	Y	0.1		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
91	Hexachloroethane	1.9	Y	Y	0.2		All ND, MDL<C, MEC=MDL	0.2	MEC<C, go to Step 5	Y	Y	0.2		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
92	Indeno(1,2,3-cd)Pyrene	0.0044	Y	Y	0.04		All ND, MinDL>C, Go to Step 5			Y	Y	0.04		Y	No detected value of B, Step		No	UD; effluent data and B are ND
93	Isophorone	8.4	Y	Y	0.3		All ND, MDL<C, MEC=MDL	0.3	MEC<C, go to Step 5	Y	Y	0.3		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
94	Naphthalene	No Criteria	Y	Y	0.05		No Criteria	No Criteria	No Criteria	Y	Y	0.05		N	No Criteria	No Criteria	Uo	No Criteria
95	Nitrobenzene	17	Y	Y	0.3		All ND, MDL<C, MEC=MDL	0.3	MEC<C, go to Step 5	Y	Y	0.3		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
96	N-Nitrosodimethylamine	0.00069	Y	Y	0.4		All ND, MinDL>C, Go to Step 5			Y	Y	0.4		Y	No detected value of B, Step		No	UD; effluent data and B are ND
97	N-Nitrosodi-n-Propylamin	0.005	Y	Y	0.3		All ND, MinDL>C, Go to Step 5			Y	Y	0.3		Y	No detected value of B, Step		No	UD; effluent data and B are ND
98	N-Nitrosodiphenylamine	5	Y	Y	0.4		All ND, MDL<C, MEC=MDL	0.4	MEC<C, go to Step 5	Y	Y	0.4		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
99	Phenanthrene	No Criteria	Y	Y	0.03		No Criteria	No Criteria	No Criteria	Y	Y	0.03		N	No Criteria	No Criteria	Uo	No Criteria
100	Pyrene	960	Y	Y	0.03		All ND, MDL<C, MEC=MDL	0.03	MEC<C, go to Step 5	Y	Y	0.03		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
101	1,2,4-Trichlorobenzene	No Criteria	Y	Y	0.3		No Criteria	No Criteria	No Criteria	Y	Y	0.3		N	No Criteria	No Criteria	Uo	No Criteria
102	Aldrin	0.00013	Y	Y	0.003		All ND, MinDL>C, Go to Step 5			Y	Y	0.003		Y	No detected value of B, Step		No	UD; effluent data and B are ND
103	alpha-BHC	0.0039	Y	Y	0.002		All ND, MDL<C, MEC=MDL	0.002	MEC<C, go to Step 5	Y	Y	0.002		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
104	beta-BHC	0.014	Y	Y	0.001		All ND, MDL<C, MEC=MDL	0.001	MEC<C, go to Step 5	Y	Y	0.001		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
105	gamma-BHC	0.019	Y	Y	0.001		All ND, MDL<C, MEC=MDL	0.001	MEC<C, go to Step 5	Y	Y	0.001		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
106	delta-BHC	No Criteria	Y	Y	0.001		No Criteria	No Criteria	No Criteria	Y	Y	0.001		N	No Criteria	No Criteria	Uo	No Criteria
