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Secretary for
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California Regional Water Quality Control Board

San Francisco Bay Region

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Arnold Schwarzenegger
Governor

ORDER NO. R2-2010-0072
NPDES NO. CA0038121

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

Table 1. Discharger Information

Discharger	Town of Yountville and California Department of Veterans Affairs
Name of Facility	Town of Yountville/California Veterans Home Joint Wastewater Reclamation Facility and its associated collection systems
Facility Address	7501 Solano Avenue
	Yountville, CA 94599
	Napa County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a **minor** discharge.	

Discharges by the Town of Yountville/California Veterans Home Joint Wastewater Reclamation Plant from the discharge point identified below are subject to waste discharge requirements as set forth in this Order.

Table 2. Discharge Locations

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Secondary Treated Municipal Wastewater	38º 24’ 22.01” N	122º 20’ 32.04” W	Napa River

Table 3. Administrative Information

This Order was adopted by the Regional Water Board on:	**May 12, 2010**
This Order shall become effective on:	**July 1, 2010**
This Order shall expire on:	**June 30, 2015**
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	**180 days prior to the Order expiration date**

I, Bruce H. Wolfe, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on the date indicated in Table 3.

Digitally signed by Bruce Wolfe
Date: 2010.05.18 13:18:39 -07'00'

Bruce H. Wolfe, Executive Officer

Table of Contents

I. Facility Information....3
II. Findings....3
III. Discharge Prohibitions....10
IV. Effluent Limitations and Discharge Specifications....11
V. Receiving Water Limitations....13
VI. Groundwater Limitations....14
VII. Provisions....14

Appendix A – Definitions

Appendix B – Site Map

Appendix C – Flow Schematic

Appendix D – Federal Standard Provisions

Appendix E – Monitoring and Reporting Program

Appendix F – Fact Sheet

Appendix G – Regional Standard Provisions

List of Tables

Table 1. Discharger Information....1
Table 2. Discharge Locations....1
Table 3. Administrative Information....1
Table 4. Facility Information....3
Table 5. Basin Plan Beneficial Uses of the Napa River....7
Table 6. Effluent Limitations for Conventional Pollutants and Chlorine....11
Table 7. Effluent Limitations for Toxic Pollutants....12
Table 8. Recycled Water Expansion Tasks....20

I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	Town of Yountville and the California Department of Veterans Affairs
Name of Facility	Town of Yountville/State of California Veterans Home Joint Wastewater Reclamation Facility and their respective collection systems
Facility Address	7501 Solano Avenue
	Yountville, CA 94599
	Napa County
Facility Contact, Title, and Phone	Donald Moore, Wastewater System Supervisor, (707) 944-2988
Mailing Address	6550 Yount Street, Yountville CA 94599
Type of Facility	Publicly Owned Treatment Works (POTW)
Facility Design Flow	0.55 million gallons per day (MGD) (average dry weather design treatment capacity)
Service Areas	Town of Yountville and the State of California Veterans Home
Service Population	3290

II. FINDINGS

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

A. Background. The Town of Yountville and the California Department of Veterans Affairs (hereinafter, known as the Discharger) are currently discharging under Order No. R2-2004-0017 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0038121. The Discharger submitted a Report of Waste Discharge, dated October 31, 2008, and applied for reissuance of its NPDES permit to discharge up to 0.55 MGD (average dry weather flow) of secondary treated wastewater from the Town of Yountville/California Veterans Home Joint Wastewater Reclamation Facility (hereinafter, the Plant). The Discharger's discharge is also currently under Order No. R2-2007-0077 (NPDES Permit CA0038849) that superseded all requirements on mercury from wastewater discharges in the region. The mercury permit is unaffected by this Order.

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

B. Facility Description. The Town of Yountville and the California Department of Veterans Affairs (owner of the California Veterans Home) jointly own the Plant.

The Town of Yountville operates the Plant, which provides secondary treatment of wastewater from domestic and commercial sources from the Town of Yountville and the California Veterans Home. The estimated service area population is about 3,290, consisting of 2,290 Town residents and approximately 1,000 residents of the California Veterans Home. The Facility (hereinafter) includes the Plant, and the Town of Yountville's collection system (approximately 8.5 miles of sewer line and one pump station) and the California Veterans Home collection system (approximately 4.7 miles of collection system). The Town of Yountville is responsible for operating and maintaining its collection system and the California Veterans Home is responsible for operating and maintaining its collection system.

The average dry weather design treatment capacity of the Plant is 0.55 MGD, and its hydraulic capacity is 2.0 MGD. The average discharge rate from 2004 to 2007 was 0.57 MGD, and the highest maximum daily effluent flow rate during this period was 1.76 MGD. The Plant can accept up to 2.8 MGD through its primary system during peak wet weather conditions. Flows in excess of the Plant's secondary treatment capacity are stored in a 3.8 million gallon pond for later treatment. Wastewater treatment processes at the Plant include grit removal, primary clarification, first stage trickling filtration, intermediate clarification, second stage trickling filtration, aerated solids contact, final sedimentation, disinfection (chlorination), and dechlorination (sulfur dioxide). The treated wastewater flows to an effluent storage pond for discharge to the Napa River, or for recycling and reuse.

Wastewater is not discharged to the Napa River all year, but only during the wet season from October 1 through May 15, when the Napa River flow is high. During the rest of the year, wastewater is treated to meet Title 22 reclamation requirements through additional filtration and disinfection, and then pumped to storage ponds for golf course and vineyard irrigation. The recycled water system is covered under the region-wide general reclamation permit (Regional Water Board Order No. 96-011).

With the addition of new storage ponds for the Mondavi Vineyards in 2009, the Discharger doubled its recycled water storage capacity from 118 acre-feet (AF) to 230 AF. The significant gain in storage allowed the Discharger to use 85% of its effluent for irrigation during the 2008/09 water year, discharging only 15% to the Napa River when inflows to the treatment plant were greater than the amount that could be distributed to recycled water users. Some of the discharge to the Napa River was due to high inflow/infiltration (I/I) into the collection system, which typically occurs during large storms. The flow of the Napa River is also high during storms, so that the discharge will receive dilution. Flow data from a USGS monitoring station located about ten miles upstream of Yountville indicates that for the 2008/09 season, most river flow-to-effluent ratios were greater than 1,000:1 and all were greater than 100:1.

The Discharger is currently upgrading its treatment and distribution system in an effort to increase recycled water quality and eliminate discharges to the Napa River as much as possible, except during exceptionally large storm events or times when recycled water user storage ponds are unavailable. Phase I of the upgrades is underway. This phase includes modifying the Plant's filters and disinfection system to produce Title 22 tertiary recycled water. It currently produces Title 22 secondary recycled water. The Discharger anticipates that Phase I, which includes changing the piping layout to allow better control of wastewater flows, will be complete at the beginning of 2010, and that Phase II, which includes electrical improvements and expansion of the recycled water pumping system, will be completed within five years.

Biosolids from the various process units are returned to the primary clarifier, which operates as a sludge thickener. Thickened sludges are processed in primary and secondary sludge digesters and then applied to one of two sludge drying beds. Less than 100 tons of biosolids are placed in the Clover Flat Landfill annually.

The Discharger is not covered under the Statewide General Permit for Industrial Stormwater Discharges (NPDES General Permit CAS000001) because the Discharger's flow is less than that required to be covered by the general permit (one MGD for POTWs). The Discharger has developed and maintains a Storm Water Pollution Prevention Plan.

Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

C. Legal Authorities. This Order is issued pursuant to Clean Water Act (CWA) section 402 and implements regulations adopted by the U. S. Environmental Protection Agency (USEPA) and Chapters 5.5, Division 7 of the California Water Code (CWC) (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from the Facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4, Division 7 of the CWC (commencing with section 13260).

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

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

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

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

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

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

Beneficial uses of the Napa River are listed in Table 5.

Table 5. Beneficial Uses of the Napa River and Groundwater

Receiving Water Name	Beneficial Uses
Napa River	Agricultural Supply (AGR) Municipal and Domestic Supply (MUN) Cold Freshwater Habitat (COLD) Fish Spawning (SPWN) Warm Freshwater Habitat (WARM) Wildlife Habitat (WILD) Water Contact Recreation (REC1) Non-Contact Water Recreation (REC2) Navigation (NAV) Fish Migration (MIGR) Preservation of Rare and Endangered Species (RARE)

The State Water Board adopted a Water Quality Control Plan for the Control of Temperature in Coastal and Interstate Water and Enclosed Bays and Estuaries of California (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for surface waters. While the effluent temperature is typically higher than the receiving water temperature, the flow rate of the discharge is much less than of the river (69:1 minimum river to effluent ratio) and will not significantly increase the temperature of the river. This permit prohibits the alteration of the river temperature beyond natural background levels. Therefore, the requirements of this permit implement the Thermal Plan.

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

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

K. Recycled Water Policy. The State Water Board adopted Resolution No. 2009-0011 on February 3, 2009, titled *Policy for Water Quality Control for Recycled Water*, which is intended to promote sustainable local water supplies by increasing the acceptance and promoting the use of recycled water. The policy sets a goal to increase the use of recycled water statewide by at least one million acre feet per year (afy) over 2002 level by 2020 and by at least two million afy by 2030. The policy also requires Regional Water Boards to exercise their authority to the fullest extent possible to encourage the use of recycled water, and to develop watershed based salt and nutrient management plans to ensure use of recycled water does not degrade groundwater resources.

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

M. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based and water quality-based effluent levels for individual pollutants. The technology-based effluent limitations consist of restrictions on biochemical oxygen demand (BOD), total suspended solids (TSS), and pH. Derivation of these technology-based limitations is discussed in the Fact Sheet (Attachment F). This Order's technology-based pollutant restrictions implement the minimum applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum federal technology-based requirements as necessary to meet water quality standards.

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

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

O. Anti-Backsliding Requirements. CWA sections 402(o)(2) and 303(d)(4) and 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as those in Order No. R2-2004-0017. As discussed in the Fact Sheet, the permitted discharge is consistent with anti-backsliding requirements.

P. Endangered Species Act. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the State. The Discharger is responsible for meeting all requirements of applicable State and federal law pertaining to threatened and endangered species.

Q. Monitoring and Reporting. 40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

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

S. Provisions and Requirements Implementing State Law. This Order contains no provisions or requirements that only implement State law.

T. Notification of Interested Parties. The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.

U. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

THEREFORE, IT IS HEREBY ORDERED, that this Order supercedes Order No. R2-2004-0017 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

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

B. Discharge of treated wastewater to the Napa River is prohibited unless the river-to-effluent flow ratio is at least 42:1.

C. Discharge of treated wastewater is prohibited except when inflow to the treatment plant exceeds the capacity of the recycled water distribution and storage system.

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

E. The average dry weather flow, measured at Monitoring Locations EFF-001, as described in the attached Monitoring and Reporting Plan (MRP) (Attachment E), shall not exceed 0.55 MGD. Actual average dry weather flow shall be determined for compliance with this prohibition over three consecutive dry weather months each year.

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

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations for Conventional and Chlorine

The Discharger shall maintain compliance with the following effluent limitations, with compliance measured at Monitoring Location EFF-001 (except for total residual chlorine which will be measured at EFF-002) as described in the attached MRP (Attachment E).

a. Conventional Pollutants and Chlorine:

Table 6. Effluent Limitations for Conventional Pollutants and Chlorine

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand (BOD)	mg/L	30	45	---	---	---
Total Suspended Solids (TSS)	mg/L	30	45	---	---	---
Oil and Grease	mg/L	10	---	20	---	---
pH [1]	s.u.	---	---	---	6.5	8.5
Chlorine, Total Residual	mg/L	---	---	---	---	0.0 [2]

Footnotes to Table 6:

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

[2] The Discharger may elect to use a continuous on-line monitoring systems for measuring flows, sodium hypochlorite, and sodium bisulfite dosage (including a safety factor) and concentration to prove that chlorine residual exceedances are false positives. If convincing evidence is provided, Regional Water Board staff will conclude that these chlorine residual exceedances are false positives and are not violations of this Order's Total Residual Chlorine limit.

b. BOD and TSS 85 Percent Removal: The concentration-based average monthly percent removal of BOD and TSS shall not be less than 85 percent.

c. Bacteria Quality:

(1) The five-day moving median value for the most probable number (MPN) of total coliform bacteria shall not exceed 23 MPN/100mL; and
(2) No single sample shall exceed 240 MPN/100mL when verified by a repeat sample taken within 48 hours.

B. Effluent Limitations for Toxic Pollutants

The Discharger shall maintain compliance with the following effluent limitations, with compliance measured for at Monitoring Location EFF-002, as described in the attached MRP (Attachment E).

Table 7. Effluent Limitations for Toxic Pollutants

Parameter	Units	Final Effluent Limitations [1][2]	
		Average Monthly	Maximum Daily
Copper	µg/L	34	69
Zinc	µg/L	230	460
Cyanide	µg/L	12	24
Dioxin-TEQ[3]	µg/L	1.3×10^{-8}	2.6×10^{-8}
Dichlorobromomethane	µg/L	3.0	5.9
Ammonia, Total	mg/L N	10	21

[1] a. Limitations for toxic pollutants apply to the average concentration of all samples collected during the averaging period (daily = 24-hour period; monthly = calendar month).

b. All metals limitations are expressed as total recoverable metal.

[2] A daily maximum or average monthly value for a given constituent shall be considered noncompliant with the effluent limitations only if it exceeds the effluent limitation and the Reporting Level for that constituent.

[3] Final effluent limitations for dioxin-TEQ shall become effective February 1, 2020 (ten years from the Order effective date).

C. Acute Toxicity:

a. Representative samples of the effluent, with compliance measured at Monitoring Location EFF-002, shall meet the following limits for acute toxicity. Bioassays shall be conducted in compliance with MRP section V (Attachment E). The survival of organisms in undiluted effluent shall be:

- a three (3) sample median value of not less than 90 percent survival, and
- a single sample value of not less than 70 percent survival.

b. The acute toxicity limitations are further as follows:

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

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

c. Bioassays shall be performed using the most up-to-date USEPA protocol and the most sensitive species based on the most recent screening test results. Bioassays shall be conducted in compliance with *Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to*

Freshwater and Marine Organisms, currently 5th Edition (EPA-821-R-02-012), with exceptions granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP) upon the Discharger's request with justification.

d. If the Discharger can demonstrate to the satisfaction of the Executive Officer that toxicity exceeding the levels cited above is caused by ammonia and that the ammonia in the discharge is in compliance with the ammonia effluent limits in this Order, then such toxicity does not constitute a violation of this effluent limitation.

V. RECEIVING WATER LIMITATIONS

A. Receiving water limitations are based on WQOs contained in the Basin Plan and are a required part of this Order. The discharges shall not cause the following in the Napa River:

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

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

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

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

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

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

a. Dissolved Oxygen 7.0 mg/L, minimum

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

b. Dissolved Sulfide Natural background levels

c. pH Within a range from 6.5 to 8.5

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

VI. GROUNDWATER LIMITATIONS

Not applicable.

VII. PROVISIONS

A. Standard Provisions

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

2. The Discharger shall comply with all applicable items of the Regional Standard Provisions, and Monitoring and Reporting Requirements for NPDES Surface Water Discharge Permits included in Attachment G of this Order.

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

1. Reopener Provisions

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

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

b. If new or revised WQOs or Total Maximum Daily Loads (TMDLs) come into effect for the San Francisco Bay estuary and contiguous water bodies (whether statewide, regional, or site-specific), including the Napa River. In such cases, effluent limitations in this Order will be modified as

necessary to reflect updated WQOs and wasteload allocations in TMDLs. Adoption of effluent limitations contained in this Order is not intended to restrict in any way future modifications based on legally adopted WQOs, TMDLs, or as otherwise permitted under federal regulations governing NPDES permit modifications.

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

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

e. If monitoring data provide a more accurate assessment of the effluent variability so effluent limits should be calculated.

f. Or as otherwise authorized by law.

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

2. Best Management Practices and Pollution Minimization

a. Pollution Minimization Program (PMP)

The Discharger shall continue to improve, in a manner acceptable to the Executive Officer, its PMP to reduce pollutant loadings to the treatment plant and therefore to the receiving waters.

b. Annual Pollution Prevention (P2) Report

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

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

(2) *Discussion of current pollutants of concern.* Periodically, the Discharger shall determine which pollutants are currently a problem and/or which pollutants may be potential future problems. This discussion shall address why the pollutants were identified as pollutants of concern.

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

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

(5) *Continuation of Public Outreach Program.* The Discharger shall prepare a public outreach program to communicate pollution minimization measures to its service area. Outreach may include participation in existing community events such as county fairs, initiating new community events such as displays and contests during Pollution Prevention Week, conducting school outreach programs, conducting plant tours, and providing public information in various media. Information shall be specific to target audiences. The Discharger shall coordinate with other agencies as appropriate.

(6) *Identification of specific tasks and time schedules for future efforts.* Based on the evaluation of effectiveness, the Discharger shall describe how it will continue or change its PMP tasks to more effectively reduce the loading of pollutants to the treatment plant and therefore in its effluent.

c. PMP for Pollutants with Effluent Limitations

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

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

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

d. PMP submittals for Pollutants with Effluent Limitations

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

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

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

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

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

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

i. All PMP monitoring results for the previous year,

ii. A list of potential sources of the reportable priority pollutants(s),

iii. A summary of all actions undertaken pursuant to the control strategy, and

iv. A description of actions to be taken in the following year.

3. Special Provisions for POTWs

a. Biosolids Management Practices Requirements

(1) All biosolids generated by the Discharger must be disposed of in a municipal solid waste landfill, used as part of a waste-to-energy facility, reused by land application, or disposed of in a sludge-only landfill in accordance with 40 CFR 503. If the Discharger desires to dispose of biosolids by a different method, USEPA must approve the

alternative disposal practice before start up. All the requirements in 40 CFR 503 are enforceable by USEPA whether or not they are stated in an NPDES permit or other permit issued to the Discharger. The Regional Water Board shall be copied on relevant correspondence and reports forwarded to USEPA regarding sludge management practices.

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

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

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

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

(6) For biosolids that are applied to the land, placed on a surface disposal site, or fired in a biosolids incinerator as defined in 40 CFR 503, the Discharger shall submit an annual report to USEPA and the Regional Water Board containing monitoring results and pathogen and vector attraction reduction measures as specified by 40 CFR 503, postmarked February 15 of each year, for the period covering the previous calendar year.

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

(8) This Order does not authorize permanent storage of biosolids on site or on-site disposal activities.

(9) Biosolids Monitoring and Reporting Provisions of the Regional Standard Provisions (Attachment G) apply to sludge handling, disposal and reporting practices.

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

b. Sanitary Sewer Overflows and Sewer System Management Plan

The Town of Yountville's collection system and the California Veterans Home collection system are part of the facility that is subject to this Order. As such, the Town of Yountville must properly operate and maintain its collection system and the California Veterans Home must properly operate and maintain its collection system (Attachment D, Standard Provisions - Permit Compliance, subsection I.D). The Town of Yountville and the California Veterans Home must each separately report any noncompliance (Attachment D, Standard Provision - Reporting, subsections V.E.1 and V.E.2), and each separately mitigate any discharge from their respective collection systems in violation of this Order (Attachment D, Standard Provisions - Permit Compliance, subsection I.C).

The General Waste Discharge Requirements for Sanitary Sewer Systems (General WDRs for Wastewater Collection Agencies, State Water Board Order No. 2006-0003 DWQ) has requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. While the Town of Yountville and the California Veterans Home must each comply independently with both the General WDRs for Wastewater Collection Agencies and this Order, the General WDRs for Wastewater Collection Agencies more clearly and specifically stipulate requirements for operation and maintenance and for reporting and mitigating sanitary sewer overflows. Implementation of the requirements of the General WDR for Wastewater Collection Agencies for proper operation and maintenance and mitigation of spills will satisfy the corresponding federal NPDES requirements specified in Attachment D (as supplemented by Attachment G) this Order. Following reporting requirements in the General WDRs for Wastewater Collection Agencies will satisfy NPDES reporting requirements specified in Attachment D (as supplemented by Attachment G) of the Order for sewage spills from the collection system upstream of the Plant boundaries.