107	Chlordane (303d listed)	0.00057	Y	Y	0.005		All ND, MinDL>C, Go to Step 5			Y	Y	0.005		Y	No detected value of B, Step		No	UD; effluent data and B are ND
108	4,4'-DDT (303d listed)	0.00059	Y	Y	0.001		All ND, MinDL>C, Go to Step 5			Y	Y	0.001		Y	No detected value of B, Step		No	UD; effluent data and B are ND
109	4,4'-DDE (linked to DDT)	0.00059	Y	Y	0.001		All ND, MinDL>C, Go to Step 5			Y	Y	0.001		Y	No detected value of B, Step		No	UD; effluent data and B are ND
110	4,4'-DDD	0.00083	Y	Y	0.001		All ND, MinDL>C, Go to Step 5			Y	Y	0.001		Y	No detected value of B, Step		No	UD; effluent data and B are ND
111	Dieldrin (303d listed)	0.00014	Y	Y	0.002		All ND, MinDL>C, Go to Step 5			Y	Y	0.002		Y	No detected value of B, Step		No	UD; effluent data and B are ND
112	alpha-Endosulfan	0.056	Y	Y	0.002		All ND, MDL<C, MEC=MDL	0.002	MEC<C, go to Step 5	Y	Y	0.002		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
113	beta-Endolsulfan	0.056	Y	Y	0.001		All ND, MDL<C, MEC=MDL	0.001	MEC<C, go to Step 5	Y	Y	0.001		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
114	Endosulfan Sulfate	110	Y	Y	0.001		All ND, MDL<C, MEC=MDL	0.001	MEC<C, go to Step 5	Y	Y	0.001		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
115	Endrin	0.036	Y	Y	0.002		All ND, MDL<C, MEC=MDL	0.002	MEC<C, go to Step 5	Y	Y	0.002		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
116	Endrin Aldehyde	0.76	Y	Y	0.002		All ND, MDL<C, MEC=MDL	0.002	MEC<C, go to Step 5	Y	Y	0.002		N	No detected value of B, Step		No	Ud;MEC<C & B is ND
117	Heptachlor	0.00021	Y	Y	0.003		All ND, MinDL>C, Go to Step 5			Y	Y	0.003		Y	No detected value of B, Step		No	UD; effluent data and B are ND
118	Heptachlor Epoxide	0.0001	Y	Y	0.002		All ND, MinDL>C, Go to Step 5			Y	Y	0.002		Y	No detected value of B, Step		No	UD; effluent data and B are ND
119-125	PCBs sum (2)	0.00017	Y	Y	0.34		All ND, MinDL>C, Go to Step 5			Y	Y	0.34		Y	No detected value of B, Step		No	UD; effluent data and B are ND
126	Toxaphene	0.0002	Y	Y	0.2		All ND, MinDL>C, Go to Step 5			Y	Y	0.2		Y	No detected value of B, Step		No	UD; effluent data and B are ND
	Tributylin	0.01	Y	Y	0.00144		All ND, MDL<C, MEC=MDL	0.00144	MEC<C, go to Step 5	Y	Y	0.00139		N	No detected value of B, Step		No	Ud;MEC<C & B is ND