The Discharger should note that Attachment D and G of this Order specify reporting requirements for unauthorized discharges from anywhere within the Plant downstream of the Plant boundaries.

4. Recycled Water Expansion Plan

The Discharger shall adhere to the following schedule to increase the amount of water it recycles.

Table 8. Recycled Water Expansion Tasks

Task	Deadline
a. Complete work to upgrade and upsize the following components of the recycled water system and treatment (Phase IIa): • Electrical system • Recycled water distribution pumps • Distribution pipeline • Variable frequency drives	December 1, 2013
b. Complete installation of a SCADA (or supervisory control and data acquisition) System that includes, at a minimum, the following operational parameters into a central control and notification system (Phase IIb): • Pump operation/wet well levels • Storage pond volume • Operational alarms • Continuous monitoring results	December 1, 2015
c. Submit annual progress reports containing information related to ongoing construction activities, funding allocations, new recycled water users, and schedule/status of future projects.	Annually on Feb 1 with the Annual Self-Monitoring Report starting with the report due in 2012

ATTACHMENT A – DEFINITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Reporting Level (RL) is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

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

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

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

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

where:

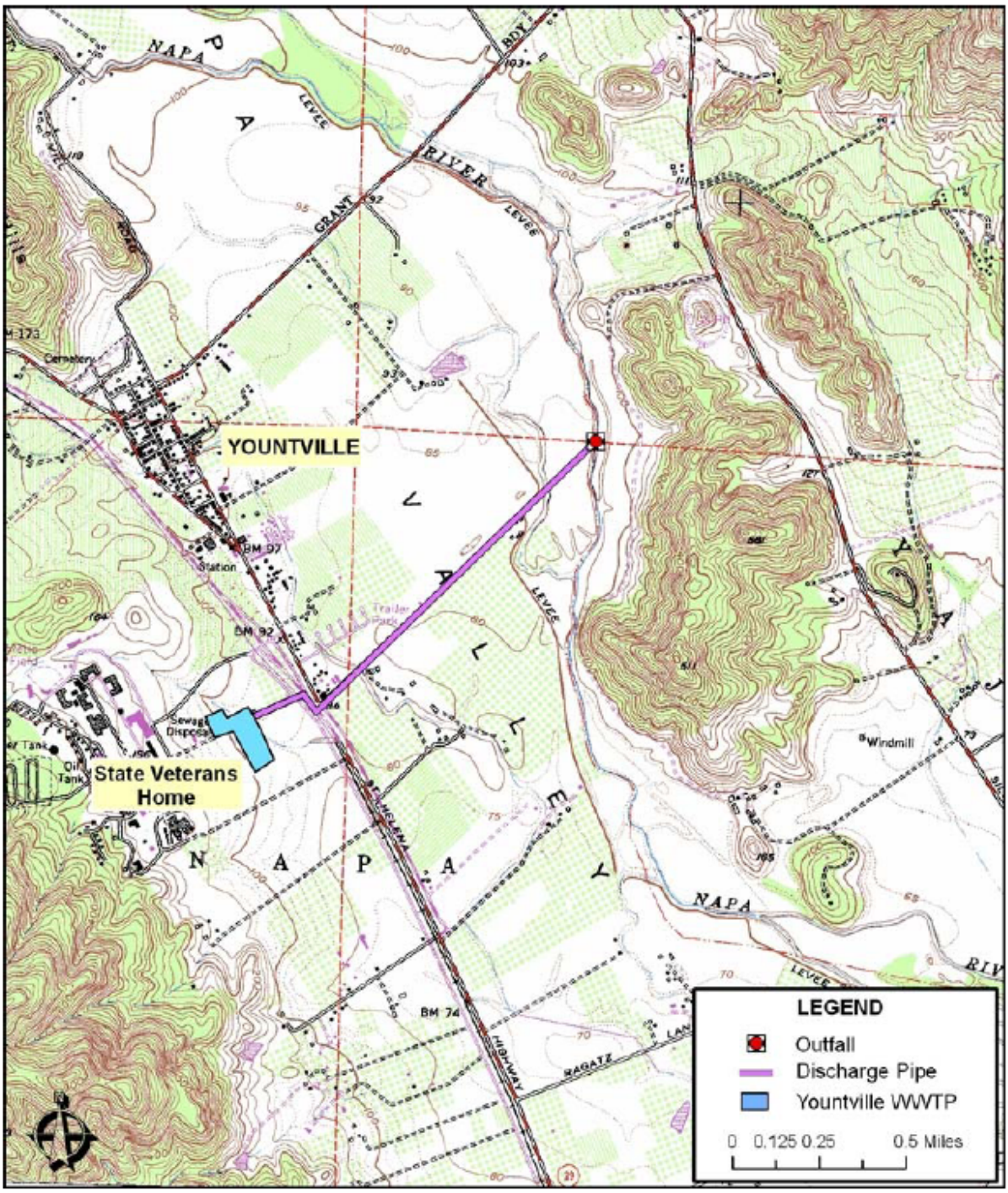
x is the observed value;

μ is the arithmetic mean of the observed values; and

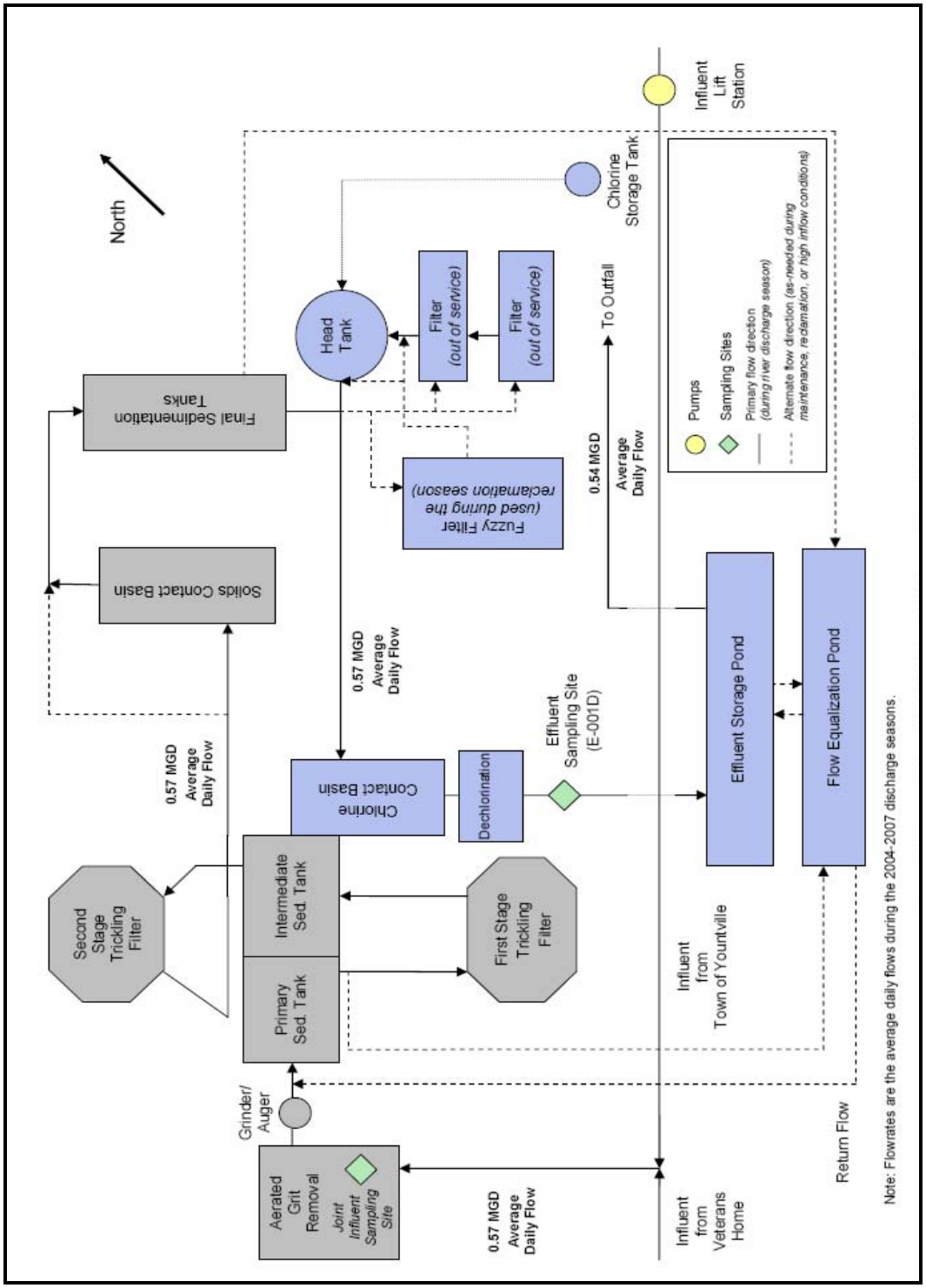
n is the number of samples.

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

ATTACHMENT B – SITE MAP



ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – FEDERAL STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

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

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

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

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

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

F. Inspection and Entry

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

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

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

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

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

G. Bypass

1. Definitions

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

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

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

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

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

    b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and

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

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

5. Notice

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

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

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed

treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1).)

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

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

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

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

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

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

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

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

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

IV. STANDARD PROVISIONS – RECORDS

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

B. Records of monitoring information shall include:

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

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

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

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

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

6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

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

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

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

B. Signatory and Certification Requirements

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

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

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

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

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and

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

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

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

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

C. Monitoring Reports

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

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

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

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

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

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

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

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

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

F. Planned Changes

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

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

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

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

G. Anticipated Noncompliance

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

H. Other Noncompliance

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

I. Other Information

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

VI. STANDARD PROVISIONS – ENFORCEMENT

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

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

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

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

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

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

I. General Monitoring Provisions E-2
II. Monitoring Locations E-2
III. Influent Monitoring Requirements E-3
IV. Effluent Monitoring Requirements E-3
V. Whole Effluent Toxicity Testing Requirements E-5
VI. Land Discharge Monitoring Requirements E-6
VII. Recycled water Monitoring Requirements E-6
VIII. Receiving water Monitoring Requirements E-6
IX. Other Monitoring Requirements E-7
X. Reporting Requirements E-7

List of Tables

Table E-1. Monitoring Station Locations E-3
Table E-2. Influent Monitoring – Monitoring Location INF-001 ..... E-3
Table E-3. Effluent Monitoring – Monitoring Location EFF-001 ..... E-4
Table E-4. Receiving Water Monitoring – Monitoring Location RSW-001 ..... E-7
Table E-5. Monitoring Periods and Reporting Schedule E-8

MONITORING AND REPORTING PROGRAM

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

I. GENERAL MONITORING PROVISIONS

A. The Discharger shall comply with the MRP for this Order as adopted by the Regional Water Board, and with all requirements contained in the Regional Standard Provisions (Attachment G). The MRP may be amended by the Executive Officer pursuant to United States Environmental Protection Agency (USEPA) regulations 40 CFR 122.62, 122.63, and 124.5. If any discrepancies exist between the MRP and the Regional Standard Provisions, the MRP prevails.

B. All analyses shall be conducted using current USEPA methods, methods approved by the USEPA Regional Administrator pursuant to 40 CFR 136.4 and 40 CFR 136.5, or equivalent methods that are commercially and reasonably available and that provide quantification of sampling parameters and constituents sufficient to evaluate compliance with applicable effluent limits and to perform reasonable potential analyses. Equivalent methods must be more sensitive than those specified in 40 CFR 136, must be specified in the permit, and must be approved for use by the Executive Officer, following consultation with the State Water Quality Control Board (State Water Board) Quality Assurance Program.

C. Laboratories analyzing monitoring samples shall be certified by the Department of Health Services, in accordance with CWC section 13176, and shall include quality assurance/quality control data with their reports.

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Type of Sampling Location	Monitoring Location Name	Monitoring Location Description
Influent	INF-001	At a point upstream of the headworks at which all waste tributary to the treatment system is present, and preceding any phase of treatment, formerly A-1.
Effluent	EFF-001	At a point after full treatment, including disinfection, formerly E-1.
Effluent	EFF-002	At a point after full treatment that represents all wastewater discharged to the Napa River at Discharge Point 001.
Receiving Water	RSW-001	At a point in the Napa River approximately 500 feet downstream of Discharge Point 001.

III. INFLUENT MONITORING REQUIREMENTS

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

Table E-2. Influent Monitoring – Monitoring Location INF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency [1]
Flow [2]	MG or MGD	Continuous	Continuous
Biochemical Oxygen Demand (BOD) [3]	mg/L	C-24	1/Week
	kg/day	C-24	1/Week
Total Suspended Solids (TSS) [3]	mg/L	C-24	1/Week
	kg/day	C-24	1/Week

Units:

MG = million gallons
MGD = million gallons per day
mg/L = milligrams per liter
kg/d = kilograms per day

Footnotes:

[1] Influent monitoring is required year-round. BOD and TSS monitoring is only required during months during which a discharge to the Napa River occurs. At least one sample shall be collected for each discharge event regardless of the duration of discharge.

[2] For each calendar month, the Discharger shall report the total daily flow volume (MG) for each day, the monthly average flow rate (MGD), the maximum daily flow rate (MGD), the minimum daily flow rate (MGD), and the total monthly flow volume (MG).

[3] To be analyzed using methods described in 40 CFR Part 136.

IV. EFFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor flow rates and treated effluent according to Table E-3 for all months during which discharge to the Napa River occurs. Parameters shall be analyzed using the analytical methods described in 40 CFR 136, except where noted.

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency [1]	Sample Location
Flow Rate [2]	MG or MGD	Continuous	Continuous	EFF-001 & EFF-002
pH [3]	standard units	Grab	1/day	EFF-001
BOD	mg/L	24-hour composite	1/week	EFF-001
	kg/day	24-hour composite	1/week	EFF-001
	% removal	Calculated	1/month	EFF-001
TSS	mg/L	24-hour composite	1/week	EFF-001
	kg/day	24-hour composite	1/week	EFF-001
	% removal	Calculated	1/month	EFF-001
Total Chlorine Residual[4]	mg/L	Cont/2 –hour	1/hour	EFF-002
Oil and Grease[5]	mg/L	24-hour composite	1/every 2 months	EFF-001
Total Coliform Bacteria	MPN/100mL	Grab	3/week	EFF-001
Temperature	°C	Grab	1/day	EFF-002
Turbidity	NTU	24-hour composite	1/day	EFF-002
Acute Toxicity [6]	% survival	24-hour composite	1/quarter	EFF-002
Dissolved Oxygen	mg/L	Grab	1/week	EFF-002
Copper	µg/L	24-hour composite	1/month	EFF-002
Zinc	µg/L	24-hour composite	1/month	EFF-002
Cyanide[7]	µg/L	Grab	1/month	EFF-002
Dioxin-TEQ	µg/L	Grab	1/year	EFF-002
Dichlorobromomethane	µg/L	Grab	1/quarter	EFF-002
Total Ammonia[8]	mg/L as N	Grab	1/quarter	EFF-002
Remaining Priority Pollutants	µg/L	[9]	1/permit Term	EFF-002
River Flow-to-Effluent Ratio[10]	--	Calculated	1/day	EFF-002

Units:

MG	=	million gallons
MGD	=	million gallons per day
°C	=	degrees Celsius
mg/L	=	milligrams per liter
kg/d	=	kilograms per day
µg/L	=	micrograms per liter
MPN/100 mL	=	most probable number per 100 milliliters
NTU	=	Nephelometric Turbidity Units

Footnotes:

[1] Flow rate, BOD, and TSS monitoring is required year-round. Monitoring for all other parameters is only required during months during which a discharge to the Napa River occurs. At least one BOD and TSS sample shall be collected for each discharge event regardless of the duration of discharge. All other parameters shall be monitored according to the frequency in Table E-3, but samples shall be collected, at a minimum, during the first discharge event of the frequency period to ensure that the parameter is monitored before the discharge stops.

[2] For each calendar month, the Discharger shall report the total daily flow volume (MG) for each day of discharge, the monthly average flow rate (MGD), the maximum daily flow rate (MGD), the minimum daily flow rate (MGD), and the total monthly flow volume (MG). For each calendar month, the Discharger shall also report the volume of treated wastewater recycled (MG) and the volume of discharge to the Napa River (MG). The Discharger shall also report the duration and volume of each discharge event.

[3] If pH is monitored continuously, the minimum and maximum pH values for each day shall be reported.

[4] Effluent chlorine concentrations shall be monitored continuously. Chlorine residual concentrations shall be monitored and reported for sampling points both before and after dechlorination. The Discharger shall report the maximum residual chlorine concentration observed following dechlorination on a daily basis. Total chlorine dosage (kg/day) shall be recorded on a daily basis.

Alternatively, the Discharger may evaluate compliance with this requirement by recording discrete readings from the continuous monitoring every hour on the hour, or by collecting grab samples every hour, for a total of 24 readings or samples per day if the following conditions are met: (a) the Discharger shall retain continuous monitoring readings for at least three years; (b) the Discharger shall acknowledge in writing that the Regional Water Board reserves the right to use all other continuous monitoring data for discretionary enforcement; and (c) the Discharger must provide in writing the brand name(s), model number(s), and serial number(s) of the equipment used to continuously monitor dechlorinated final effluent chlorine residual. If the identified equipment is replaced, the Discharger shall provide the Regional Water Board in writing, within 72 hours of the successful startup of the new equipment, the new equipment's brand name, model number, and serial number. The written notification identified in items (a) through (c) shall be in the form of a letter addressed to the Regional Water Board's Executive Officer with a certification statement as listed in the October 19, 2004, Regional Water Board letter re: Chlorine Compliance Strategy for Dischargers Using Continuous Monitoring Devices.

[5] Each oil and grease sample shall be a composite of three grab samples taken at equal intervals during the sampling date, with each grab sample being collected in a glass container. The grab samples shall be mixed in proportion to the instantaneous flow rates occurring at the time of each grab sample, within the accuracy of plus or minus 5%. Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent as soon as possible after use, and the solvent rinsings shall be added to the composite sample for extraction and analysis.

[6] Acute bioassay tests shall be performed in accordance with Section V of this MRP. The frequency shall be quarterly when discharging.

[7] The Discharger may, at its option, analyze for cyanide as Weak Acid Dissociable Cyanide using protocols specified in Standard Method Part 4500-CN-I, USEPA Method OI 1677, or an equivalent method in the latest edition. The alternative method of analysis must be approved by the Executive Officer.

[8] Monitoring for temperature shall occur concurrently with monitoring for ammonia and pH, for determination of the un-ionized fraction of ammonia.

[9] Monitoring for the priority pollutants is addressed in Attachment G.

[10] The Discharger shall calculate and report the river flow-to-effluent ratio once per day whenever discharge to the Napa River is occurring. The river flow-to-effluent ratio is to determine compliance with Prohibition III.B, and shall be calculated as the ratio of the instantaneous flow rate of the Napa River measured at USGS Station No. 11458000 (at 8 a.m. every morning) to the effluent flow rate during the previous 24 hours (8 a.m. to 8 a.m.) measured at EFF-002.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

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

2. Test organisms shall be fathead minnow unless the Executive Officer specified otherwise in writing.

3. All bioassays shall be performed according to the most up-to-date protocols in 40 CFR 136, currently in *Methods for Measuring the Acute Toxicity of*

Effluents and Receiving Water to Freshwater and Marine Organisms, 5th Edition.

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

5. Effluent used for fish bioassays shall be dechlorinated prior to testing. The sample may be taken from the final secondary effluent prior to disinfection. Monitoring of the bioassay water shall include, on a daily basis, the following parameters: pH, dissolved oxygen, ammonia (if toxicity is observed), temperature, hardness, and alkalinity. These results shall be reported. If a violation of acute toxicity requirements occurs, the bioassay test shall be repeated with new fish as soon as practical and shall be repeated until a test fish survival rate of 90 percent or greater is observed. If the control fish survival rate is less than 90 percent, the bioassay test shall be restarted with new fish and shall continue as soon as practical until an acceptable test is completed (i.e., control fish survival rate is 90 percent or greater).

VI. LAND DISCHARGE MONITORING REQUIREMENTS

Not Applicable.

VII. RECYCLED WATER MONITORING REQUIREMENTS

The Discharger shall monitor the flow of all treated effluent that is reused for any purpose. For each calendar month, the Discharger shall report the monthly average flow rate (MGD) and the total monthly flow volume (MG) to all recycled water users.

VIII. RECEIVING WATER MONITORING REQUIREMENTS

The Discharger shall conduct receiving water monitoring according to Table E-4 using the analytical methods described in 40 CFR 136. Parameters shall be analyzed twice per year during the discharge season; once after the first storm of the season during the interval from October 1 through January 31, and once during the interval from February 1 through May 15.

Table E-4. Receiving Water Monitoring – Monitoring Location RSW-001

Parameter	Units	Sample Type
pH	Standard units	Grab
Temperature	^{o}C	Grab
Total Nitrogen	mg/L as N	Grab
Total Ammonia	mg/L as N	Grab
Unionized Ammonia	mg/L as N	Calculated
Total Phosphate	mg/L as P	Grab
Hardness	mg/L as $CaCO_3$	Grab
Standard Observations	---	Observation

Units:
^{o}C = degrees Celsius
mg/L = milligrams per liter

IX. OTHER MONITORING REQUIREMENTS

A. Biosolids Monitoring

The Discharger shall adhere to sludge monitoring requirements required by 40 CFR 258 (for landfill disposal) or 40 CFR 503 (for land application).

B. Groundwater Monitoring

Not applicable

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

The Discharger shall comply with all federal Standard Provisions (Attachment D) and Regional Standard Provisions (Attachment G) related to monitoring, reporting, and recordkeeping.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this Order, the State or Regional Water Board may notify the Discharger to electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event of a service interruption for electronic submittal.

2. The Discharger shall submit monthly and annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test

methods specified in this Order for each calendar month. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR. Monthly SMRs shall be due on the 30th day following the end of each calendar month, covering samples collected during that calendar month; Annual Reports shall be due on February 1 following each calendar year.

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

Table E-5. Monitoring Periods and Reporting Schedule

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

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

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

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

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

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

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

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

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

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

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

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

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

C. Discharge Monitoring Reports

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

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

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

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

D. Other Reports

The Discharger shall report the results of any special studies, monitoring, and reporting required by Section VI.C.2 (Special Studies, Technical Reports, and Additional Monitoring Requirements) of this Order with the first monthly SMR following the respective due date. The Discharger shall include a report of progress towards meeting compliance schedules established by section VI.C.2 of this Order in the annual SMR.

ATTACHMENT F – FACT SHEET

I. Permit Information F-2
II. Facility Description F-3
III. Applicable Plans, Policies, and Regulations F-6
IV. Rationale For Effluent Limitations and Discharge Specifications F-9
V. Rationale for Receiving Water Limitations F-31
VI. Rationale for Monitoring and Reporting Requirements F-31
VII. Rationale for Provisions F-33
VIII. Public Participation F-34

List of Tables

Table F-1. Facility Information F-2
Table F-2. Outfall Location F-4
Table F-3. Effluent Limitations (Order No. R2-2004-0017) and Monitoring Data for Conventional and Non-Conventional Pollutants F-5
Table F-4. Effluent Limitations (Order No. R2-2004-0017) and Monitoring Data for Toxic Pollutants F-5
Table F-5. Compliance with Previous Order Provisions F-6
Table F-6. Basin Plan Beneficial Uses of the Napa River F-7
Table F-7. Reasonable Potential Analysis Summary F-17
Table F-8. Effluent Limit Calculations F-28

FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Town of Yountville/California Veterans Home Joint Wastewater Reclamation Facility.

Table F-1. Facility Information

WDID	2 283019001
Discharger	Town of Yountville and the California Department of Veterans Affairs
Name of Facility	Town of Yountville/California Veterans Home Joint Wastewater Reclamation Facility and their respective collection systems
Facility Address	7501 Solano Avenue
	Yountville CA 94599
	Napa County
Facility Contact, Title, Phone	Donald Moore, Wastewater System Supervisor, (707) 944-2988
Authorized Person to Sign and Submit Reports	Same as above
Mailing Address	6550 Yount St., Yountville CA 94599
Billing Address	Same as Mailing Address
Type of Facility	Publicly Owned Treatment Works (POTW)
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	B
Pretreatment Program	No
Reclamation Requirements	Regional Water Board Order No. 96-011
Facility Permitted Flow	0.55 million gallons per day (MGD) average dry weather flow
Facility Design Flow	0.55 MGD (average dry weather treatment capacity)
Watershed	San Pablo Bay
Receiving Water	Napa River
Receiving Water Type	Freshwater
Service Areas	Town of Yountville and the California Veterans Home
Service Area Population	3,290

A. The Town of Yountville and the California Department of Veterans Affairs (hereinafter the Discharger) own and operate the Town of Yountville/California Veterans Home Joint Wastewater Reclamation Facility (Plant), a Publicly-Owned Treatment Works (POTW), and part of its associated collection system. The Plant and the associated collection system are collectively considered the Facility. The Facility provides secondary treatment of the wastewater collected from its service areas and discharges to the Napa River during the discharge season.

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

B. The discharge of treated wastewater from the Facility to the Napa River, a water of the United States, is currently regulated by Order No. R2-2004-0017 (NPDES Permit No. CA0038121), which was adopted on March 17, 2004, became effective on June 1, 2004, and expired on April 30, 2009. The Discharger's discharge is also currently under Order No. R2-2007-0077 (NPDES Permit CA0038849) that superseded all requirements on mercury from wastewater discharges in the region. The mercury permit is unaffected by this Order.

C. The Discharger filed a Report of Waste Discharge dated October 31, 2008, and submitted an application for renewal of its NPDES permit. The application was deemed complete, and the previous Order was administratively extended.

II. FACILITY DESCRIPTION

A. Description of Wastewater Treatment

The Town of Yountville owns and operates the Plant, which provides secondary treatment of wastewater from domestic and commercial sources from the Town of Yountville and the California Veterans Home. The estimated service area population is about 3,290. The Town of Yountville owns and operates the collection system for the town (about 8.5 miles of sewer line and one pump station), and the California Veterans Home owns and operates its collection system (about 4.7 miles of sewer line). The Town of Yountville is responsible for operating and maintaining its collection system, and the California Veterans Home is responsible for operating and maintaining its collection system.

The average dry weather design treatment capacity of the Plant is 0.55 MGD, and its hydraulic capacity is 2.0 MGD. The average discharge rate from 2004 to 2007 was 0.57 MGD, and the highest maximum daily effluent flow rate during this period was 1.76 MGD. The Plant can accept up to 2.8 MGD through its primary system during peak wet weather conditions. Flows in excess of the Plant's secondary treatment capacity are stored in a 3.8 million gallon pond for later treatment. Wastewater treatment processes at the Plant include grit removal, primary clarification, first stage trickling filtration, intermediate clarification, second stage trickling filtration, aerated solids contact, final sedimentation, disinfection (chlorination), and dechlorination (sulfur dioxide). The treated wastewater flows to an effluent storage pond for discharge to the Napa River, or for recycling and reuse.

Wastewater is not discharged to the Napa River all year, but only during the wet season from October 1 through May 15, when Napa River flows are high. During the rest of the year, wastewater is treated to meet Title 22 reclamation requirements through additional filtration and disinfection, and then pumped to storage ponds for golf course and vineyard irrigation. The recycled water system is covered under the region-wide general reclamation permit (Regional Water Board Order No. 96-011).

With the addition of new storage ponds for the Mondavi Vineyards in 2009, the Discharger doubled its recycled water storage capacity from 118 acre-feet (AF) to 230 AF. The significant gain in storage allowed the Discharger to use 85% of its effluent for irrigation during the 2008/09 water year, discharging only 15% to the Napa River when inflows to the treatment plant were greater than the amount that could be distributed to recycled water users. Much of the discharge to the Napa River was due to high inflow/infiltration (I/I) into the collection system, which typically occurs during large storms. The flow of the Napa River is also high during storms, so that the discharge will receive dilution. Flow data from a USGS monitoring station located about ten miles upstream of Yountville indicates that for the 2008/09 season, most river flow-to-effluent ratios were greater than 1,000:1 and all were greater than 100:1.

Biosolids from the various process units are returned to the primary clarifier, which operates as a sludge thickener. Thickened sludges are processed in primary and secondary sludge digesters and then applied to one of two sludge drying beds. Less than 100 tons of biosolids are placed in the Clover Flat Landfill annually.

The Discharger is not covered under the Statewide General Permit for Industrial Stormwater Discharges (NPDES General Permit CAS000001) because its flow is less than the one MGD requirement. The Discharger has developed and maintains a Stormwater Pollution Prevention Plan.

B. Discharge Points and Receiving Waters

The location of the discharge point and the receiving water is shown in Table F-2 below.

Table F-2. Outfall Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Secondary Treated Municipal Wastewater	38º 24’ 22.01” N	122º 20’ 32.04” W	Napa River

The Napa River is located in the Napa River hydrologic area within the San Pablo Watershed.

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

Tables F-3 (conventional and non-conventional pollutants) and F-4 (priority pollutants) show recent monitoring data and the effluent limitations contained in the previous Order (No. R2-2004-0017).

Table F-3. Previous Effluent Limitations (Order No. R2-2004-0017) and Monitoring Data for Conventional and Non-Conventional Pollutants

Parameter	units	Limitations			Monitoring Data (From 12/05 to 04/08)		
		Monthly Average	Weekly Average	Daily Maximum	Highest Monthly Average	Highest Weekly Average	Highest Daily Discharge
BOD_5	mg/L	30	45	---	11	---	19
TSS	mg/L	30	45	---	7	---	9
pH	s.u.	6.0 – 9.0			Minimum – 6.3 Maximum – 7.7		
Oil and Grease	mg/L	10	---	20	ND	---	ND
Chlorine, Total Residual	mg/L	---	---	0.0[1]	---	---	< 0.00[1]
Acute Toxicity	% Survival	[2]			Minimum 3-sample median: 100% Single sample minimum: 100%		
Total Coliform Bacteria	MPN/100 mL	[3]			Maximum 5-day median: 22 Maximum Single Sample: 22		

Units:
mg/L = milligrams per liter
mL/L-hr = milliliters per liter per hour
MPN/100 mL = Most Probable Number per 100 milliliters
ND = Non-Detect
NA = Not Applicable
% survival = percent survival

Footnotes:

[1] Effluent limitation and monitoring results reported as an instantaneous maximum effluent concentration.

[2] An 11-sample median value of not less than 90 percent survival and an 11-sample 90th percentile value of not less than 70 percent survival.

[3] A 5-day moving median value for the MPN value of total coliform bacteria of not more than 23 MPN/100mL, and no single sample exceeding 240 MPN/100 mL, when verified by a repeat sample within 48 hours.

Table F-4. Previous Effluent Limitations (Order No. R2-2004-0017) and Monitoring Data for Toxic Pollutants

Parameter	Units	Final Limits		Interim Limits		Monitoring Data (From 02/06 to 04/08)
		Daily Maximum	Monthly Average	Daily Maximum	Monthly Average	Highest Daily Concentration
Copper	µg/L	78	---	---	---	25
Mercury	µg/L	---	---	---	0.084	0.02
Zinc	µg/L	833	488	---	---	190
Cyanide	µg/L	88	39	---	---	6.7
Chlorodibromomethane	µg/L	2.4	4.8	---	---	0.1
Dichlorobromomethane	µg/L	---	---	5.8	---	~1.6[1]
Bis(2-ethylhexyl)phthalate	µg/L	14	28	---	---	~1.6[1]

Footnote to Table F-4:

1 - All samples were below minimum levels and are therefore merely estimates.

D. Compliance Summary

1. **Compliance with Numeric Effluent Limits.** No exceedances of numeric effluent limits were observed during the previous permit term.

2. **Acute toxicity.** The Discharger's acute toxicity monitoring data show that nine bioassay results from May 2005 – May 2008 on two species (*P. promelas* and *O. mykiss*) were each 100% survival with 100% effluent. There have been no acute toxicity effluent limitation violations.

3. **Compliance with Previous Permit Provisions.** A list of special activities required by the previous permit and the status of those requirements are shown in Table F-5, below.

Table F-5. Compliance with Previous Permit Provisions

Provision Number	Requirement	Status of Completion
E.4	Storm Water Pollution Prevention Plan (SWPPP)	SWPPP submitted 1/09
E.5	Chlorodibromomethane and Dichlorobromomethane Source Control and Compliance Schedule	Discharger satisfied requirements
E.6	Optional Bacteriological Assessment Study	Discharger chose not to conduct study.
E.7	Installation of Diffuser on Discharge Outfall	Discharger chose not to install a diffuser, but will pursue a zero-discharge option.

E. Planned Changes

The Discharger is currently upgrading its treatment and distribution system in an effort to completely eliminate discharges to the Napa River, except for exceptionally wet years. Phase I of the upgrades is underway. This phase included modifying Plant filters and the disinfection system to produce Title 22 tertiary recycled water, and changing the piping layout to allow better control of wastewater flows. It had produced Title 22 secondary recycled water. Phase II is expected to be completed by 2015, and will include electrical improvements and expansion of the recycled water pumping system.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

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

This Order also serves as WDRs pursuant to CWC Article 4, Chapter 4, Division 7 (commencing with section 13260).

B. California Environmental Quality Act (CEQA)

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

C. State and Federal Regulations, Policies, and Plans

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

   The Basin Plan specifies the beneficial uses of the Napa River, which are summarized in Table F-6, below. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply (MUN).

Table F-6. Beneficial Uses of the Napa River

Discharge Point	Receiving Water Name	Beneficial Uses
001	Napa River	Agricultural Supply (AGR) Municipal and Domestic Supply (MUN) Cold Freshwater Habitat (COLD) Fish Spawning (SPWN) Warm Freshwater Habitat (WARM) Wildlife Habitat (WILD) Water Contact Recreation (REC1) Non-Contact Water Recreation (REC2) Navigation (NAV) Fish Migration (MIGR) Preservation of Rare and Endangered Species (RARE)

The State Water Board adopted a Water Quality Control Plan for the Control of Temperature in Coastal and Interstate Water and Enclosed Bays and Estuaries of California (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for surface waters. While the effluent temperature is typically higher than the receiving water temperature, the flow rate of the discharge is much less than of the river (69:1 minimum river to effluent ratio) and will not significantly increase the temperature of the river. This

permit prohibits the alteration of the river temperature beyond natural background levels. Therefore, the requirements of this permit implement the Thermal Plan.

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

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

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

5. **Antidegradation Policy.** 40 CFR 131.12 requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provisions of 40 CFR 131.12 and Resolution 68-16.

6. **Anti-Backsliding Requirements.** CWA sections 402(o)(2) and 303(d)(4) and 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the

previous permit, with some exceptions in which limitations may be relaxed. The permitted discharge is consistent with anti-backsliding requirements. The permitted discharge is consistent with anti-backsliding requirements.

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

In November 2006, the USEPA approved a revised list of impaired water bodies prepared by the State [the 303(d) list], pursuant to CWA section 303(d), which requires identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. The Napa River is 303(d) listed for nutrients, pathogens, and sediment. San Pablo Bay, to which the Napa River is tributary, is 303(d) listed for chlordane, DDT, dieldrin, dioxins and furans, mercury, nickel, PCBs, selenium, and exotic species. The SIP requires final effluent limitations for all 303(d)-listed pollutants to be consistent with total maximum daily loads and associated wasteload allocations (WLAs).

TMDLs are in effect for mercury for San Francisco Bay and for pathogens for the Napa River. The Regional Water Board adopted a TMDL for sediment and plans to adopt TMDLs for the remaining pollutants on the 303(d) list within the next ten years.

TMDLs will establish WLAs for point sources and load allocations (LAs) for non-point sources, and will be established to achieve the water quality standards for the impaired waterbodies. The discharge of mercury from the Facility is regulated by Regional Water Board Order No. R2-2007-0077, which implements the mercury TMDLs and contains monitoring and reporting requirements. The effluent limitations for total coliform bacteria contained in this permit are consistent with the Napa River TMDL for pathogens.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

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

A. Discharge Prohibitions

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

2. **Discharge Prohibition III.B (No discharge without minimum 42:1 river-to-effluent ratio):** This prohibition is based on best professional judgment to ensure that the discharge does not fully use the assimilative capacity of the Napa River in consideration of the other permitted wastewater discharges to this same segment of the river, specifically the cities of Calistoga and St. Helena. The detailed calculations underlying the 42:1 ratio may be found in Attachment F-1 to this Fact Sheet. The calculations are intended to be relatively simple, yet sufficiently protective to ensure that assimilative capacity remains available. They involve the following assumptions:

   - The mass of pollutants flowing downstream through the river equals the masses from each source flowing into the river;

   - Urban runoff flows are about 15 times the combined flows of the treatment plants discharging to the river; and

   - Urban runoff copper loads are about eight times those of the wastewater discharges.

   Compliance with this prohibition ensures, in part, compliance with Basin Plan Table 4-1, Discharge Prohibition 1, which prohibits the discharge of any wastewater with particular characteristics of concern to beneficial uses that does not receive at least a minimum initial dilution of 10:1. The purpose of this requirement is to (a) provide an added degree of protection from the continuous effects of waste discharge, (b) provide a buffer against the effects of abnormal discharges caused by temporary plant upsets or malfunctions, (c) minimize public contact with undiluted wastes, and (d) reduce the visual (aesthetic) impacts of waste discharges.

   Historically, previous permits have imposed Prohibition 1 by requiring river-to-effluent ratios of 10:1 (in 1998) and 25:1 (in 2004). This Order increases the stringency of the requirement to 42:1. However, this does not fully address the issue of initial dilution and previous permits did not clearly outline their rationale. Initial dilution, in the most classic sense, is instantaneous mixing. Because the outfall does not have a diffuser, it does not have <u>initial</u> dilution. This fact is made evident in the dilution credit discussion in subsection C.4.b, below. The following addresses this by justifying a partial exception for the <u>initial</u> dilution element of Prohibition 1. The minimum of 10:1 element is retained because it is necessary to ensure compliance with the full intent of the prohibition, specifically (b) through (d).

   The Basin Plan allows for exceptions to Prohibition 1 if there is "an inordinate burden … relative to beneficial uses protected, and an equivalent level of environmental

protection can be achieved by alternate means ….” In this case, installing a diffuser would impose an inordinate burden relative to the beneficial uses protected. The Discharger estimated that a diffuser would cost about $500,000 to install, with significant annual maintenance costs because it would be in a dynamic river bed. The Discharger recycles about 85% of its wastewater to reduce the amount it discharges and has stated its preference to direct its resources toward increasing recycling instead of installing a diffuser.

In terms of the beneficial uses protected, for this discharge the threat to beneficial uses is less because of the absence of acute toxicity in the discharge. No acute toxicity has been found in the effluent during the most recent permit term as measured through whole effluent toxicity tests (see page F-6). Furthermore, for most pollutants, the 99th percentile observed during the most recent permit term was less than the acute water quality objective. Copper and zinc were the exceptions. Nevertheless, the Discharger’s mixing zone study indicates that mixing occurs rapidly, and during worst case conditions, any organisms floating through the mixing zone would have a short residence time (about seven minutes, which is much less the one-hour timeframe for the acute criteria) and would therefore be unlikely to experience acute toxicity. Moreover, the threat to beneficial uses is further minimized because the Order prohibits discharge during most of the year (Prohibition III.C) and allows discharge only when the river-to-effluent ratio is adequate.