a. The most stringent of salt and fresh water criteria were selected for this analysis.

b. According to Table 1 of Section (b)(1) of CTR (40CFR 131.38), those criteria should use Basin Plan objectives; criteria for Se and CN are specified by the NTR.

c. Criteria for copper is taken from CTR. CTR criteria for copper is expressed as dissolved metals. The copper criter in the table is adjusted by dividing a factor of 0.83 to convert the dissovled to total metal concetration.
The freshwater criteria for Selenium is taken from NTR.

d. Acronyms in the "Final Result" column: CD: Cannot determine reasonable potential due to the absence of data, or because Minimum DL is greater than water quality objective or CTR criteria
IM: Interim monitoring is required
DL: Detection limit above water quality objective or CTR criteria
Y(B): Reasonable potential due to ambient data exceedances

Attachment 2

Calculation of Final WQBELs

Yountville
Draft Effluent Limitation Calcuations
(Per Section 1.4 of the SIP)

Note: Numbers in blue have formula in the cells - calculates values automatically

PRIORITY POLLUTANTS	Copper	Zinc	Cyanide	Mercury	Chlorodibromomethane	Dichlorobromomethane	Bis(2-Ethylhexyl)Phthalate
Basis and Criteria type	BP FW (4-d, 1-hr avg)	BP FW (4-d, 1-hr avg)	BP FW (4-d, 1-hr avg)	BP FW (4-d, 1-hr avg)	CTR HH	CTR HH	CTR HH
Lowest WQO	12.83	58.00	5.2	0.025	0.401	0.560	5.90
Translators							
Dilution Factor (D) (if applicable)	9	9	9	0	9	9	9
no. of samples per month	4	4	4	4	4	4	4
Aquatic life criteria required? (Y/N)	Y	Y	Y	Y	N	N	N
HH criteria analysis required? (Y/N)	Y	N	Y	Y	Y	Y	Y
Applicable Acute WQO	19.39	170	22	2.4			
Applicable Chronic WQO	12.83	58	5.2	0.025			
HH criteria	1300		610	0.05	0.401	0.56	1.8
Background (max conc)	1	2	0.197	0.015	0.18	0.2	0.6
Background (avg conc for HH calc)	1		0.197	0.007675	0.18	0.2	0.45
Is the pollutant Bioaccumulative(Y/N)	N	N	N	Y	N	N	N
ECA acute	184.9	1,682.00	218.2	2.4			
ECA chronic	119.3	562	50.227	0.025			
ECA HH	12991		6,098	0.05	2.39	3.8	13.95
No. of data points <10 or atleast 80% of data reported non detect? (Y/N)	N	N	N	N	Y	Y	Y
avg of data points	27.600	98.000	6.160	0.050			
SD	12.607	40.985	4.731	0.043			
CV calculated	0.46	0.42	0.77	0.86	N/A	N/A	N/A
CV (Selected) - Final	0.46	0.42	0.77	0.86	0.60	0.60	0.60
ECA acute mult99	0.40	0.43	0.26	0.23			
ECA chronic mult99	0.61	0.63	0.45	0.42			
LTA acute	73.85	716.58	56.46	0.56			
LTA chronic	72.43	354.86	22.71	0.01			
minimum of LTAs	72.43	354.86	22.71	0.01			
AMEL mult95	1.41	1.38	1.72	1.81	1.55	1.55	1.55
MDEL mult99	2.50	2.35	3.86	4.26	3.11	3.11	3.11
AMEL (aq life)	102.32	488.15	39.02	0.02			
MDEL(aq life)	181.34	832.94	87.76	0.04			
MDEL/AMEL Multiplier	1.77	1.71	2.25	2.36	2.01	2.01	2.01
AMEL (human hlth)	12991		6098	0.05000	2.39000	3.80000	13.95000
MDEL (human hlth)	23024		13717	0.11806	4.79479	7.62352	27.98634
minimum of AMEL for Aq. life vs HH	102.32	488.15	39.02	0.02	2.39	3.80	13.95
minimum of MDEL for Aq. Life vs HH	181.34	832.94	87.76	0.04	4.79	7.62	27.99
Current limit in permit (30-d avg)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Current limits in permit (daily)	78	1055	52	24/0.084	N/A	N/A	N/A
Final limit - AMEL	102.32	488.15	39.02	0.019	2.390	3.800	13.95
Final limit - MDEL	181.34	832.94	87.76	0.045	4.795	7.624	27.99
Max Effl Conc (MEC)	55	160.0	14.0	0.028	0.800	5.800	8

Time/Date Printed: 5:04 PM 3/17/04
Filename: draft Yountville RPA 1-14

Attachment 3

Effluent Monitoring Data (January 2000 through March 2003)