Therefore, this discharge satisfies the inordinate burden exception of Basin Plan Prohibition 1 for initial dilution because (1) there would be an inordinate burden relative to the beneficial uses protected, and (2) compliance with the requirements in this Order serves as the alternate means to ensure an equivalent level of protection.

3. **Discharge Prohibition III.C (No Discharge except when inflow to the treatment plant exceeds the capacity of the recycled water distribution and storage system):** This prohibition is based on the past performance of the Facility. The Discharger has demonstrated that discharges to the Napa River are unnecessary except when inflow to the Plant exceeds capacity of the recycled water distribution and storage system.

4. **Discharge Prohibition III.D (No bypass or overflow of untreated or partially treated wastewaters):** This prohibition is based on 40 CFR 122.41(m)(4). See federal Standard Provisions, Attachment D, section G.

5. **Discharge Prohibition III.E (Average dry weather flow not to exceed dry weather design capacity):** Exceedance of the Plant’s average dry weather flow design capacity may result in lowering the reliability of achieving compliance with water quality requirements. This prohibition is meant to ensure effective wastewater treatment by limiting flows to the Plant’s design treatment capacity. The average dry weather flow is to be determined over three consecutive dry weather months each year and is to include both flows discharged and recycled.

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

B. Technology-Based Effluent Limitations

Except as noted, this Order retains the effluent limitations for conventional and non-conventional pollutants from Order No. R2-2004-0017.

The limitations for BOD and TSS are based on USEPA technology-based effluent guidelines (40 CFR 133).

The pH limitation has been changed from technology based limits for deep water discharges, to more stringent water quality-based limits consistent with Basin Plan Table 4-2 for shallow water discharges, and the Basin Plan's definition of deep and shallow water discharges at section 4.6.1. The discharge does not qualify as a deep water discharge because the outfall is not equipped with a diffuser.

The limitation for oil and grease, chlorine, and total coliform bacteria is based on the Basin Plan Table 4-2. Alternate limitations for total coliform bacteria are used as allowed by footnote e because these limitations will not compromise beneficial uses of the receiving water.

Effluent limitations for settleable matter are not retained from the previous order. The Plant provides secondary treatment, and the settleable matter effluent limits of the previous order were technology-based effluent limitations for primary treatment. Compliance with 40 CFR 133 and Basin Plan Table 4-2 will ensure removal of settleable matter to acceptably low levels – below 0.1 ml/L/hr (30 day average) and 0.2 ml/L/hr (daily maximum). The Basin Plan was amended on January 21, 2004, in part, because it mistakenly applied these limits to secondary and advanced treatment plants; therefore, not retaining the limits for settleable matter is consistent with the exception to the backsliding prohibition expressed at CWA section 402(o)(2)(B)(ii) (when technical mistakes or mistaken interpretations of law were made in establishing the limitations in the previous permit). The removal of these limits is not expected to cause degradation of receiving water because the Discharger will maintain its existing treatment performance. Limits for total suspended solids will also hold the Discharger at its current performance.

C. Water Quality-Based Effluent Limitations (WQBELs)

WQBELs have been derived to implement water quality objectives (WQOs) that protect beneficial uses. Both the beneficial uses and the WQOs have been approved pursuant to

federal law. The procedures for calculating individual WQBELs are based on the SIP or the Basin Plan. Most beneficial uses and WQOs contained in the Basin Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any WQOs and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless applicable water quality standards for purposes of the Clean Water Act pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than the applicable CWA water quality standards.

1. Scope and Authority

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

The process for determining Reasonable Potential and calculating WQBELs when necessary is intended to protect the designated beneficial uses of the receiving water as specified in the Basin Plan, and to achieve applicable WQOs contained in other State plans and policies, and applicable WQC contained in the CTR and NTR.

b. NPDES regulations and the SIP provide the basis to establish maximum daily effluent limitations (MDELs).

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

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

c. MDELs are used in this Order to protect against acute water quality effects. The MDELs are necessary for preventing fish kills or mortality to aquatic organisms.

2. Applicable Beneficial Uses and Water Quality Objectives

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

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

b. CTR. The CTR specifies numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 57 priority toxic pollutants. These criteria apply to all inland surface waters and enclosed bays and estuaries of San Francisco Bay Region, although the Basin Plan includes numeric objectives for certain of these priority toxic pollutants that supersede CTR criteria.

c. NTR. The NTR establishes numeric aquatic life criteria for selenium and numeric human health criteria for 33 toxic organic pollutants for waters of San Francisco Bay upstream to and including Suisun Bay and the Sacramento River-San Joaquin River Delta. These criteria apply to the Napa River, the receiving water for this Discharger.

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

The Napa River, the receiving water for this discharge, is a freshwater river. As confirmed by the "Collaborative Napa River Receiving Water Evaluation," salinity data measured in the Napa River upstream and downstream of the discharge show that all of the data (8 data points) fall below 1 ppt, indicating a freshwater environment. The reasonable potential analysis (RPA) and effluent limitations in this Order are therefore based on freshwater objectives.

e. **Receiving Water Hardness.** Ambient hardness values are used to calculate freshwater WQOs that are hardness dependent. In determining WQOs for this Order, Regional Water Board staff used a hardness of 103 mg/L as $CaCO_3$, which is the lowest hardness value of ten samples collected downstream of the discharge point through the "Collaborative Napa River Receiving Water Evaluation." The lowest hardness was selected to be conservative since relatively few hardness data were available.

f. **Site-Specific Metals Translators.** 40 CFR 122.45(c) requires that effluent limitations for metals be expressed as total recoverable metal. Since applicable WQO for metals are typically expressed as dissolved metal, factors or translators must be used to convert metals concentrations from dissolved to total recoverable and vice versa. The CTR includes default translators that are used in NPDES permitting activities; however, site-specific conditions, such as water temperature, pH, suspended solids, and organic carbon, greatly impact the form of metal (dissolved, non-filterable, or otherwise) that is present in the water and therefore available to cause toxicity. In general, the dissolved form of a metal is more available and more toxic to aquatic life than non-filterable forms. Site-specific translators can be developed to account for site-specific conditions, thereby preventing exceedingly stringent or under protective WQOs. In determining the need for and calculating WQBELs for all applicable metals, the Regional Board staff has used default translators USEPA established in the CTR at 40 CFR 131.38(b)(2), Table 2.

3. Determining the Need for WQBELs

Assessing whether a pollutant has "Reasonable Potential" is the fundamental step in determining whether or not a WQBEL is required. Using the methods prescribed in SIP section 1.3, Regional Water Board staff analyzed effluent data to determine if the discharge demonstrates Reasonable Potential. The Reasonable Potential Analysis (RPA) compares the effluent data with numeric and narrative WQOs in the Basin Plan, the NTR, and the CTR.

a. **Reasonable Potential Methodology.** The RPA identifies the observed maximum effluent concentration (MEC) for each pollutant based on existing effluent data. There are three triggers in determining Reasonable Potential.

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

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

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

b. **Effluent Data.** Regional Water Board staff analyzed the Discharger's data for priority pollutants and the nature of the discharge to determine if the discharge has Reasonable Potential. The RPA was based on the effluent monitoring data collected by the Discharger from May 2006 through April 2008.

c. **Ambient Background Data.** Ambient background values are used to determine reasonable potential and to calculate effluent limitations when necessary. For the RPA, ambient background concentrations are the observed maximum detected water column concentrations. The SIP states that, for calculating WQBELs, ambient background concentrations are either the observed maximum ambient water column concentrations or, for objectives intended to protect human health from carcinogenic effects, the arithmetic mean of observed ambient water concentrations.

The Regional Water Board's August 6, 2001, letter formally required dischargers to conduct additional ambient background monitoring pursuant to CWC section 13267, and to provide this technical information to the Regional Water Board. 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", which includes background water quality data used for the reasonable potential analysis.

The evaluation provided data for the Napa River from near the town of St. Helena to near the town of Napa. Monitoring locations near St. Helena and the City of Calistoga are upstream monitoring locations to this discharge. Receiving water data for all toxic pollutants, in addition to data for conventional and non-conventional parameters, were collected. Data for most toxic pollutants were collected from

April 2007 to February 2009, with additional data collected in 2003 for copper, nickel, and selenium.

d. Reasonable Potential Determination. The MECs, most stringent applicable WQC, and background concentrations used in the RPA are presented in the Table F-7, below, along with the RPA result (Yes or No) for each pollutant analyzed. Reasonable Potential was not determined for all pollutants because there are not applicable WQOs for all pollutants and monitoring data are not available for others. The RPA determined that copper, mercury, zinc, cyanide, dichlorobromomethane, and total ammonia demonstrate reasonable potential by Trigger 1.

Table F-7. Reasonable Potential Analysis Summary

CTR #	Priority Pollutants	MEC or Minimum DL [a][b] (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL [a][b] (µg/L)	RPA Results [c]
1	Antimony	0.3	6	1.8	No
2	Arsenic	0.9	50	4.3	No
3	Beryllium	< 0.1	4	0.06	No
4	Cadmium	0.08	1.2	< 0.02	No
5a	Chromium (III)	1.6	50	1.8	No
5b	Chromium (VI)	1.6	11	< 0.6	No
6	**Copper**	**25**	**9.8**	**3.1**	**Yes**
7	Lead	0.3	3.4	1.1	No
8	**Mercury (303d listed)**	**0.02**	**0.025**	**0.036**	**Yes**
9	Nickel (303d listed)	4.2	55	4.1	No
10	Selenium (303d listed)	1	5.0	3	No
11	Silver	0.2	1.9	0.02	No
12	Thallium	< 0.1	1.7	< 0.01	No
13	**Zinc**	**190**	**126**	**12**	**Yes**
14	**Cyanide**	**6.7**	**5.2**	**<0.6**	**Yes**
15	Asbestos	Not Available	7000000	< 0.99	Ud
16	2,3,7,8-TCDD (303d listed)	< 8.02E-07	1.3E-08	< 3.37 E-07	No
	Dioxin TEQ (303d listed)	**1.6E-11**	**1.3E-08**	**1.1 E-11**	**Yes**
17	Acrolein	< 0.5	320	<1.2	No
18	Acrylonitrile	< 0.33	0.059	< 0.58	No
19	Benzene	< 0.03	1	< 0.1	No
20	Bromoform	<0.03	4.3	< 0.09	No
21	Carbon Tetrachloride	< 0.04	0.25	< 0.06	No
22	Chlorobenzene	< 0.03	70	< 0.1	No
23	Chlorodibromomethane	0.1	0.401	< 0.08	No
24	Chloroethane	< 0.03	No Criteria	< 0.11	Ud
25	2-Chloroethylvinyl ether	< 0.1	No Criteria	< 0.29	Ud
26	Chloroform	7.3	No Criteria	< 0.09	Ud
27	**Dichlorobromomethane**	**1.6**	**0.56**	**< 0.08**	**Yes**
28	1,1-Dichloroethane	< 0.04	5	< 0.06	No
29	1,2-Dichloroethane	< 0.04	0.38	< 0.09	No
30	1,1-Dichloroethylene	< 0.07	0.057	< 0.07	No
31	1,2-Dichloropropane	< 0.03	0.52	< 0.07	No
32	1,3-Dichloropropylene	< 0.03	0.5	< 0.07	No
33	Ethylbenzene	< 0.04	300	< 0.09	No

CTR #	Priority Pollutants	MEC or Minimum DL [a][b] (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL [a][b] (µg/L)	RPA Results [c]
34	Methyl Bromide	< 0.05	48	< 0.06	No
35	Methyl Chloride	0.6	No Criteria	< 0.09	Ud
36	Methylene Chloride	< 0.07	4.7	< 0.08	No
37	1,1,2,2-Tetrachloroethane	< 0.04	0.17	< 0.07	No
38	Tetrachloroethylene	< 0.04	0.8	< 0.12	No
39	Toluene	0.07	150	< 0.06	No
40	1,2-Trans-Dichloroethylene	< 0.05	10	< 0.09	No
41	1,1,1-Trichloroethane	< 0.03	200	< 0.11	No
42	1,1,2-Trichloroethane	< 0.05	0.6	< 0.06	No
43	Trichloroethylene	< 0.05	2.7	< 0.07	No
44	Vinyl Chloride	< 0.05	0.5	< 0.14	No
45	2-Chlorophenol	< 0.7	120	< 0.8	No
46	2,4-Dichlorophenol	< 0.7	93	< 0.7	No
47	2,4-Dimethylphenol	< 0.8	540	< 0.8	No
48	2-Methyl- 4,6-Dinitrophenol	< 0.6	13.4	< 0.6	No
49	2,4-Dinitrophenol	< 0.6	70	< 0.6	No
50	2-Nitrophenol	< 0.6	No Criteria	< 0.6	Ud
51	4-Nitrophenol	< 0.6	No Criteria	< 0.7	Ud
52	3-Methyl 4-Chlorophenol	< 0.6	No Criteria	< 0.6	Ud
53	Pentachlorophenol	< 0.6	0.28	< 0.6	No
54	Phenol	< 1	21000	< 0.6	No
55	2,4,6-Trichlorophenol	< 0.6	2.1	< 0.6	No
56	Acenaphthene	< 0.03	1200	< 0.03	No
57	Acenaphthylene	< 0.02	No Criteria	< 0.02	Ud
58	Anthracene	< 0.02	9600	0.02	No
59	Benzidine	< 1	0.00012	< 5	No
60	Benzo(a)Anthracene	< 0.02	0.0044	< 0.02	No
61	Benzo(a)Pyrene	< 0.02	0.0044	< 0.02	No
62	Benzo(b)Fluoranthene	< 0.02	0.0044	< 0.02	No
63	Benzo(ghi)Perylene	< 0.02	No Criteria	< 0.02	Ud
64	Benzo(k)Fluoranthene	< 0.02	0.0044	< 0.03	No
65	Bis(2-Chloroethoxy)Methane	< 0.7	No Criteria	< 0.7	Ud
66	Bis(2-Chloroethyl)Ether	< 0.8	0.031	< 0.9	No
67	Bis(2-Chloroisopropyl)Ether	< 0.6	1400	< 0.6	No
68	Bis(2-Ethylhexyl)Phthalate	1.6	1.8	< 0.6	No
69	4-Bromophenyl Phenyl Ether	< 0.8	No Criteria	< 0.97	Ud
70	Butylbenzyl Phthalate	< 0.7	3000	< 0.7	No
71	2-Chloronaphthalene	< 0.9	1700	< 0.98	No
72	4-Chlorophenyl Phenyl Ether	< 0.9	No Criteria	< 0.99	Ud
73	Chrysene	< 0.02	0.0044	< 0.02	No
74	Dibenzo(a,h)Anthracene	< 0.02	0.0044	< 0.02	No
75	1,2-Dichlorobenzene	< 0.03	600	< 0.11	No
76	1,3-Dichlorobenzene	< 0.03	400	< 0.11	No
77	1,4-Dichlorobenzene	< 0.04	5	< 0.1	No
78	3,3 Dichlorobenzidine	< 0.6	0.04	< 0.1	No
79	Diethyl Phthalate	<0.6	23000	< 0.6	No
80	Dimethyl Phthalate	< 0.7	313000	< 0.7	No
81	Di-n-Butyl Phthalate	< 0.6	2700	< 0.6	No
82	2,4-Dinitrotoluene	< 0.6	0.11	< 0.6	No

CTR #	Priority Pollutants	MEC or Minimum DL [a][b] (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL [a][b] (µg/L)	RPA Results [c]
83	2,6-Dinitrotoluene	< 0.6	No Criteria	< 0.6	Ud
84	Di-n-Octyl Phthalate	< 0.7	No Criteria	< 0.7	Ud
85	1,2-Diphenylhydrazine	< 0.6	0.04	< 0.6	No
86	Fluoranthene	<0.02	300	< 0.02	No
87	Fluorene	< 0.02	1300	< 0.02	No
88	Hexachlorobenzene	< 0.7	0.00075	< 0.91	No
89	Hexachlorobutadiene	< 0.7	0.44	< 0.92	No
90	Hexachlorocyclopentadiene	< 0.8	50	< 0.8	No
91	Hexachloroethane	< 0.6	1.9	< 0.94	No
92	Indeno(1,2,3-cd)Pyrene	< 0.02	0.0044	< 0.02	No
93	Isophorone	< 0.7	8.4	< 0.8	No
94	Naphthalene	< 0.02	No Criteria	< 0.02	Ud
95	Nitrobenzene	< 0.7	17	< 0.7	No
96	N-Nitrosodimethylamine	< 0.8	0.00069	< 0.8	No
97	N-Nitrosodi-n-Propylamine	< 0.6	0.005	< 0.6	No
98	N-Nitrosodiphenylamine	< 0.6	5	< 0.6	No
99	Phenanthrene	< 0.02	No Criteria	0.04	Ud
100	Pyrene	< 0.02	960	< 0.02	No
101	1,2,4-Trichlorobenzene	< 0.8	5	< 0.98	No
102	Aldrin	< 0.002	0.00013	< 0.002	No
103	Alpha-BHC	< 0.002	0.0039	< 0.002	No
104	Beta-BHC	< 0.002	0.014	< 0.002	No
105	Gamma-BHC	0.009	0.019	< 0.002	No
106	Delta-BHC	< 0.002	No Criteria	< 0.002	Ud
107	Chlordane (303d listed)	< 0.02	0.00057	< 0.02	No
108	4,4'-DDT (303d listed)	< 0.002	0.00059	< 0.003	No
109	4,4'-DDE (linked to DDT)	< 0.003	0.00059	< 0.003	No
110	4,4'-DDD	< 0.002	0.00083	< 0.003	No
111	Dieldrin (303d listed)	< 0.002	0.00014	< 0.002	No
112	Alpha-Endosulfan	< 0.003	0.056	< 0.003	No
113	beta-Endolsulfan	< 0.002	0.056	< 0.003	No
114	Endosulfan Sulfate	< 0.002	110	< 0.002	No
115	Endrin	< 0.002	0.036	< 0.002	No
116	Endrin Aldehyde	< 0.002	0.76	< 0.002	No
117	Heptachlor	< 0.003	0.00021	< 0.003	No
118	Heptachlor Epoxide	< 0.002	0.0001	< 0.002	No
119-125	PCBs sum (303d listed)	< 0.02	0.00017	< 0.002	No
126	Toxaphene	< 0.15	0.0002	< 0.19	No
	Tributylin	Not Available	0.072	< 0.00036	Ud
	Total PAHs	< 0.02	No Criteria	0.06	No
	Total Ammonia (mg/L N)	**8.0**	**0.45**	**< 0.04**	**Yes**

Footnotes:

[a] The Maximum Effluent Concentration (MEC) and maximum background concentration are the actual detected concentrations unless preceded by a "<" sign, in which case the value shown is the minimum detection level.

[b] The MEC or maximum background concentration is "Not Available" when there are no monitoring data for the constituent.

[c] RPA Results = Yes, if MEC > WQO/WQC, B > WQO/WQC and MEC is detected, or Trigger 3;
= No, if MEC and B are < WQO/WQC or all effluent data are undetected;

= Undetermined (Ud), if no criteria have been promulgated or there are insufficient data.

(1) Constituents with limited data. In some cases, Reasonable Potential cannot be determined because effluent data are limited, or ambient background concentrations are not available. The Discharger will continue to monitor for these constituents in the effluent using analytical methods that provide the best feasible detection limits. When additional data become available, further RPA will be conducted to determine whether to add numeric effluent limitations.

(2) Pollutants with no Reasonable Potential. WQBELs are not included in this Order for constituents that do not demonstrate Reasonable Potential; however, monitoring for those pollutants is still required.

The previous Order included final WQBELs for chlorodibromomethane and bis(2-ethylhexyl)phthalate; however, because the RPA showed that discharges from the Facility no longer demonstrate Reasonable Potential for these pollutants, the effluent limitations are not retained by this Order, and new effluent limitations are not established. The elimination of these effluent limits is consistent with anti-backsliding requirements in State Water Board Order WQ-2001-16.

4. WQBEL Calculations.

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

b. Dilution Credit. The Order allows dilution credits for certain pollutants. The SIP allows dilution credits for completely-mixed discharges, and under certain circumstances for incompletely-mixed discharges. The outfall does not have a diffuser, and the Discharger's February 2010 mixing zone study[1] indicates that the discharge is incompletely-mixed as defined in the SIP (less than 5% difference in pollutant concentrations in a cross section of the river within two river widths downstream). The width of the river was approximately 30 feet during the study and the plume did not meet the SIP definition within 60 feet down stream. A dye study showed that the plume was mixed laterally about 200 feet downstream of the outfall and that the plume was diluted by at least 12:1 at this distance; a computer model indicated that the plume would be fully mixed vertically and laterally about 1000 feet downstream. Vertical mixing does not occur as rapidly as lateral mixing because the temperature of the effluent is slightly higher than that of the river, and therefore floats on the surface.

[1] Town of Yountville Effluent Mixing Zone/Dilution Credit Study, February 25, 2010. Larry Walker Associates

SIP section 1.4.2.2 allows mixing zones for incompletely-mixed discharges, but the mixing zone must be as small as practicable and it must not:

- Compromise the integrity of the water body;
- Cause acute toxicity conditions to aquatic life passing through the mixing zone;
- Restrict the passage of aquatic life;
- Adversely impact biologically sensitive or critical habitats, including, but not limited to, habitats of species listed under federal or State endangered species laws;
- Produce undesirable or nuisance aquatic life;
- Result in floating debris, oil, or scum;
- Produce objectionable color, odor, taste, or turbidity;
- Cause objectionable bottom deposits;
- Cause nuisance;
- Dominate the receiving water body or overlap a mixing zone from different outfall; or
- Be located at or near any drinking water intake.

The Discharger identified a mixing zone extending from the outfall to a distance 200 feet downstream and encompassing the entire width and depth of the river within this reach. Its February 2010 study evaluated all of the above conditions and found that this mixing zone would comply with all the above conditions.

As previously noted, the dye study showed that the plume was diluted by at least 12:1 dilution (D=11) within 200 feet of the outfall. This is the highest dilution justified by the Discharger; therefore, on a pollutant-by-pollutant basis, the smallest practicable mixing zone can be no larger than the 200-foot mixing zone evaluated in the study. Since this 200-foot mixing zone meets the SIP criteria listed above, smaller mixing zones also meet these criteria.

For each pollutant, the smallest practicable mixing zone is the mixing zone that results in the smallest dilution credit, not to exceed D=11. The smallest dilution credit was determined based on the smallest credit resulting in compliance with WQBELs on a pollutant-by-pollutant basis. This was done by setting the dilution credit so that the 95th percentile of the historic effluent data was less than the resulting AMEL; the 99th percentile was less than the resulting MDEL; and the mean was less than the resulting long term average of the projected distribution. The Order allows dilution credits as follows: D=5 for copper, D=3 for zinc, D=2 for cyanide, D=5 for dichlorobromomethane, and D=10 for ammonia. No dilution credit was granted for dioxin-TEQ because it is bioaccumulative and the receiving water flows into San Francisco Bay, which is listed as impaired by dioxins and furans.

c. Calculation of Pollutant-Specific WQBELs

(1) Copper

(a) WQOs. The most stringent WQOs for copper are the freshwater aquatic life criteria from the Basin Plan: 9.6 and 14 micrograms per liter (µg/L), chronic and acute, respectively, expressed as total metal, based on a hardness of 103 mg/L.

(b) RPA. This Order establishes effluent limitations for copper because the MEC of 25 µg/L exceeds the governing WQO for copper, demonstrating Reasonable Potential by Trigger 1.

(c) WQBELs. Effluent limitations for copper, calculated according to SIP procedures with a default CV of 0.6 and D=5, are an AMEL of 34 µg/L and an MDEL of 69 µg/L.

(d) Feasibility of Compliance. It is feasible for the Discharger to comply with the copper effluent limits because the 95th percentile (28 µg/L) is less than the AMEL (34 µg/L); the 99th percentile (32 µg/L) is less than the MDEL (69 µg/L); and the mean (19 µg/L) is less than the long term average of the projected distribution of the effluent data set after accounting for effluent variability (22 µg/L).

(e) Antibacksliding. Anti-backsliding requirements are satisfied because the copper WQBELs established by this Order are more stringent than those in the previous permit.

(2) Zinc

(a) WQOs. The most stringent applicable WQOs for zinc are from the Basin Plan for protection of freshwater aquatic life: 123 µg/L for both acute and chronic criteria, expressed as total metal, based on a hardness of 103 mg/L.

(b) RPA. This Order establishes effluent limitations for zinc because the MEC (190 µg/L) exceeds the applicable WQOs for this pollutant, demonstrating Reasonable Potential by Trigger 1.

(c) WQBELs. Final WQBELs for zinc calculated according to SIP procedures with a default CV of 0.6 and D=3, are an AMEL of 230 µg/L and an MDEL of 460 µg/L.

(d) Feasibility of Compliance. It is feasible for the Discharger to comply with the zinc effluent limits because the 95th percentile (218 µg/L) is less than the AMEL (230 µg/L); the 99th percentile (253 µg/L) is less than the MDEL (460 µg/L); and the mean (132 µg/L) is less than the long term average of

the projected distribution of the effluent data set after accounting for effluent variability (150 µg/L).

(e) Anti-backsliding. Anti-backsliding requirements are satisfied because the zinc WQBELs established by this Order are more stringent than those in the previous permit.

(3) Cyanide

(a) WQOs. The most stringent applicable WQOs for cyanide are from the Basin Plan for protection of fresh water aquatic life: 22 µg/L and 5.2 µg/L, acute and chronic criteria, respectively.

(b) RPA. This Order establishes effluent limitations for cyanide because the MEC of 6.7 µg/L exceeds the acute WQO for this pollutant, demonstrating Reasonable Potential by Trigger 1.

(c) WQBELs. Final WQBELs for cyanide, calculated according to SIP procedures with a default CV of 0.6 and D=2, are an AMEL of 12 µg/L and an MDEL of 24 µg/L.

(d) Feasibility of Compliance. It is feasible for the Discharger to comply with the cyanide effluent limits because the 95th percentile (10.6 µg/L) is less than the AMEL (12 µg/L); the 99th percentile (17.6 µg/L) is less than the MDEL (24 µg/L); and the mean (3.9 µg/L) is less than the long term average of the projected lognormal distribution of the effluent data set after accounting for effluent variability (7.4 µg/L).

(e) Anti-backsliding. Anti-backsliding requirements are satisfied because the cyanide WQBELs established by this Order are more stringent than those in the previous permit.

(4) Dioxin-TEQ

(a) WQOs. The Basin Plan narrative WQO for bioaccumulative substances states, "Many pollutants can accumulate on particulates, in sediments, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered."

Because it is the consensus of the scientific community that dioxins and furans associate with particulates, accumulate in sediments, and bioaccumulate in the fatty tissue of fish and other organisms, the Basin Plan's narrative bioaccumulation WQO applies to these pollutants. Elevated levels of dioxins and furans in fish tissue in San Francisco Bay demonstrate

that the narrative bioaccumulation WQO is not being met. USEPA has therefore included San Pablo Bay as impaired by dioxin and furan compounds in the current 303(d) listing of receiving waters where WQOs are not being met after imposition of applicable technology-based requirements.

The CTR establishes a numeric WQO for 2,3,7,8-tetrachlorinated dibenzo-p-dioxin (2,3,7,8-TCDD) of 1.3×10^{-8} µg/L for the protection of human health, when water and aquatic organisms are consumed. When the CTR was promulgated, USEPA stated its support of the regulation of other dioxin and dioxin-like compounds through the use of toxicity equivalencies (TEQs) in NPDES permits. "For California waters, if the discharge of dioxin or dioxin-like compounds has reasonable potential to cause or contribute to a violation of a narrative criterion, numeric WQBELs for dioxin or dioxin-like compounds should be included in NPDES permits and should be expressed using a TEQ scheme" [65 Fed. Reg. 31682, 31695 (2000)].

This Order uses a TEQ scheme based on a set of toxicity equivalency factors (TEFs) the World Health Organization (WHO) developed in 1998, and a set of bioaccumulation equivalency factors (BEFs) USEPA developed for the Great Lakes region (40 CFR132, Appendix F), to convert the concentration of any congener of dioxin or furan into an equivalent concentration of 2,3,7,8-TCDD. The CTR criterion is used as a criterion for dioxin-TEQ because dioxin-TEQ represents a toxicity-weighted concentration equivalent to 2,3,7,8-TCDD, thus translating the narrative bioaccumulation objective into a numeric criterion appropriate for the RPA.

To determine if the discharge of dioxin or dioxin-like compounds has reasonable potential to cause or contribute to a violation of the Basin Plan's narrative bioaccumulation WQO, TEFs and BEFs were used to express the measured concentrations of 16 dioxin congeners in effluent and background samples as 2,3,7,8-TCDD. These "equivalent" concentrations were then compared to the CTR numeric criterion for 2,3,7,8-TCDD (1.4×10^{-8} µg/L). Although the 1998 WHO scheme includes TEFs for dioxin-like PCBs, they are not included in this Order's TEQ scheme. The CTR has established a specific water quality standard for PCBs, and dioxin-like PCBs are included in the analysis of total PCBs.

(b) RPA. This Order establishes effluent limitations for dioxin-TEQ because the effluent contains dioxin-TEQ in concentrations that could exceed the Basin Plan narrative objective for bioaccumulation, demonstrating Reasonable Potential by Trigger 3.

(c) WQBELs. WQBELs for dioxin-TEQ, calculated using SIP procedures with a default CV of 0.60, are an AMEL of 1.3×10^{-8} µg/L and an MDEL of 2.6×10^{-8} µg/L.

(d) Feasibility of Compliance. It is feasible for the Discharger to comply with the WQBELs for dioxin-TEQ. While there isn't enough data to do a statistical analysis, the maximum effluent concentration (1.6×10^{-11} µg/L) was three orders of magnitude less than the effluent limits.

(e) Anti-backsliding. Anti-backsliding requirements are satisfied because the previous permit did not include effluent limitations for dioxin-TEQ.

(5) Dichlorobromomethane

(a) WQO. The most stringent applicable WQO for dichlorobromomethane is the CTR criterion for protection of human health of 0.56 µg/L.

(b) RPA. This Order establishes effluent limitations for dichlorobromomethane because the MEC (1.6 µg/L) exceeds the applicable WQC for this pollutant, demonstrating Reasonable Potential by Trigger 1.

(c) WQBELs. Final WQBELs for dichlorobromomethane, calculated according to SIP procedures with a default CV of 0.6 and D=5, are an AMEL of 3.0 µg/L and an MDEL of 5.9 µg/L.

(d) Feasibility of Compliance. It is feasible for the Discharger to comply with the effluent limits because the 95th percentile (2.2 µg/L) is less than the AMEL (3.0 µg/L); the 99th percentile (3.4 µg/L) is less than the MDEL (5.9 µg/L); and the mean (0.9 µg/L) is less than the long term average of the projected lognormal distribution of the effluent data set after accounting for effluent variability (0.95 µg/L).

(e) Anti-backsliding. Anti-backsliding requirements are satisfied because the previous permit did not contain final effluent limitations for dichlorobromomethane.

(6) Total Ammonia

(a) WQOs. The Basin Plan contains WQOs for un-ionized ammonia of 0.025 mg/L as an annual median and 0.16 mg/L as a maximum for Central San Francisco Bay and upstream reaches of the Bay. Regional Water Board staff translated these WQOs for un-ionized ammonia to equivalent total ammonia concentrations (as nitrogen) since (1) sampling and laboratory methods are not available to analyze for un-ionized ammonia; and (2) the fraction of total ammonia that exists in the toxic un-ionized form depends on the pH, salinity, and temperature of the receiving water. To translate the

Basin Plan's un-ionized ammonia objectives, Regional Water Board staff used pH and temperature data from February 2002 through February 2009 from a monitoring station in the Napa River upstream of Calistoga and a monitoring station in the Napa River downstream of Yountville. Regional Water Board staff used the following equations for freshwater environments to determine the fraction of total ammonia that would exist in the toxic, un-ionized form in the receiving water [*Ambient Water Quality Criteria for Ammonia* (saltwater) – 1989, EPA Publication 440/5-88-004, USEPA, 1989]:

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

Where:
pK = 0.09018 + 2729.92/(273 + T), and
T = Temperature in degrees Celsius

To convert the Basin Plan's chronic un-ionized ammonia WQO to an equivalent total ammonia concentration, the median un-ionized ammonia fraction of the receiving water data set was used. To convert the Basin Plan's acute un-ionized ammonia WQO to an equivalent total ammonia concentration, the 90th percentile un-ionized ammonia fraction of the receiving water data set was used. Using the 90th percentile and median to express the acute and chronic un-ionized ammonia WQOs as equivalent total ammonia concentrations is consistent with USEPA guidance, as expressed in *The Metals Translator: Guidance for Calculating a Total Recoverable Limit from a Dissolved Criterion* (EPA Publication Number 823-B-96-007, 1996). The equivalent total ammonia chronic and acute WQOs are 1.17 mg/L and 1.93 mg/L, respectively.

(b) RPA. This Order establishes effluent limitations for total ammonia because the MEC (8.0 mg/L) exceeds the most stringent WQO (1.17 mg/L) for this pollutant, demonstrating Reasonable Potential by Trigger 1.

(c) WQBELs. WQBELs for total ammonia, calculated according to SIP procedures with a default CV of 0.6 and D=10, are an AMEL of 10.3 mg/L and an MDEL of 20.8 mg/L. Allowing credit for actual, initial dilution for ammonia is appropriate because ammonia is a pollutant that readily degrades to a non-toxic state.

To calculate total ammonia limits, some statistical adjustments were made because the Basin Plan's chronic WQO for un-ionized ammonia is based on an annual median, while chronic criteria are usually based on a 4-day average. The SIP also assumes a monthly sampling frequency of 4 days per month to calculate effluent limitations based on chronic criteria. To use the

SIP methodology to calculate effluent limits for a Basin Plan objective based on an annual median, an averaging period of 365 days and a monitoring frequency of 30 days per month (the maximum daily sampling frequency in a month since the averaging period for a chronic criterion is longer than 30 days) were used. These statistical adjustments are supported by USEPA's *Water Quality Criteria; Notice of Availability; 1999 Update of Ambient Water Quality Criteria for Ammonia*, published on December 22, 1999, in the Federal Register.

Following SIP methodology as guidance, Regional Water Board staff used the maximum ambient background total ammonia concentration to calculate effluent limitations based on the acute criterion; and the median background total ammonia concentration to calculate effluent limitations based on the chronic criterion. Because the Basin Plan's chronic un-ionized ammonia objective is an annual median, the median background concentration is more representative of ambient conditions than a daily maximum. Here, all background data were non-detect values, and therefore the minimum detection limit was used.

(d) Feasibility of Compliance. It is feasible for the Discharger to comply with the effluent limits because the 95th percentile (10 µg/L) is equals the AMEL; the 99th percentile (15 µg/L) is less than the MDEL (21 µg/L); and the mean (3.6 µg/L) is less than the long term average of the projected lognormal distribution of the effluent data set after accounting for effluent variability (6.7 µg/L).

(e) Anti-backsliding. Anti-backsliding requirements are satisfied because the previous permit did not contain final effluent limitations for ammonia.

e. Effluent Limit Calculations. Table F-8 shows the WQBEL calculations for copper, zinc, cyanide, dioxin-TEQ, dichlorobromomethane, and ammonia.

Table F-8. Effluent Limit Calculations

Pollutant	**Copper**	**Zinc**	**Cyanide**	**Dioxin-TEQ**	**Dichlorobromomethane**	**Total Ammonia**
Units	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L N
Basis	BP & CTR FW aq life	BP & CTR FW aq life	BP &CTR FW aq life	BP narrative	CTR HH	BP aq life
Criteria-Acute	14.4	123	22			1.93
Criteria-Chronic	9.6	123	5.2			1.17
Dilution factor	5	3	2	0	5	10
No. of samples per month	4	4	4	4	4	4
Aquatic life criteria analysis required (Y/N)	Y	Y	Y	N	N	Y
HH criteria analysis required (Y/N)	N	N	Y	Y	Y	N
Applicable WQO	9.6	123	5.2	1.3E-08	0.56	1.17
Background	4.1	12	0.6	1.1E-09	0.08	0.04
ECA acute	71	456	65			20.83
ECA chronic	42	456	14			12
ECA HH			700	1.3E-08	2.0	
Average effluent	18.9	133	3.9	1.6E-10	0.93	3.6
Standard deviation	5.8	51.9	2.4		0.54	
CV	0.6	0.6	0.6	0.6	0.6	0.6
ECA acute mult99	0.32	0.32	0.32		0.32	0.32
ECA chronic mult99	0.53	0.53	0.53		0.53	0.53
LTA acute	22.8	146	20		0.95	6.7
LTA chronic	22	241	7.4		2.8	11.6
Minimum LTA	22	146	5.0			6.7
AMEL mult95	1.6	1.6	1.6			1.6
MDEL mult99	3.1	3.1	3.1			3.1
AMEL (aq life)	34	228	11.7			10.38
MDEL (aq life)	69	456	24.0			20.83
MDEL/AMEL multiplier			2.01	2.01	2.01	
AMEL (human health)			700	1.3E-08	2.96	
MDEL (human health)			1437	2.6E-08	5.94	
Final limit – AMEL	**34**	**230**	**12**	**1.3E-08**	**3.0**	**10**
Final limit – MDEL	**69**	**460**	**24**	**2.6E-08**	**5.9**	**21**

5. **Whole Effluent Acute Toxicity**

   a. **Permit Requirements.** This Order includes effluent limitations for whole effluent acute toxicity that are based on Basin Plan Table 4-3. The previous permit required acute toxicity tests using both fathead minnow and rainbow trout. Since both species had 100% survival for all tests that were done from 2004 to 2007, neither species showed more sensitivity. Therefore, this Order will only require acute toxicity tests on fathead minnow. Compliance evaluation is based on 96-hour static-renewal bioassays. All bioassays shall be performed according to the USEPA-approved method in 40 CFR Part 136, currently *Methods for Measuring the Acute Toxicity of Effluents and Receiving Water, 5th Edition.*

   b. **Ammonia Toxicity.** Toxicity due to ammonia is not a concern because there are effluent limits for ammonia that are based on the protection of aquatic life. Therefore, if the Discharger can demonstrate to the satisfaction of the Executive Officer that toxicity exceeding limitations in this Order is caused by ammonia, and that the ammonia in the discharge does not exceed ammonia effluent limitations, then such toxicity does not constitute a violation of the effluent limitations for whole effluent toxicity. If ammonia toxicity is verified by a Toxicity Identification Evaluation (TIE), the Discharger may use am adjusted protocol approved by the Executive Officer for routine bioassay testing.

6. **Whole Effluent Chronic Toxicity**

   This Order does not include requirements for chronic toxicity monitoring. This is consistent with Basin Plan section 4.5.5.3.2, which lists the types of facilities that are required to monitor for chronic toxicity: all municipal facilities with approved pretreatment programs, all major industrial facilities, and selected groundwater dischargers. None of these facility descriptions apply to the Discharger.

   Given the small size of the facility, and the relative expenditure of resources required to conduct chronic toxicity monitoring, Regional Water Board staff have determined that chronic toxicity monitoring is not required at this time. The State Water Board is developing a chronic toxicity policy; therefore, this permit may be amended in the future to incorporate the State policy once it becomes effective.