	Original Data Set										Additional Data Set									
	3/1/00		12/6/00		3/7/01		12/12/01		3/6/02		2/14/02		4/17/02		8/7/02		12/4/02		3/3/03	
Antimony											J	0.3	J	0.2	J	0.3	J	0.3	<	0.2
Arsenic	<	4	<	4	<	4		1.1		0.7	J	0.49		0.8		0.8		0.8		0.9
Beryllium											<	0.06	<	0.06	<	0.06	<	0.05	<	0.05
Cadmium	<	1	<	1	<	0.2		0.2		0.1	J	0.09		0.1		0.1		0.1		0.2
Chromium (III)	<	5	<	5	<	5		0.5		0.5	J	0.42	J	0.6		0.7		0.8		1
Chromium (VI)											<	2	<	2	<	0.9	<	0.9	J	2.6
Copper		26		32		21		20		18		18		16		27		55		43
Lead	<	3	<	3	<	3		0.76		0.4		0.43		0.37		0.42		0.59		0.66
Mercury	<	0.2	<	0.2	<	0.2	<	0.13	<	0.008		0.017		0.028		0.013		0.018		0.024
Nickel	<	5	<	5	<	5		4.2		3.1		3.2		3.6		3.9		3.7		4.1
Selenium	<	10	<	10	<	1		0.7	<	0.3	J	1	<	0.5	J	0.6	<	0.5	<	0.5
Silver	<	3	<	3	<	0.5		0.3		0.2		0.2		0.1	J	0.04		0.2		0.2
Thallium											<	0.03	<	0.03	<	0.03	J	0.06	<	0.03
Zinc		60		50		50		160		140		150		110		85		77		98
Cyanide	<	3	<	17	<	3		13		14		3	J	2.3		9		6	J	2.8
2,3,7,8 TCDD												7.504E-08				4.39E-08		1.0325E-07		1.4895E-07
Acrolein											<	3.3			<	1	<	1	<	1
Acrylonitrile											<	1.6			<	1	<	1	<	1
Benzene											<	0.27			<	0.3	<	0.3	<	0.3
Bromoform											<	0.1			<	0.2	<	0.2	<	0.2
Carbon Tetrachloride											<	0.42			<	0.42	<	0.42	<	0.42
Chlorobenzene											<	0.19			<	0.3	<	0.3	<	0.3
Chlorodibromomethane											<	0.18				0.8	<	0.3	<	0.3
Chloroethane											<	0.34			<	0.34	<	0.34	<	0.34
2-Chloroethylvinyl ether											<	0.31			<	0.32	<	0.32	<	0.32
Chloroform												2				20		3.7		9.3
Dichlorobromomethane											<	0.46				5.8	J	0.4		0.9
1,1-Dichloroethane											<	0.28			<	0.34	<	0.34	<	0.34
1,2-Dichloroethane											<	0.18			<	0.2	<	0.2	<	0.2
1,1-Dichloroethylene											<	0.37			<	0.49	<	0.49	<	0.49
1,2-Dichloropropane											<	0.22			<	0.2	<	0.2	<	0.2
1,3-Dichloropropylene											<	0.47			<	0.5	<	0.5	<	0.5
Ethylbenzene											<	0.3			<	0.4	<	0.4	<	0.4
Methyl Bromide											<	0.46			<	0.42	<	0.42	<	0.42
Methyl Chloride											<	0.36			<	0.46	<	0.46	<	0.46
Methylene Chloride											<	0.38			<	0.4	<	0.4	<	0.4
1,1,2,2-Tetrachloroethane											<	0.34			<	0.3	<	0.3	<	0.3
Tetrachloroethylene											<	0.32			<	0.44	<	0.44	<	0.44