D. Anti-backsliding and Antidegradation

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

   - BOD_5 and TSS
   - 85% removal requirement for BOD and TSS
   - Oil and grease
   - Total residual chlorine

- Acute toxicity

Retaining effluent limitations for these parameters ensures that existing receiving water quality will not be degraded and that anti-backsliding requirements of the CWA are met.

2. **New Effluent Limitations**. The previous permit did not have final WQBELs for the following parameters established by this Order.

   - Dioxin-TEQ
   - Dichlorobromomethane
   - Total ammonia

   The effluent limitations in this Order for dichlorobromomethane are new final limits, which are more stringent than the interim limitation for this parameter in the previous permit. The establishment of effluent limitations for all of these pollutants effectively creates limitations that are more stringent than those in the previous permit, therefore meeting applicable anti-backsliding requirements and ensuring that the existing quality of the receiving water will not be degraded.

3. **More Stringent Effluent Limitations**. This Order establishes effluent limitations for pH, copper, cyanide, and zinc that are more stringent than those contained in the previous permit, and therefore satisfy applicable antidegradation and anti-backsliding requirements.

4. **Effluent Limitations Not Retained from the previous permit.** Final limitations for the following parameters are not retained by this Order.

   - Settleable matter
   - Chlorodibromomethane
   - Bis(2-ethylhexyl)phthalate
   - Mercury

   This Order does not retain effluent limitations for settleable matter because compliance with the requirements of 40 CFR 133 and of Basin Plan Table 4-2 will ensure removal of settleable solids to acceptably low levels - below 0.1 mL/L-hr (30-day average) and 0.2 mL/L-hr (daily maximum).

   This Order does not retain effluent limitations for chlorodibromomethane and bis(2-ethylhexyl)phthalate because the RPA did not show reasonable potential for these pollutants to violate WQOs. Elimination of WQBELs for these pollutants is consistent with State Water Board Order WQ 2001-16, and does not violate anti-backsliding policies. Antidegradation policies are also satisfied because the exclusion of these limitations will not result in degradation of the receiving waters.

This Order does not retain effluent limitations for mercury because mercury discharges to the San Francisco Bay, including this discharge, are now regulated by Regional Water Board Order No. R2-2007-0077, which became effective March 1, 2008. Order No. R2-2007-0077 is a Watershed Permit that implements the San Francisco Bay Mercury TMDL. The elimination of effluent limitations for mercury from this permit does not violate anti-backsliding or antidegradation policies because the discharge is still regulated by another means.

5. **Effluent Limitations Less Stringent than the Previous Permit.** There are no effluent limitations less stringent than the previous permit.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Receiving water limitations are based on the Basin Plan's numeric and narrative objectives for surface water.

VI. RATIONALE FOR GROUNDWATER LIMITATIONS

Not applicable.

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

The principal purposes of a discharge monitoring program are to:

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

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

A. Influent Monitoring

Influent flow monitoring requirements are retained from the previous permit. These requirements (for flow, BOD_5, and TSS) allow determination of compliance with this Order's 85 percent removal requirement.

B. Effluent Monitoring

The MRP retains all effluent monitoring requirements from the previous permit with the following exceptions. Monitoring for settleable matter, chlorodibromomethane, bis(2-ethylhexyl)phthalate, and mercury are no longer required because the effluent limitations for these parameters are not retained in this Order. New quarterly monitoring for ammonia is established to determine compliance with the new limits. Concurrent monitoring for temperature is also established to calculate of the un-ionized fraction of ammonia in the effluent. Quarterly temperature requirements are required to determine if there is reasonable potential to violate temperature WQOs, and to ensure that the cold water (COLD) beneficial use is protected.

C. Reclamation Monitoring Requirements

Reclamation monitoring requirements are unchanged from the previous permit. Flow monitoring is required to determine the Discharger's water recycling rate.

D. Receiving Water Monitoring

This Order establishes new receiving water monitoring requirements. Monitoring requirements for pH and temperature in receiving waters are required for determination of site-specific ammonia WQOs. The Napa River is 303(d) listed for nutrients, pathogens, and sediment. Receiving water monitoring for total nitrogen, total ammonia, and total phosphate is required to monitor the status of impairment in the receiving waters. Receiving water hardness monitoring is required for future determination of hardness-based WQOs.

E. Other Monitoring Requirements

1. **Biosolids Monitoring**. Biosolids monitoring is required pursuant to 40 CFR Part 258 (for landfill disposal) or 40 CFR 503 (for land application).

2. **Groundwater Monitoring**. The Discharger has been monitoring groundwater underneath its sludge drying beds for the past ten years. Groundwater samples have been collected quarterly from monitoring wells located up gradient, underneath, and down gradient of the sludge drying beds. These wells were monitored for total coliform, nitrate/nitrite, and total organic carbon. Statistical analyses of this data showed no significant difference in the concentrations of these parameters among the monitoring wells, and the concentrations were below levels of concern. The results indicate that Discharger's sludge drying activities have not impacted groundwater.

Future impacts are also unlikely because the amount of sludge processed is not expected to increase. Therefore, groundwater monitoring is no longer required.

VIII. RATIONALE FOR PROVISIONS

A. Standard Provisions (Provision VII.A)

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

Attachment G contains Regional Standard Provisions that supplement Attachment D. These standard provisions contain definitions of terms, specify general sampling and analytical protocols, and set requirements for reporting spills, violations, and routine monitoring data in accordance with NPDES regulations, the Water Code, and Regional Water Board policies.

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

The Discharger is required to monitor its influent, its effluent, and the receiving water to evaluate compliance with permit conditions and to provide data for future RPAs. Monitoring requirements are contained in the MRP (Attachment E), Federal Standard Provisions (Attachment D) and Regional Standard Provisions (Attachment G).

C. Special Provisions (Provision VII.C)

1. Reopener Provisions

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

2. Best Management Practices and Pollution Minimization Program

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

3. Special Provisions for Municipal Facilities (POTWs Only)

a. Biosolids Management Practices Requirements: This provision is based on the Basin Plan (Chapter IV) and 40 CFR 257 and 40 CFR 503.

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

4. Recycled Water Expansion Plan

This provision is required pursuant to the CWA section 101(a)(1), which sets a national goal that the discharge of pollutants into navigable waters be eliminated, and by State Water Board Resolution No. 2009-0011, which requires the Regional Water Board to exercise its authority to the fullest extent possible to encourage the use of recycled water.

IX. PUBLIC PARTICIPATION

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the Napa Valley Register.

B. Written Comments

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

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on April 7, 2010**.**

C. Public Hearing

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

Date:	May 12, 2010
Time:	9:00 am
Location:	Elihu Harris State Office Building 1515 Clay Street, 1st Floor Auditorium Oakland, CA 94612
Contact:	Vincent Christian, (510) 622-2336, email vchristian@waterboards.ca.gov

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

Please be aware that dates and venues may change. The Regional Water Board's web address is http://www.waterboards.ca.gov/sanfranciscobay where one can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

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

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

E. Information and Copying

The Report of Waste Discharge, related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:45 a.m. and 5:00 p.m., except from noon to 1:00 p.m., Monday through Friday (The governor has ordered the Regional Board Office be closed on the first, second, and third Friday of each month). Copying of documents may be arranged through the Regional Water Board by calling 510-622-2300.

F. Register of Interested Persons

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

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Vincent Christian at 510-622-2336 (e-mail at vchristian@waterboards.ca.gov).

APPENDIX F-1
RIVER-TO-EFFLUENT RATIO CALCULATIONS

The flow balance for the Napa River can be express as in Equation 1.

$$Q_{RivUpstrm} + Q_c + Q_{sh} + Q_y + Q_{urban} + Q_{trib} = Q_{RivDnstrm}$$

where:

$Q_{RivUpstrm}$ = Upstream River Flow
Q_c = Calistoga Effluent Flow
Q_{sh} = Saint Helena Effluent Flow
Q_y = Yountville Effluent Flow
Q_{urban} = Urban Runoff Flow
Q_{trib} = Tributary Flow
$Q_{RivDnstrm}$ = Downstream River Flow

Conservatively assuming that Q_{trib} is negligible during the early part of the discharge season, this equation yields:

Equation 1: $Q_{RivUpstrm} + Q_c + Q_{sh} + Q_y + Q_{urban} = Q_{RivDnstrm}$

Conservatively using the 2007/2008 wet weather influent data to estimate the flows of each facility.

Q_y = 104 Mgal/year
Q_{sh} = 106 Mgal/year = 1.02 * Q_y
Q_y = 154 Mgal/year = 1.48 * Q_y
$Q_c + Q_{sh} + Q_y$ = 364 Mgal/year

Q_{urban} can be estimated through this equation: [2]

$$Q_{urban} = C_{mun} * I * A_{mun} + C_{ind} * I * A_{ind}$$

Where:

I = rainfall = 30 inches / year
C_{mun} = municipal runoff fraction = 0.2
C_{ind} = industrial runoff fraction = 1.0
A_{mun} = municipal area = 25,667 acres
A_{ind} = indusrial area = 1,447 acres

[2] Table 7b of January 16, 2007, staff report for the Napa River Sediment Total Maximum Daily Loads.

$$Q_{urban} = \left[0.2\left(30in/year\right)\left(25667acres\right) + 1.0\left(30in/year\right)\left(1447acres\right)\right] X \left[\frac{1.008\ ft^3/\sec}{acre-in/hr}\right] X \left[\frac{3600\sec}{hr}\right] X \left[\frac{7.4805gal}{ft^3}\right]$$

$$Q_{urban} = 5{,}359 \text{ Mgal/year}$$

Therefore, Q_{urban} is about 15 times the combined flow of the treatment plants.

$$\frac{Q_{urban}}{Q_c + Q_{sh} + Q_y} = \frac{5359\ Mgal/year}{364\ Mgal/year} = 14.7 \approx 15$$

$$Q_{Urban} = 15 * (Q_c + Q_{sh} + Q_y)$$

Substituting this ratio into Equation 1:

$$Q_{RivUpstrm} + 16 * (Q_c + Q_{sh} + Q_y) = Q_{RivDnstrm}$$

Because the ambient background and effluent data suggest that assimilative capacity may be most limited with respect to copper, the mass balance calculations are based on copper concentrations.

The mass balance can be expressed as follows:

Equation 2 : $Q_{RivUpstrm} * C_b + Q_c * C_c + Q_{sh} * C_{sh} + Q_y * C_y + Q_{urban} * C_{urban} = Q_{RivDnstrm} * C_o$

where:

C_b = Upstream Background River Copper Concentration
C_c = Calistoga Effluent Copper Concentration
C_{sh} = Saint Helena Effluent Copper Concentration
C_y = Yountville Effluent Copper Concentration
C_{urban} = Urban Runoff Copper Concentration
C_{trib} = Tributary Copper Concentration
C_o = Downstream River Copper Water Quality Objective Concentration

Assuming that urban and non-urban runoff copper loads are about eight times those of the wastewater treatment plants[3].

$$Q_{urban} * C_{urban} = 8 * (Q_c * C_c + Q_{sh} * C_{sh} + Q_y * C_y)$$

Combining the above equations:

$$Q_{RivUpstrm} * C_b + 9 * (Q_c * C_c + Q_{sh} * C_{sh} + Q_y * C_y) = Q_{RivDnstrm} * C_o$$

[3] June 6, 2007, staff report for Copper Site Specific Objectives

Conservatively, the following effluent copper concentrations are base on the 95th percentiles of the monitoring data for each wastewater treatment facility, and the downstream copper water quality objective is based on the lowest measured downstream hardness of 103 mg/L. The background copper concentration in the Napa River reflects upstream measurements.

C_c = 8.2 mg/L
C_{sh} = 9.8 mg/L
C_y = 28 mg/L
C_o = 9.6 mg/L
C_b = 3.2 mg/L

Substituting these values into Equation 2:

$$[Q_{RivDnstrm}-16*(1.48*Q_y + 1.02*Q_y + Q_y)]*3.2 + 9*[(1.48*Q_y)*8.2 + (1.02*Q_y)*9.8 + 28*Q_y) = 9.6*Q_{RivDnstrm}$$

Solving this equation for the ratio of the upstream flow to the Yountville plant flow yields a river-to-effluent ratio of 42:1:

$$\frac{Q_{RivDnstrm}}{Q_y} = \frac{42}{1}$$

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ATTACHMENT G

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

For

NPDES WASTEWATER DISCHARGE PERMITS

March 2010

Table of Contents

I. STANDARD PROVISIONS - PERMIT COMPLIANCE G-1
- A. Duty to Comply G-1
- B. Need to Halt or Reduce Activity Not a Defense G-1
- C. Duty to Mitigate G-1
  - 1. Contingency Plan G-1
  - 2. Spill Prevention Plan G-2
- D. Proper Operation & Maintenance G-2
  - 1. Operation and Maintenance (O&M) Manual G-2
  - 2. Wastewater Facilities Status Report G-2
  - 3. Proper Supervision and Operation of Publicly Owned Treatment Works (POTWs) G-3
- E. Property Rights G-3
- F. Inspection and Entry G-3
- G. Bypass G-3
- H. Upset G-3
- I. Other G-3
- J. Storm Water G-3
  - 1. Storm Water Pollution Prevention Plan (SWPP Plan) G-3
  - 2. Source Identification G-4
  - 3. Storm Water Management Controls G-5
  - 4. Annual Verification of SWPP Plan G-6
- K. Biosolids Management G-6

II. STANDARD PROVISIONS – PERMIT ACTION G-7

III. STANDARD PROVISIONS – MONITORING G-7
- A. Sampling and Analyses G-7
  - 1. Use of Certified Laboratories G-7
  - 2. Use of Appropriate Minimum Levels G-7
  - 3. Frequency of Monitoring G-7
- B. Biosolids Monitoring G-10
  - 1. Biosolids Monitoring Frequency G-10
  - 2. Biosolids Pollutants to Monitor G-11
- C. Standard Observations G-11
  - 1. Receiving Water Observations G-11
  - 2. Wastewater Effluent Observations G-11
  - 3. Beach and Shoreline Observations G-12
  - 4. Land Retention or Disposal Area Observations G-12
  - 5. Periphery of Waste Treatment and/or Disposal Facilities Observations G-12

IV. STANDARD PROVISIONS – RECORDS G-12
- A. Records to be Maintained G-12
- B. Records of monitoring information shall include G-13
  - 1. Analytical Information G-13
  - 2. Flow Monitoring Data G-13
  - 3. Wastewater Treatment Process Solids G-13
  - 4. Disinfection Process G-13

5. Treatment Process Bypasses G-14
6. Treatment Facility Overflows G-14
V. STANDARD PROVISIONS – REPORTING G-14
A. Duty to Provide Information G-14
B. Signatory and Certification Requirements G-14
C. Monitoring Reports G-15
1. Self Monitoring Reports G-15
D. Compliance Schedules G-19
E. Twenty-Four Hour Reporting G-19
1. Spill of Oil or Other Hazardous Material Reports G-19
2. Unauthorized Discharges from Municipal Wastewater Treatment Plants G-20
F. Planned Changes G-23
G. Anticipated Noncompliance G-23
H. Other Noncompliance G-23
I. Other Information G-23
VI. STANDARD PROVISIONS – ENFORCEMENT G-23
VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS G-23
VIII. DEFINITIONS – This section is an addition to Standard Provisions (Attachment D) G-23

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

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

FOR

NPDES WASTEWATER DISCHARGE PERMITS

APPLICABILITY

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

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

I. STANDARD PROVISIONS - PERMIT COMPLIANCE

A. Duty to Comply – Not Supplemented

B. Need to Halt or Reduce Activity Not a Defense – Not Supplemented

C. Duty to Mitigate – This supplements I.C. of Standard Provisions (Attachment D)

1. **Contingency Plan -** The Discharger shall maintain a Contingency Plan as originally required by Regional Water Board Resolution 74-10 and as prudent in accordance with current municipal facility emergency planning. The Contingency Plan shall describe procedures to ensure that existing facilities remain in, or are rapidly returned to, operation in the event of a process failure or emergency incident, such as employee strike, strike by suppliers of chemicals or maintenance services, power outage, vandalism, earthquake, or fire. The Discharger may combine the Contingency Plan and Spill Prevention Plan into one document. Discharge in violation of the permit where the Discharger has failed to develop and implement a Contingency Plan as described below will be the basis for considering the discharge a willful and negligent violation of the permit pursuant to California Water Code Section 13387. The Contingency Plan shall, at a minimum, contain the provisions of a. through g. below.

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

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

c. Provisions of emergency standby power.

d. Protection against vandalism.

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

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

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

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

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

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

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

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

D. Proper Operation & Maintenance – This supplements I.D of Standard Provisions (Attachment D)

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

2. **Wastewater Facilities Status Report -** The Discharger shall regularly review, revise, or update, as necessary, its Wastewater Facilities Status Report. This report shall document how the Discharger operates and maintains its wastewater collection, treatment, and disposal facilities to ensure that all facilities are adequately staffed, supervised, financed, operated,

maintained, repaired, and upgraded as necessary to provide adequate and reliable transport, treatment, and disposal of all wastewater from both existing and planned future wastewater sources under the Discharger's service responsibilities.

3. **Proper Supervision and Operation of Publicly Owned Treatment Works (POTWs) -** POTWs shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Division 4, Chapter 14, Title 23 of the California Code of Regulations.

E. Property Rights – Not Supplemented

F. Inspection and Entry – Not Supplemented

G. Bypass – Not Supplemented

H. Upset – Not Supplemented

I. Other – This section is an addition to Standard Provisions (Attachment D)

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

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

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

J. Storm Water – This section is an addition to Standard Provisions (Attachment D)

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

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

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

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

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

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

2. Source Identification

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

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

b. A site map showing the following:

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

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

   3) Paved areas and buildings;

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

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

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

   7) Vehicle service areas.

c. A narrative description of the following:

   1) Wastewater treatment process activity areas;

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

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

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

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

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

3. Storm Water Management Controls

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

a. Storm water pollution prevention personnel

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

b. Good housekeeping

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

c. Spill prevention and response

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

d. Source control

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

e. Storm water management practices

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

f. Sediment and erosion control

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

g. Employee training

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

h. Inspections

All inspections shall be done by trained personnel. Material handling areas shall be inspected for evidence of, or the potential for, pollutants entering storm water discharges. A tracking or follow up procedure shall be used to ensure appropriate response has been taken in response to an inspection. Inspections and maintenance activities shall be documented and recorded. Inspection records shall be retained for five years.

i. Records

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

4. Annual Verification of SWPP Plan

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

K. Biosolids Management – This section is an addition to Standard Provisions (Attachment D)

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

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

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

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

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

II. STANDARD PROVISIONS – PERMIT ACTION – Not Supplemented

III. STANDARD PROVISIONS – MONITORING

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

1. Use of Certified Laboratories

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

2. Use of Appropriate Minimum Levels

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

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

3. Frequency of Monitoring

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

a. Timing of Sample Collection

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

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

3) The Discharger shall collect grab samples of effluent during periods of day-time maximum peak effluent flows (or peak flows through secondary treatment units for facilities that recycle effluent flows).

4) Effluent sampling for conventional pollutants shall occur on at least one day of any multiple-day bioassay test the MRP requires. During the course of the test, on at least one day, the Discharger shall collect and retain samples of the discharge. In the event a bioassay test does not comply with permit limits, the Discharger shall analyze these retained samples for pollutants that could be toxic to aquatic life and for which it has effluent limits.

   i. The Discharger shall perform bioassay tests on final effluent samples; when chlorine is used for disinfection, bioassay tests shall be performed on effluent after chlorination-dechlorination; and

   ii. The Discharger shall analyze for total ammonia nitrogen and calculate the amount of un-ionized ammonia whenever test results fail to meet the percent survival specified in the permit.

b. Conditions Triggering Accelerated Monitoring

1) If the results from two consecutive samples of a constituent monitored in a 30-day period exceed the monthly average limit for any parameter (or if the required sampling frequency is once per month and the monthly sample exceeds the monthly average limit), the Discharger shall, within 24 hours after the results are received, increase its sampling frequency to daily until the results from the additional sampling show that the parameter is in compliance with the monthly average limit.