Toluene											<	0.25			<	0.32	<	0.32	<	0.32
1,2-Trans-Dichloroethylene											<	0.3			<	0.43	<	0.43	<	0.43
1,1,1-Trichloroethane											<	0.35			<	0.49	<	0.49	<	0.49
1,1,2-Trichloroethane											<	0.27			<	0.3	<	0.3	<	0.3
Trichloroethylene											<	0.29			<	0.3	<	0.3	<	0.3
Vinyl Chloride											<	0.34			<	0.47	<	0.47	<	0.47
2-Chlorophenol											<	0.4			<	0.6	<	0.6	<	0.6
2,4-Dichlorophenol											<	0.3			<	0.7	<	0.7	<	0.7
2,4-Dimethylphenol											<	0.3			<	0.9	<	0.9	<	0.9
2-Methyl- 4,6-Dinitrophenol											<	0.4			<	0.9	<	0.9	<	0.9
2,4-Dinitrophenol											<	0.3			<	0.6	<	0.6	<	0.6
2-Nitrophenol											<	0.3			<	0.7	<	0.7	<	0.7
4-Nitrophenol											<	0.2			<	0.6	<	0.6	<	0.6
3-Methyl 4-Chlorophenol											<	0.3			<	0.5	<	0.5	<	0.5
Pentachlorophenol											<	0.4			<	0.9	<	0.9	<	0.9
Phenol											<	0.2			<	0.4	<	0.4	<	0.4
2,4,6-Trichlorophenol											<	0.2			<	0.6	<	0.6	<	0.6
Acenaphthene			<	5					<	0.17	<	0.17			<	0.17	<	0.17	<	0.17
Acenaphthylene			<	5					<	0.03	<	0.03			<	0.03	<	0.03	<	0.03
Anthracene			<	5					<	0.16	<	0.16			<	0.16	<	0.16	<	0.16
Benzidine											<	0.3			<	1	<	1	<	1
Benzo(a)Anthracene			<	5					<	0.12	<	0.12			<	0.12	<	0.12	<	0.12
Benzo(a)Pyrene			<	5					<	0.09	<	0.09			<	0.09	<	0.09	<	0.09
Benzo(b)Fluoranthene			<	5					<	0.11	<	0.11			<	0.11	<	0.11	<	0.11
Benzo(ghi)Perylene			<	5					<	0.06	<	0.06			<	0.06	<	0.06	<	0.06
Benzo(k)Fluoranthene			<	5					<	0.16	<	0.16			<	0.16	<	0.16	<	0.16
Bis(2-Chloroethoxy)Methane											<	0.3			<	0.9	<	0.9	<	0.9
Bis(2-Chloroethyl)Ether											<	0.3			<	0.7	<	0.7	<	0.7
Bis(2-Chloroisopropyl)Ether											<	1			<	0.6	<	0.6	<	0.6
Bis(2-Ethylhexyl)Phthalate												3				3		4		8
4-Bromophenyl Phenyl Ether											<	0.5			<	0.4	<	0.4	<	0.4
Butylbenzyl Phthalate											<	0.4			<	0.8	<	0.8	<	0.8
2-Chloronaphthalene											<	0.3			<	0.5	<	0.5	<	0.5
4-Chlorophenyl Phenyl Ether											<	0.4			<	0.5	<	0.5	<	0.5
Chrysene			<	5					<	0.14	<	0.14			<	0.14	<	0.14	<	0.14
Dibenzo(a,h)Anthracene			<	5					<	0.04	<	0.04			<	0.04	<	0.04	<	0.04
1,2-Dichlorobenzene											<	0.52			<	0.94	<	0.8	<	0.8
1,3-Dichlorobenzene											<	0.36			<	0.8	<	0.9	<	0.9

	Original Data Set										Additional Data Set									
	3/1/00		12/6/00		3/7/01		12/12/01		3/6/02		2/14/02		4/17/02		8/7/02		12/4/02		3/3/03	
1,4-Dichlorobenzene											<	0.42			<	1.09	<	0.9	<	0.9
3,3 Dichlorobenzidine											<	0.4			<	0.3	<	0.3	<	0.3
Diethyl Phthalate											<	0.4			<	0.7	<	0.7	<	0.7
Dimethyl Phthalate											<	0.4			<	0.7	<	0.7	<	0.7
Di-n-Butyl Phthalate											<	0.4			<	1	<	1	<	1
2,4-Dinitrotoluene											<	0.3			<	0.6	<	0.6	<	0.6
2,6-Dinitrotoluene											<	0.3			<	0.6	<	0.6	<	0.6
Di-n-Octyl Phthalate											<	0.4			<	0.9	<	0.9	<	0.9
1,2-Diphenylhydrazine											<	0.3			<	0.6	<	0.6	<	0.6
Fluoranthene		<	5					<	0.03		<	0.03			<	0.03	<	0.03	<	0.03
Fluorene		<	5					<	0.02		<	0.02			<	0.02	<	0.02	<	0.02
Hexachlorobenzene											<	0.4			<	0.4	<	0.4	<	0.4
Hexachlorobutadiene											<	0.2			<	0.7	<	0.7	<	0.7
Hexachlorocyclopentadiene											<	0.1			<	0.4	<	0.4	<	0.4
Hexachloroethane											<	0.2			<	0.6	<	0.6	<	0.6
Indeno(1,2,3-cd)Pyrene		<	5					<	0.04		<	0.04			<	0.04	<	0.04	<	0.04
Isophorone											<	0.3			<	0.8	<	0.8	<	0.8
Naphthalene		<	5					<	0.05		<	0.05			<	0.05	<	0.05	<	0.05
Nitrobenzene											<	0.3			<	0.7	<	0.7	<	0.7
N-Nitrosodimethylamine											<	0.4			<	0.6	<	0.6	<	0.6
N-Nitrosodi-n-Propylamine											<	0.3			<	0.7	<	0.8	<	0.8
N-Nitrosodiphenylamine											<	0.4			<	0.8	<	0.7	<	0.7
Phenanthrene		<	5					<	0.03		<	0.03			<	0.03	<	0.03	<	0.03
Pyrene		<	5					<	0.03		<	0.03			<	0.03	<	0.03	<	0.03
1,2,4-Trichlorobenzene											<	0.3			<	0.6	<	0.6	<	0.6
Aldrin											<	0.003			<	0.003	<	0.003	<	0.003
alpha-BHC											<	0.002			<	0.003	<	0.003	<	0.003
beta-BHC											<	0.001			<	0.004	<	0.004	<	0.004
gamma-BHC											<	0.001			<	0.003	<	0.003	<	0.003
delta-BHC											<	0.001			<	0.002	<	0.002	<	0.002
Chlordane											<	0.005			<	0.005	<	0.005	<	0.005
4,4'-DDT											<	0.001			<	0.003	<	0.003	<	0.003
4,4'-DDE (linked to DDT)											<	0.001			<	0.002	<	0.002	<	0.002
4,4'-DDD											<	0.001			<	0.002	<	0.002	<	0.002
Dieldrin											<	0.002			<	0.002	<	0.002	<	0.002
alpha-Endosulfan											<	0.003			<	0.002	<	0.002	<	0.002
beta-Endolsulfan											<	0.001			<	0.002	<	0.002	<	0.002
Endosulfan Sulfate											<	0.001			<	0.002	<	0.002	<	0.002
Endrin											<	0.002			<	0.002	<	0.002	<	0.002
Endrin Aldehyde											<	0.002			<	0.002	<	0.002	<	0.002
Heptachlor											<	0.003			<	0.003	<	0.003	<	0.003
Heptachlor Epoxide											<	0.002			<	0.003	<	0.003	<	0.003
PCBs sum											<	0.4			<	0.34	<	0.34	<	0.34
Toxaphene											<	0.2			<	0.4	<	0.4	<	0.4
Tributyltin											<	0.00164			<	0.00147	<	0.00151	<	0.00144