2) If any maximum daily limit is exceeded, the Discharger shall increase its sampling frequency to daily within 24 hours after the results are received that indicate the exceedance of the maximum daily limit until two samples collected on consecutive days show compliance with the maximum daily limit.

3) If final or intermediate results of an acute bioassay test indicate a violation or threatened violation (e.g., the percentage of surviving test organisms of any single acute bioassay test is less than 70 percent), the Discharger shall initiate a new test as soon as practical, and the Discharger shall investigate the cause of the mortalities and report its findings in the next self monitoring report (SMR).

4) The Discharger shall calibrate chlorine residual analyzers against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, the Discharger shall collect grab samples at least every 30 minutes until compliance with the limit is achieved, unless the Discharger monitors chlorine residual continuously. In such cases, the Discharger shall continue to conduct continuous monitoring as required by its permit.

5) When a bypass occurs (except one subject to provision III.A.3.b.6 below), the Discharger shall monitor flows and collect samples on a daily basis for all constituents at affected discharge points that have effluent limits for the duration of

the bypass (including acute toxicity using static renewals), except chronic toxicity, unless otherwise stipulated by the MRP.

6) Unless otherwise stipulated by the MRP, when a bypass approved pursuant to Attachment D, Standard Provisions, Sections I.G.2 or I.G.4, occurs, the Discharger shall monitor flows and, using appropriate procedures as specified in the MRP, collect and retain samples for affected discharge points on a daily basis for the duration of the bypass. The Discharger shall analyze for total suspended solids (TSS) using 24-hour composites (or more frequent increments) and for bacteria indicators with effluent limits using grab samples. If TSS exceeds 45 mg/L in any composite sample, the Discharger shall also analyze the retained samples for that discharge for all other constituents that have effluent limits, except oil and grease, mercury, dioxin-TEQ, and acute and chronic toxicity. Additionally, at least once each year, the Discharger shall analyze the retained samples for one approved bypass discharge event for all other constituents that have effluent limits, except oil and grease, mercury, dioxin-TEQ, and acute and chronic toxicity. This monitoring shall be in addition to the minimum monitoring specified in the MRP.

c. Storm Water Monitoring

The requirements of this section only apply to facilities that are not covered by an NPDES permit for storm water discharges and where not all site storm drainage from process areas (i.e., areas of the treatment facility where chemicals or wastewater could come in contact with storm water) is directed to the headworks. For storm water not directed to the headworks during the wet season (October 1 to April 30), the Discharger shall:

1) Conduct visual observations of the storm water discharge locations during daylight hours at least once per month during a storm event that produces significant storm water discharge to observe the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor, etc.

2) Measure (or estimate) the total volume of storm water discharge, collect grab samples of storm water discharge from at least two storm events that produce significant storm water discharge, and analyze the samples for oil and grease, pH, TSS, and specific conductance.

   The grab samples shall be taken during the first 30 minutes of the discharge. If collection of the grab samples during the first 30 minutes is impracticable, grab samples may be taken during the first hour of the discharge, and the Discharger shall explain in the Annual Report why the grab sample(s) could not be taken in the first 30 minutes.

3) Testing for the presence of non-storm water discharges shall be conducted no less than twice during the dry season (May 1 to September 30) at all storm water discharge locations. Tests may include visual observations of flows, stains, sludges, odors, and other abnormal conditions; dye tests; TV line surveys; or analysis and validation of accurate piping schematics. Records shall be maintained describing the method used, date of testing, locations observed, and test results.

4) Samples shall be collected from all locations where storm water is discharged. Samples shall represent the quality and quantity of storm water discharged from the facility. If a facility discharges storm water at multiple locations, the Discharger may sample a reduced number of locations if it establishes and documents through the monitoring program that storm water discharges from different locations are substantially identical.

5) Records of all storm water monitoring information and copies of all reports required by the permit shall be retained for a period of at least three years from the date of sample, observation, or report.

d. Receiving Water Monitoring

The requirements of this section only apply when the MRP requires receiving water sampling.

1) Receiving water samples shall be collected on days coincident with effluent sampling for conventional pollutants.

2) Receiving water samples shall be collected at each station on each sampling day during the period within one hour following low slack water. Where sampling during lower slack water is impractical, sampling shall be performed during higher slack water. Samples shall be collected within the discharge plume and down current of the discharge point so as to be representative, unless otherwise stipulated in the MRP.

3) Samples shall be collected within one foot of the surface of the receiving water, unless otherwise stipulated in the MRP.

B. Biosolids Monitoring – This section supplements III.B of Standard Provisions (Attachment D)

When biosolids are sent to a landfill, sent to a surface disposal site, or applied to land as a soil amendment, they must be monitored as follows:

1. Biosolids Monitoring Frequency

Biosolids disposal must be monitored at the following frequency:

Metric tons biosolids/365 days	Frequency
0-290	Once per year
290-1500	Quarterly
1500-15,000	Six times per year
Over 15,000	Once per month

(Metric tons are on a dry weight basis)

2. **Biosolids Pollutants to Monitor**

Biosolids shall be monitored for the following constituents:

Land Application: arsenic, cadmium, copper, mercury, molybdenum, nickel, lead, selenium, and zinc

Municipal Landfill: Paint filter test (pursuant to 40 CFR 258)

Biosolids-only Landfill or Surface Disposal Site (if no liner and leachate system): arsenic, chromium, and nickel

C. Standard Observations – This section is an addition to III of Standard Provisions (Attachment D)

1. **Receiving Water Observations**

The requirements of this section only apply when the MRP requires standard observations of the receiving water. Standard observations shall include the following:

a. *Floating and suspended materials* (e.g., oil, grease, algae, and other macroscopic particulate matter): presence or absence, source, and size of affected area.

b. *Discoloration and turbidity*: description of color, source, and size of affected area.

c. *Odor*: presence or absence, characterization, source, distance of travel, and wind direction.

d. *Beneficial water use*: presence of water-associated waterfowl or wildlife, fisherpeople, and other recreational activities in the vicinity of each sampling station.

e. *Hydrographic condition*: time and height of corrected high and low tides (corrected to nearest National Oceanic and Atmospheric Administration location for the sampling date and time of sample collection).

f. *Weather conditions*:

1) Air temperature; and

2) Total precipitation during the five days prior to observation.

2. **Wastewater Effluent Observations**

The requirements of this section only apply when the MRP requires wastewater effluent standard observations. Standard observations shall include the following:

a. *Floating and suspended material of wastewater origin* (e.g., oil, grease, algae, and other macroscopic particulate matter): presence or absence.

b. *Odor*: presence or absence, characterization, source, distance of travel, and wind direction.

3. Beach and Shoreline Observations

The requirements of this section only apply when the MRP requires beach and shoreline standard observations. Standard observations shall include the following:

a. *Material of wastewater origin*: presence or absence, description of material, estimated size of affected area, and source.

b. *Beneficial use*: estimate number of people participating in recreational water contact, non-water contact, or fishing activities.

4. Land Retention or Disposal Area Observations

The requirements of this section only apply to facilities with on-site surface impoundments or disposal areas that are in use. This section applies to both liquid and solid wastes, whether confined or unconfined. The Discharger shall conduct the following for each impoundment:

a. Determine the amount of freeboard at the lowest point of dikes confining liquid wastes.

b. Report evidence of leaching liquid from area of confinement and estimated size of affected area. Show affected area on a sketch and volume of flow (e.g., gallons per minute [gpm]).

c. Regarding odor, describe presence or absence, characterization, source, distance of travel, and wind direction.

d. Estimate number of waterfowl and other water-associated birds in the disposal area and vicinity.

5. Periphery of Waste Treatment and/or Disposal Facilities Observations

The requirements of this section only apply when the MRP specifies periphery standard observations. Standard observations shall include the following:

a. *Odor*: presence or absence, characterization, source, and distance of travel.

b. *Weather conditions*: wind direction and estimated velocity.

IV. STANDARD PROVISIONS – RECORDS

A. Records to be Maintained – This supplements IV.A of Standard Provisions (Attachment D)

The Discharger shall maintain records in a manner and at a location (e.g., wastewater treatment plant or Discharger offices) such that the records are accessible to Regional Water Board staff. The minimum period of retention specified in Section IV, Records, of the Federal Standard Provisions shall be extended during the course of any unresolved litigation regarding the subject discharge, or when requested by the Regional Water Board or Regional Administrator of USEPA, Region IX.

A copy of the permit shall be maintained at the discharge facility and be available at all times to operating personnel.

B. Records of monitoring information shall include – This supplements IV.B of Standard Provision (Attachment D)

1. Analytical Information

Records shall include analytical method detection limits, minimum levels, reporting levels, and related quantification parameters.

2. Flow Monitoring Data

For all required flow monitoring (e.g., influent and effluent flows), the additional records shall include the following, unless otherwise stipulated by the MRP:

a. Total volume for each day; and

b. Maximum, minimum, and average daily flows for each calendar month.

3. Wastewater Treatment Process Solids

a. For each treatment unit process that involves solids removal from the wastewater stream, records shall include the following:

1) Total volume or mass of solids removed from each collection unit (e.g., grit, skimmings, undigested biosolids, or combination) for each calendar month or other time period as appropriate, but not to exceed annually; and

2) Final disposition of such solids (e.g., landfill, other subsequent treatment unit).

b. For final dewatered biosolids from the treatment plant as a whole, records shall include the following:

1) Total volume or mass of dewatered biosolids for each calendar month;

2) Solids content of the dewatered biosolids; and

3) Final disposition of dewatered biosolids (disposal location and disposal method).

4. Disinfection Process

For the disinfection process, these additional records shall be maintained documenting process operation and performance:

a. For bacteriological analyses:

1) Wastewater flow rate at the time of sample collection; and

2) Required statistical parameters for cumulative bacterial values (e.g., moving median or geometric mean for the number of samples or sampling period identified in this Order).

b. For the chlorination process, when chlorine is used for disinfection, at least daily average values for the following:

1) Chlorine residual of treated wastewater as it enters the contact basin (mg/L);

2) Chlorine dosage (kg/day); and

3) Dechlorination chemical dosage (kg/day).

5. Treatment Process Bypasses

A chronological log of all treatment process bypasses, including wet weather blending, shall include the following:

a. Identification of the treatment process bypassed;

b. Dates and times of bypass beginning and end;

c. Total bypass duration;

d. Estimated total bypass volume; and

e. Description of, or reference to other reports describing, the bypass event, the cause, the corrective actions taken (except for wet weather blending that is in compliance with permit conditions), and any additional monitoring conducted.

6. Treatment Facility Overflows

This section applies to records for overflows at the treatment facility. This includes the headworks and all units and appurtenances downstream. The Discharger shall retain a chronological log of overflows at the treatment facility and records supporting the information provided in section V.E.2.

C. Claims of Confidentiality – Not Supplemented

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information – Not Supplemented

B. Signatory and Certification Requirements – Not Supplemented

C. Monitoring Reports – This section supplements V.C of Standard Provisions (Attachment D)

1. Self Monitoring Reports

For each reporting period established in the MRP, the Discharger shall submit an SMR to the Regional Water Board in accordance with the requirements listed in this document and at the frequency the MRP specifies. The purpose of the SMR is to document treatment performance, effluent quality, and compliance with the waste discharge requirements of this Order.

a. Transmittal letter

Each SMR shall be submitted with a transmittal letter. This letter shall include the following:

1) Identification of all violations of effluent limits or other waste discharge requirements found during the reporting period;

2) Details regarding violations: parameters, magnitude, test results, frequency, and dates;

3) Causes of violations;

4) Discussion of corrective actions taken or planned to resolve violations and prevent recurrences, and dates or time schedule of action implementation (if previous reports have been submitted that address corrective actions, reference to the earlier reports is satisfactory);

5) Data invalidation (Data should not be submitted in an SMR if it does not meet quality assurance/quality control standards. However, if the Discharger wishes to invalidate any measurement after it was submitted in an SMR, a letter shall identify the measurement suspected to be invalid and state the Discharger's intent to submit, within 60 days, a formal request to invalidate the measurement. This request shall include the original measurement in question, the reason for invalidating the measurement, all relevant documentation that supports invalidation [e.g., laboratory sheet, log entry, test results, etc.], and discussion of the corrective actions taken or planned [with a time schedule for completion] to prevent recurrence of the sampling or measurement problem.);

6) If the Discharger blends, the letter shall describe the duration of blending events and certify whether blended effluent was in compliance with the conditions for blending; and

7) Signature (The transmittal letter shall be signed according to Section V.B of this Order, Attachment D – Standard Provisions.).

b. Compliance evaluation summary

Each report shall include a compliance evaluation summary. This summary shall include each parameter for which the permit specifies effluent limits, the number of

samples taken during the monitoring period, and the number of samples that exceed applicable effluent limits.

c. Results of analyses and observations

1) Tabulations of all required analyses and observations, including parameter, date, time, sample station, type of sample, test result, method detection limit, method minimum level, and method reporting level, if applicable, signed by the laboratory director or other responsible official.

2) When determining compliance with an average monthly effluent limitation and more than one sample result is available in a month, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of detected but not quantified (DNQ) or nondetect (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

ii. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

If a sample result, or the arithmetic mean or median of multiple sample results, is below the reporting limit, and there is evidence that the priority pollutant is present in the effluent above an effluent limitation and the Discharger conducts a Pollutant Minimization Program, the Discharger shall not be deemed out of compliance.

3) Dioxin-TEQ Reporting: The Discharger shall report for each dioxin and furan congener the analytical results of effluent monitoring, including the quantifiable limit (reporting level), the method detection limit, and the measured concentration. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating dioxin-TEQ, the Discharger shall set congener concentrations below the minimum levels (ML) to zero. The Discharger shall calculate and report dioxin-TEQs using the following formula, where the MLs, toxicity equivalency factors (TEFs), and bioaccumulation equivalency factors (BEFs) are as provided in Table A:

$$\text{Dioxin-TEQ} = \Sigma\,(C_x \times TEF_x \times BEF_x)$$

where: C_x = measured or estimated concentration of congener *x*
TEF_x = toxicity equivalency factor for congener x
BEFx = bioaccumulation equivalency factor for congener *x*

Table A

Minimum Levels, Toxicity Equivalency Factors,
and Bioaccumulation Equivalency Factors

Dioxin or Furan Congener	Minimum Level (pg/L)	1998 Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
2,3,7,8-TCDD	10	1.0	1.0
1,2,3,7,8-PeCDD	50	1.0	0.9
1,2,3,4,7,8-HxCDD	50	0.1	0.3
1,2,3,6,7,8-HxCDD	50	0.1	0.1
1,2,3,7,8,9-HxCDD	50	0.1	0.1
1,2,3,4,6,7,8-HpCDD	50	0.01	0.05
OCDD	100	0.0001	0.01
2,3,7,8-TCDF	10	0.1	0.8
1,2,3,7,8-PeCDF	50	0.05	0.2
2,3,4,7,8-PeCDF	50	0.5	1.6
1,2,3,4,7,8-HxCDF	50	0.1	0.08
1,2,3,6,7,8-HxCDF	50	0.1	0.2
1,2,3,7,8,9-HxCDF	50	0.1	0.6
2,3,4,6,7,8-HxCDF	50	0.1	0.7
1,2,3,4,6,7,8-HpCDF	50	0.01	0.01
1,2,3,4,7,8,9-HpCDF	50	0.01	0.4
OCDF	100	0.0001	0.02

d. Data reporting for results not yet available

The Discharger shall make all reasonable efforts to obtain analytical data for required parameter sampling in a timely manner. Certain analyses require additional time to complete analytical processes and report results. For cases where required monitoring parameters require additional time to complete analytical processes and reports, and results are not available in time to be included in the SMR for the subject monitoring period, the Discharger shall describe such circumstances in the SMR and include the data for these parameters and relevant discussions of any observed exceedances in the next SMR due after the results are available.

e. Flow data

The Discharger shall provide flow data tabulation pursuant to Section IV.B.2.

f. Annual self monitoring report requirements

By the date specified in the MRP, the Discharger shall submit an annual report to the Regional Water Board covering the previous calendar year. The report shall contain the following:

1) Annual compliance summary table of treatment plant performance, including documentation of any blending events;

2) Comprehensive discussion of treatment plant performance and compliance with the permit (This discussion shall include any corrective actions taken or planned, such as changes to facility equipment or operation practices that may be needed to achieve compliance, and any other actions taken or planned that are intended to improve performance and reliability of the Discharger's wastewater collection, treatment, or disposal practices.);

3) Both tabular and graphical summaries of the monitoring data for the previous year if parameters are monitored at a frequency of monthly or greater;

4) List of approved analyses, including the following:

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

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

   (iii) List of "waived" analyses, as approved;

5) Plan view drawing or map showing the Discharger's facility, flow routing, and sampling and observation station locations;

6) Results of annual facility inspection to verify that all elements of the SWPP Plan are accurate and up to date (only required if the Discharger does not route all storm water to the headworks of its wastewater treatment plant); and

7) Results of facility report reviews (The Discharger shall regularly review, revise, and update, as necessary, the O&M Manual, the Contingency Plan, the Spill Prevention Plan, and Wastewater Facilities Status Report so that these documents remain useful and relevant to current practices. At a minimum, reviews shall be conducted annually. The Discharger shall include, in each Annual Report, a description or summary of review and evaluation procedures, recommended or planned actions, and an estimated time schedule for implementing these actions. The Discharger shall complete changes to these documents to ensure they are up-to-date.).

g. Report submittal

The Discharger shall submit SMRs to:

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

h. Reporting data in electronic format

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

1) *Reporting Method*: The Discharger shall submit SMRs electronically via a process approved by the Executive Officer (see, for example, the letter dated December 17, 1999, "Official Implementation of Electronic Reporting System [ERS]" and the progress report letter dated December 17, 2000).

2) *Monthly or Quarterly Reporting Requirements*: For each reporting period (monthly or quarterly as specified in the MRP), the Discharger shall submit an electronic SMR to the Regional Water Board in accordance with the provisions of Section V.C.1.a-e, except for requirements under Section V.C.1.c(1) where ERS does not have fields for dischargers to input certain information (e.g., sample time). However, until USEPA approves the electronic signature or other signature technologies, Dischargers that use ERS shall submit a hard copy of the original transmittal letter, an ERS printout of the data sheet, and a violation report (a receipt of the electronic transmittal shall be retained by the Discharger). This electronic SMR submittal suffices for the signed tabulations specified under Section V.C.1.c(1).

3) *Annual Reporting Requirements*: Dischargers who have submitted data using the ERS for at least one calendar year are exempt from submitting the portion of the annual report required under Section V.C.1.f(1) and (3).

D. Compliance Schedules – Not supplemented

E. Twenty-Four Hour Reporting – This section supplements V.E of Standard Provision (Attachment D)

1. Spill of Oil or Other Hazardous Material Reports

a. Within 24 hours of becoming aware of a spill of oil or other hazardous material that is not contained onsite and completely cleaned up, the Discharger shall report by telephone to the Regional Water Board at (510) 622-2369.

b. The Discharger shall also report such spills to the State Office of Emergency Services [telephone (800) 852-7550] only when the spills are in accordance with applicable reporting quantities for hazardous materials.

c. The Discharger shall submit a written report to the Regional Water Board within five working days following telephone notification unless directed otherwise by Regional Water Board staff. A report submitted electronically is acceptable. The written report shall include the following:

1) Date and time of spill, and duration if known;

2) Location of spill (street address or description of location);

3) Nature of material spilled;

4) Quantity of material involved;

5) Receiving water body affected, if any;

6) Cause of spill;

7) Estimated size of affected area;

8) Observed impacts to receiving waters (e.g., oil sheen, fish kill, water discoloration);

9) Corrective actions taken to contain, minimize, or clean up the spill;

10) Future corrective actions planned to be taken to prevent recurrence, and schedule of implementation; and

11) Persons or agencies notified.

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

The following requirements apply to municipal wastewater treatment plants that experience an unauthorized discharge at their treatment facilities and are consistent with and supercede requirements imposed on the Discharger by the Executive Officer by letter of May 1, 2008, issued pursuant to California Water Code Section 13383.

a. Two (2)-Hour Notification

For any unauthorized discharges that result in a discharge to a drainage channel or a surface water, the Discharger shall, as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the State Office of Emergency Services (telephone 800-852-7550), the local health officers or directors of environmental health with jurisdiction over the affected water bodies, and the Regional Water Board. The notification to the Regional Water Board shall be via the Regional Water Board's online reporting system at www.wbers.net, and shall include the following:

1) Incident description and cause;

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

3) Date and time the unauthorized discharge started;

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

[1] California Code of Regulations, Title 23, Section 2250(b), defines an unauthorized discharge to be a discharge, not regulated by waste discharge requirements, of treated, partially treated, or untreated wastewater resulting from the intentional or unintentional diversion of wastewater from a collection, treatment or disposal system.

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

6) Identity of the person reporting the unauthorized discharge.

b. 24-hour Certification

Within 24 hours, the Discharger shall certify to the Regional Water Board, at www.wbers.net, that the State Office of Emergency Services and the local health officers or directors of environmental health with jurisdiction over the affected water bodies have been notified of the unauthorized discharge.

c. 5-Day Written Report

Within five business days, the Discharger shall submit a written report, via the Regional Water Board's online reporting system at www.wbers.net, that includes, in addition to the information required above, the following:

1) Methods used to delineate the geographical extent of the unauthorized discharge within receiving waters;

2) Efforts implemented to minimize public exposure to the unauthorized discharge;

3) Visual observations of the impacts (if any) noted in the receiving waters (e.g., fish kill, discoloration of water) and the extent of sampling if conducted;

4) Corrective measures taken to minimize the impact of the unauthorized discharge;

5) Measures to be taken to minimize the chances of a similar unauthorized discharge occurring in the future;

6) Summary of Spill Prevention Plan or O&M Manual modifications to be made, if necessary, to minimize the chances of future unauthorized discharges; and

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

d. Communication Protocol

To clarify the multiple levels of notification, certification, and reporting, the current communication requirements for unauthorized discharges from municipal wastewater treatment plants are summarized in Table B that follows.

Table B

Summary of Communication Requirements for Unauthorized Discharges[1] from Municipal Wastewater Treatment Plants

Discharger is required to:	Agency Receiving Information	Time frame	Method for Contact
1. Notify	California Emergency Management Agency (Cal EMA)	As soon as possible, but not later than **2 hours** after becoming aware of the unauthorized discharge.	Telephone – (800) 852-7550 (obtain a control number from Cal EMA)
	Local health department	As soon as possible, but not later than **2 hours** after becoming aware of the unauthorized discharge.	Depends on local health department
	Regional Water Board	As soon as possible, but not later than **2 hours** after becoming aware of the unauthorized discharge.	Electronic[2] www.wbers.net
2. Certify	Regional Water Board	As soon as possible, but not later than **24 hours** after becoming aware of the unauthorized discharge.	Electronic[3] www.wbers.net
3. Report	Regional Water Board	Within **5 business days** of becoming aware of the unauthorized discharge.	Electronic[4] www.wbers.net

[1] California Code of Regulations, Title 23, Section 2250(b), defines an unauthorized discharge to be a discharge, not regulated by waste discharge requirements, of treated, partially treated, or untreated wastewater resulting from the intentional or unintentional diversion of wastewater from a collection, treatment or disposal system.

[2] In the event that the Discharger is unable to provide online notification within 2 hours of becoming aware of an unauthorized discharge, it shall phone the Regional Water Board's spill hotline at (510) 622-2369 and convey the same information contained in the notification form. In addition, within 3 business days of becoming aware of the unauthorized discharge, the Discharger shall enter the notification information into the Regional Water Board's online system in electronic format.

[3] In most instances, the 2-hour notification will also satisfy 24-hour certification requirements. This is because the notification form includes fields for documenting that OES and the local health department have been contacted. In other words, if the Discharger is able to complete all the fields in the notification form within 2 hours, certification requirements are also satisfied. In the event that the Discharger is unable to provide online certification within 24 hours of becoming aware of an unauthorized discharge, it shall phone the Regional Water Board's spill hotline at (510) 622-2369 and convey the same information contained in the certification form. In addition, within 3 business days of becoming aware of the unauthorized discharge, the Discharger shall enter the certification information into the Regional Water Board's online system in electronic format.

[4] If the Discharger cannot satisfy the 5-day reporting requirements via the Regional Water Board's online reporting system, it shall submit a written report (preferably electronically in pdf) to the appropriate Regional Water Board case manager. In cases where the Discharger cannot satisfy the 5-day reporting requirements via the online reporting system, it must still complete the Regional Water Board's online reporting requirements within 15 calendar days of becoming aware of the unauthorized discharge.

F. Planned Changes – Not supplemented

G. Anticipated Noncompliance – Not supplemented

H. Other Noncompliance – Not supplemented

I. Other Information – Not supplemented

VI. STANDARD PROVISIONS – ENFORCEMENT – Not Supplemented

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS – Not Supplemented

VIII. DEFINITIONS – This section is an addition to Standard Provisions (Attachment D)

More definitions can be found in Attachment A of this NPDES Permit.

1. Arithmetic Calculations

   a. Geometric mean is the antilog of the log mean or the back-transformed mean of the logarithmically transformed variables, which is equivalent to the multiplication of the antilogarithms. The geometric mean can be calculated with either of the following equations:

   $$\text{Geometric Mean} = Anti\log\left(\frac{1}{N}\sum_{i=1}^{N} Log(C_i)\right)$$

   or

   $$\text{Geometric Mean} = (C_1 * C_2 * \ldots * C_N)^{1/N}$$

   Where "N" is the number of data points for the period analyzed and "C" is the concentration for each of the "N" data points.

   b. Mass emission rate is obtained from the following calculation for any calendar day:

   $$\text{Mass emission rate (lb/day)} = \frac{8.345}{N}\sum_{i=1}^{N} Q_i C_i$$

   $$\text{Mass emission rate (kg/day)} = \frac{3.785}{N}\sum_{i=1}^{N} Q_i C_i$$

   In which "N" is the number of samples analyzed in any calendar day and "Q_i" and "C_i" are the flow rate (MGD) and the constituent concentration (mg/L) associated with each of the "N" grab samples that may be taken in any calendar day. If a composite sample is taken, "C_i" is the concentration measured in the composite sample and "Q_i" is the average flow rate occurring during the period over which the samples are composited. The daily concentration of a constituent measured over any calendar day shall be determined from the flow-weighted average of the same constituent in the combined waste streams as follows:

C_d = Average daily concentration = $\frac{1}{Q_t}\sum_{i=1}^{N} Q_i C_i$

In which "N" is the number of component waste streams and "Q" and "C" are the flow rate (MGD) and the constituent concentration (mg/L) associated with each of the "N" waste streams. "Q_t" is the total flow rate of the combined waste streams.

c. Maximum allowable mass emission rate, whether for a 24-hour, weekly 7-day, monthly 30-day, or 6-month period, is a limitation expressed as a daily rate determined with the formulas in the paragraph above, using the effluent concentration limit specified in the permit for the period and the specified allowable flow.

d. POTW removal efficiency is the ratio of pollutants removed by the treatment facilities to pollutants entering the treatment facilities (expressed as a percentage). The Discharger shall determine removal efficiencies using monthly averages (by calendar month unless otherwise specified) of pollutant concentration of influent and effluent samples collected at about the same time and using the following equation (or its equivalent):

Removal Efficiency (%) = 100 × [1-(Effluent Concentration/Influent Concentration)]

2. Biosolids means the solids, semi-liquid suspensions of solids, residues, screenings, grit, scum, and precipitates separated from or created in wastewater by the unit processes of a treatment system. It also includes, but is not limited to, all supernatant, filtrate, centrate, decantate, and thickener overflow and underflow in the solids handling parts of the wastewater treatment system.

3. Blending is the practice of recombining wastewater that has been biologically treated with wastewater that has bypassed around biological treatment units.

4. Bottom sediment sample is (1) a separate grab sample taken at each sampling station for the determination of selected physical-chemical parameters, or (2) four grab samples collected from different locations in the immediate vicinity of a sampling station while the boat is anchored and analyzed separately for macroinvertebrates.

5. Composite sample is a sample composed of individual grab samples collected manually or by an automatic sampling device on the basis of time or flow as specified in the MRP. For flow-based composites, the proportion of each grab sample included in the composite sample shall be within plus or minus five percent (+/-5%) of the representative flow rate of the waste stream being measured at the time of grab sample collection. Alternatively, equal volume grab samples may be individually analyzed with the flow-weighted average calculated by averaging flow-weighted ratios of each grab sample analytical result. Grab samples comprising time-based composite samples shall be collected at intervals not greater than those specified in the MRP. The quantity of each grab sample comprising a time-based composite sample shall be a set of flow proportional volumes as specified in the MRP. If a particular time-based or flow-based composite sampling protocol is not specified in the MRP, the Discharger shall determine and implement the most representative sampling protocol for the given parameter subject to Executive Officer approval.

6. Depth-integrated sample is defined as a water or waste sample collected by allowing a sampling device to fill during a vertical traverse in the waste or receiving water body being sampled. The

Discharger shall collect depth-integrated samples in such a manner that the collected sample will be representative of the waste or water body at that sampling point.

7. Flow sample is an accurate measurement of the average daily flow volume using a properly calibrated and maintained flow measuring device.

8. Grab sample is an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples represent only the condition that exists at the time the wastewater is collected.

9. Initial dilution is the process that results in the rapid and irreversible turbulent mixing of wastewater with receiving water around the point of discharge.

10. Overflow is the intentional or unintentional spilling or forcing out of untreated or partially treated wastes from a transport system (e.g., through manholes, at pump stations, and at collection points) upstream from the treatment plant headworks or from any part of a treatment plant facility.

11. Priority pollutants are those constituents referred to in 40 CFR Part 122 as promulgated in the Federal Register, Vol. 65, No. 97, Thursday, May 18, 2000, also known as the California Toxics Rule, the presence or discharge of which could reasonably be expected to interfere with maintaining designated uses.

12. Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage. It excludes infiltration and runoff from agricultural land.

13. Toxic pollutant means any pollutant listed as toxic under federal Clean Water Act section 307(a)(1) or under 40 CFR 401.15.

14. Untreated waste is raw wastewater.

15. Waste, waste discharge, discharge of waste, and discharge are used interchangeably in the permit. The requirements of the permit apply to the entire volume of water, and the material therein, that is disposed of to surface and ground waters of the State of California.

Table C

List of Monitoring Parameters and Analytical Methods

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
1.	Antimony	204.2					10	5	50	0.5	5	0.5		1000
2.	Arsenic	206.3				20		2	10	2	2	1		1000
3.	Beryllium						20	0.5	2	0.5	1			1000
4.	Cadmium	200 or 213				10	0.5	10	0.25	0.5				1000
5a.	Chromium (III)	SM 3500												
5b.	Chromium (VI)	SM 3500				10	5							1000
6.	Copper	200.9					25	5	10	0.5	2			1000
7.	Lead	200.9					20	5	5	0.5	2			10,000
8.	Mercury	1631 (note)[3]												
9.	Nickel	249.2					50	5	20	1	5			1000
10.	Selenium	200.8 or SM 3114B or C						5	10	2	5	1		1000
11.	Silver	272.2					10	1	10	0.25	2			1000
12.	Thallium	279.2					10	2	10	1	5			1000
13.	Zinc	200 or 289					20		20	1	10			
14.	Cyanide	SM 4500 CN^- C or I				5								
15.	Asbestos (only required for dischargers to MUN waters)[4]	0100.2 [5]												
16.	2,3,7,8-TCDD and 17 congeners (Dioxin)	1613												
17.	Acrolein	603	2.0	5										
18.	Acrylonitrile	603	2.0	2										
19.	Benzene	602	0.5	2										
33.	Ethylbenzene	602	0.5	2										
39.	Toluene	602	0.5	2										

[1] The suggested method is the USEPA Method unless otherwise specified (SM = Standard Methods). The Discharger may use another USEPA-approved or recognized method if that method has a level of quantification below the applicable water quality objective. Where no method is suggested, the Discharger has the discretion to use any standard method.

[2] Minimum levels are from the *State Implementation Policy*. They are the concentration of the lowest calibration standard for that technique based on a survey of contract laboratories. Laboratory techniques are defined as follows: GC = Gas Chromatography; GCMS = Gas Chromatography/Mass Spectrometry; LC = High Pressure Liquid Chromatography; Color = Colorimetric; FAA = Flame Atomic Absorption; GFAA = Graphite Furnace Atomic Absorption; ICP = Inductively Coupled Plasma; ICPMS = Inductively Coupled Plasma/Mass Spectrometry; SPGFAA = Stabilized Platform Graphite Furnace Atomic Absorption (i.e., USEPA 200.9); Hydride = Gaseous Hydride Atomic Absorption; CVAA = Cold Vapor Atomic Absorption; DCP = Direct Current Plasma.

[3] The Discharger shall use ultra-clean sampling (USEPA Method 1669) and ultra-clean analytical methods (USEPA Method 1631) for mercury monitoring. The minimum level for mercury is 2 ng/l (or 0.002 ug/l).

[4] MUN = Municipal and Domestic Supply. This designation, if applicable, is in the Findings of the permit.

[5] *Determination of Asbestos Structures over 10 [micrometers] in Length in Drinking Water Using MCE Filters*, USEPA 600/R-94-134, June 1994.

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
20.	Bromoform	601	0.5	2										
21.	Carbon Tetrachloride	601	0.5	2										
22.	Chlorobenzene	601	0.5	2										
23.	Chlorodibromomethane	601	0.5	2										
24.	Chloroethane	601	0.5	2										
25.	2-Chloroethylvinyl Ether	601	1	1										
26.	Chloroform	601	0.5	2										
75.	1,2-Dichlorobenzene	601	0.5	2										
76.	1,3-Dichlorobenzene	601	0.5	2										
77.	1,4-Dichlorobenzene	601	0.5	2										
27.	Dichlorobromomethane	601	0.5	2										
28.	1,1-Dichloroethane	601	0.5	1										
29.	1,2-Dichloroethane	601	0.5	2										
30.	1,1-Dichloroethylene or 1,1-Dichloroethene	601	0.5	2										
31.	1,2-Dichloropropane	601	0.5	1										
32.	1,3-Dichloropropylene or 1,3-Dichloropropene	601	0.5	2										
34.	Methyl Bromide or Bromomethane	601	1.0	2										
35.	Methyl Chloride or Chloromethane	601	0.5	2										
36.	Methylene Chloride or Dichlorormethane	601	0.5	2										
37.	1,1,2,2-Tetrachloroethane	601	0.5	1										
38.	Tetrachloroethylene	601	0.5	2										
40.	1,2-Trans-Dichloroethylene	601	0.5	1										
41.	1,1,1-Trichloroethane	601	0.5	2										
42.	1,1,2-Trichloroethane	601	0.5	2										
43.	Trichloroethene	601	0.5	2										
44.	Vinyl Chloride	601	0.5	2										
45.	2-Chlorophenol	604	2	5										
46.	2,4-Dichlorophenol	604	1	5										
47.	2,4-Dimethylphenol	604	1	2										
48.	2-Methyl-4,6-Dinitrophenol or Dinitro-2-methylphenol	604	10	5										
49.	2,4-Dinitrophenol	604	5	5										
50.	2-Nitrophenol	604		10										
51.	4-Nitrophenol	604	5	10										
52.	3-Methyl-4-Chlorophenol	604	5	1										
53.	Pentachlorophenol	604	1	5										
54.	Phenol	604	1	1		50								
55.	2,4,6-Trichlorophenol	604	10	10										
56.	Acenaphthene	610 HPLC	1	1	0.5									
57.	Acenaphthylene	610 HPLC		10	0.2									
58.	Anthracene	610 HPLC		10	2									
60.	Benzo(a)Anthracene or 1,2 Benzanthracene	610 HPLC	10	5										
61.	Benzo(a)Pyrene	610 HPLC		10	2									
62.	Benzo(b)Fluoranthene or 3,4 Benzofluoranthene	610 HPLC		10	10									
63.	Benzo(ghi)Perylene	610 HPLC		5	0.1									

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
64.	Benzo(k)Fluoranthene	610 HPLC		10	2									
74.	Dibenzo(a,h)Anthracene	610 HPLC		10	0.1									
86.	Fluoranthene	610 HPLC	10	1	0.05									
87.	Fluorene	610 HPLC		10	0.1									
92.	Indeno(1,2,3-cd) Pyrene	610 HPLC		10	0.05									
100.	Pyrene	610 HPLC		10	0.05									
68.	Bis(2-Ethylhexyl)Phthalate	606 or 625	10	5										
70.	Butylbenzyl Phthalate	606 or 625	10	10										
79.	Diethyl Phthalate	606 or 625	10	2										
80.	Dimethyl Phthalate	606 or 625	10	2										
81.	Di-n-Butyl Phthalate	606 or 625		10										
84.	Di-n-Octyl Phthalate	606 or 625		10										
59.	Benzidine	625		5										
65.	Bis(2-Chloroethoxy)Methane	625		5										
66.	Bis(2-Chloroethyl)Ether	625	10	1										
67.	Bis(2-Chloroisopropyl)Ether	625	10	2										
69.	4-Bromophenyl Phenyl Ether	625	10	5										
71.	2-Chloronaphthalene	625		10										
72.	4-Chlorophenyl Phenyl Ether	625		5										
73.	Chrysene	625		10	5									
78.	3,3'-Dichlorobenzidine	625		5										
82.	2,4-Dinitrotoluene	625	10	5										
83.	2,6-Dinitrotoluene	625		5										
85.	1,2-Diphenylhydrazine (note)[6]	625		1										
88.	Hexachlorobenzene	625	5	1										
89.	Hexachlorobutadiene	625	5	1										
90.	Hexachlorocyclopentadiene	625	5	5										
91.	Hexachloroethane	625	5	1										
93.	Isophorone	625	10	1										
94.	Naphthalene	625	10	1	0.2									
95.	Nitrobenzene	625	10	1										
96.	N-Nitrosodimethylamine	625	10	5										
97.	N-Nitrosodi-n-Propylamine	625	10	5										
98.	N-Nitrosodiphenylamine	625	10	1										
99.	Phenanthrene	625		5	0.05									
101.	1,2,4-Trichlorobenzene	625	1	5										
102.	Aldrin	608	0.005											
103.	α-BHC	608	0.01											
104.	β-BHC	608	0.005											
105.	γ-BHC (Lindane)	608	0.02											
106.	δ-BHC	608	0.005											
107.	Chlordane	608	0.1											
108.	4,4'-DDT	608	0.01											
109.	4,4'-DDE	608	0.05											
110.	4,4'-DDD	608	0.05											

[6] Measurement for 1,2-Diphenylhydrazine may use azobenzene as a screen: if azobenzene is measured at >1 ug/l, then the Discharger shall analyze for 1,2-Diphenylhydrazine.

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
111.	Dieldrin	608	0.01											
112.	Endosulfan (alpha)	608	0.02											
113.	Endosulfan (beta)	608	0.01											
114.	Endosulfan Sulfate	608	0.05											
115.	Endrin	608	0.01											
116.	Endrin Aldehyde	608	0.01											
117.	Heptachlor	608	0.01											
118.	Heptachlor Epoxide	608	0.01											
119-125	PCBs: Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260	608	0.5											
126.	Toxaphene	608	0.5											