Attachment 4

Calculation of Mercury Mass Limit and Mass Trigger

Town of Yountville
2004 NPDES Permit Renewal
Mercury Mass Trigger and Limit Calculations

Year	Month	Mercury Concentration (µg/L)[1]		Hg Conc. Used for Load Calc.	Average Total Treated Effluent (mgd)	Average River Discharge (mgd)	Mercury Mass Limit			Mercury Mass Trigger		
							Monthly Mass Load (kg/mo)	12-Month Moving Average (kg/mo)	ln(12-Month Moving Average)	Monthly Mass Load (kg/mo)	12-Month Moving Average (kg/mo)	ln(12-Month Moving Average)
2000	January	<	0.2	0.1	0.435	0.345	0.005			0.004		
	February	<	0.2	0.1	0.851	0.642	0.010			0.007		
	March	<	0.2	0.1	0.648	0.430	0.007			0.005		
	April	<	0.2	0.1	0.426	0.307	0.005			0.004		
	May	<	0.2	0.1	0.377	0.255	0.004			0.003		
	June	<	0.2	0.1	0.376	0.000	0.004			0.000		
	July	<	0.2	0.1	0.405	0.000	0.005			0.000		
	August	<	0.2	0.1	0.334	0.000	0.004			0.000		
	September	<	0.2	0.1	0.313	0.000	0.004			0.000		
	October	<	0.2	0.1	0.324	0.000	0.004			0.000		
	November	<	0.2	0.1	0.303	0.081	0.003			0.001		
	December	<	0.2	0.1	0.291	0.071	0.003	0.005	-5.324	0.001	0.002	-6.193
2001	January	<	0.2	0.1	0.373	0.275	0.004	0.005	-5.336	0.003	0.002	-6.226
	February	<	0.2	0.1	0.659	0.584	0.008	0.005	-5.375	0.007	0.002	-6.255
	March	<	0.2	0.1	0.490	0.370	0.006	0.004	-5.408	0.004	0.002	-6.285
	April	<	0.2	0.1	0.343	0.306	0.004	0.004	-5.426	0.004	0.002	-6.286
	May	<	0.2	0.1	0.327	0.278	0.004	0.004	-5.437	0.003	0.002	-6.274
	June	<	0.2	0.1	0.311	0.000	0.004	0.004	-5.451	0.000	0.002	-6.274
	July	<	0.2	0.1	0.341	0.000	0.004	0.004	-5.466	0.000	0.002	-6.274
	August	<	0.2	0.1	0.330	0.000	0.004	0.004	-5.467	0.000	0.002	-6.274
	September	<	0.2	0.1	0.311	0.000	0.004	0.004	-5.467	0.000	0.002	-6.274
	October	<	0.2	0.1	0.308	0.000	0.004	0.004	-5.471	0.000	0.002	-6.274
	November	<	0.2	0.1	0.399	0.416	0.005	0.004	-5.449	0.005	0.002	-6.117
	December[2]	<	0.2	0.1	0.868	0.721	0.010	0.005	-5.328	0.008	0.003	-5.868
2002	January	=	0.016	0.016	0.646	0.496	0.001	0.005	-5.383	0.001	0.003	-5.936
	February		0.017	0.017	0.419	0.273	0.001	0.004	-5.514	0.001	0.002	-6.153
	March	<	0.008	0.004	0.484	0.479	0.000	0.004	-5.633	0.000	0.002	-6.326
	April		0.028	0.028	0.379	0.401	0.001	0.003	-5.698	0.001	0.002	-6.435
	May	=	0.016	0.016	0.374	0.386	0.001	0.003	-5.778	0.001	0.001	-6.574
	June	=	0.016	0.016	0.357	0.000	0.001	0.003	-5.860	0.000	0.001	-6.574
	July	=	0.016	0.016	0.340	0.000	0.001	0.003	-5.961	0.000	0.001	-6.574
	August		**0.013**	0.013	0.316	0.000	0.000	0.002	-6.075	0.000	0.001	-6.574
	September	=	0.016	0.016	0.299	0.000	0.001	0.002	-6.191	0.000	0.001	-6.574
	October	=	0.016	0.016	0.311	0.000	0.001	0.002	-6.320	0.000	0.001	-6.574
	November	=	0.016	0.016	0.326	0.146	0.001	0.001	-6.524	0.000	0.001	-6.888
	December		0.018	0.018	0.780	0.825	0.002	0.001	-7.169	0.002	0.000	-7.661
2003	January	=	0.024	0.024	0.591	0.591	0.002	0.001	-7.122	0.002	0.001	-7.541
	February	=	0.024	0.024	0.436	0.548	0.001	0.001	-7.083	0.002	0.001	-7.398
	March		0.024	0.024	0.441	0.556	0.001	0.001	-6.989	0.002	0.001	-7.234

Mean			-5.847			-6.496
Standard Deviation			0.606			0.456
Mean + 3*SD			-4.027			-5.129
exp(Mean + 3*SD)			**0.018**			**0.006**

Footnote: Mercury Concentration shaded in yellow means that the data is not actual effluent data since Hg was not samples in that month. If there is no Hg data, then the annual average value is inserted for the calculation of mass load except for Years 2000 and 2001. When calculating the average, half Detection limits replace the non-detects.