CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

CENTRAL VALLEY REGION

1685 E Street, Fresno, California 93706
Phone (559)445-5116•(559)445-5910
http://www.waterboards.ca.gov/centralvalley

ORDER NO. R5-2008-0060
NPDES NO. CA0081759

WASTE DISCHARGE REQUIREMENTS FOR THE U.S. DEPARTMENT OF INTERIOR, NATIONAL PARK SERVICE,YOSEMITE NATIONAL PARK EL PORTAL WASTEWATER TREATMENT FACILITY MARIPOSA COUNTY

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

Table 1. Discharger Information

Discharger	U.S. Department of Interior, National Park Service, Yosemite National Park
Name of Facility	El Portal Wastewater Treatment Facility
Facility Address	5083 Foresta Road
	El Portal, CA 95318
	Mariposa County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

The discharge by the U.S. Department of Interior, National Park Service, Yosemite National Park from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
D-001	Treatment Plant Effluent	37º40'00" N	119º48'30" W	Merced River
D-002	Treatment Plant Effluent	37º40'00" N	119º48'30" W	Merced River

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**25 April 2008**
This Order shall become effective on:	**13 June 2008**
This Order shall expire on:	**23 April 2013**
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:	**25 October 2012**

IT IS HEREBY ORDERED, that Order No. 5-01-243 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code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.

I, Pamela C. Creedon, 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, Central Valley Region, on 25 April 2008.

_____

Pamela C. Creedon, Executive Officer

Table of Contents

List of Tables

List of Attachments

I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	U.S. Department of Interior, National Park Service, Yosemite National Park
Name of Facility	El Portal Wastewater Treatment Facility
Facility Address	5083 Foresta Road
	El Portal, CA 95318
	Mariposa County
Facility Contact, Title, and Phone	Paul Laymon, Utilities Manager, (209) 379-1077
Mailing Address	P. O. Box 700, El Portal, CA 95318
Type of Facility	Publicly Owned Treatment Works
Facility Design Flow	1.0 mgd

II. FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Regional Water Board), finds:

A. Background. U.S. Department of Interior, National Park Service, Yosemite National Park (hereinafter Discharger) is currently discharging pursuant to Waste Discharge Requirements (WDRs) Order No. 5-01-243 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0081759. The Discharger submitted a Report of Waste Discharge, dated 28 September 2006, and applied for a NPDES permit renewal to discharge up to 1.0 mgd of treated wastewater from the El Portal Wastewater Treatment Facility, hereinafter Facility or WWTF. The application was deemed complete on 29 September 2006.

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

B. Facility Description. The Discharger owns and operates the Facility. The sanitary sewer collection system leading to the Facility is also owned and operated by the Discharger. The WWTF consists of headworks, two primary clarifiers, an aerated flow equalization tank, secondary treatment in three aeration tanks and two secondary clarifiers, and tertiary treatment by coagulation and flocculation followed by tube settling and filtration. Prior to discharge, treated wastewater is disinfected with ultraviolet light. Wastewater is discharged to the Merced River by percolation from Discharge D-001 or directly, via an outfall pipe from Discharge D-002. The Merced River is a water of the United States and a tributary to the San Joaquin River. Direct discharge to the Merced River occurs rarely only during emergencies or when the river stage exceeds maximum pond stage.

Digested sludge is either dewatered mechanically onsite in two centrifuges, or in ten cement-lined sludge beds. Dewatered sludge is temporarily stored in sludge-hauling trailers before hauling offsite for disposal. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

C. Legal Authorities. This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC) (commencing with section 13370). It shall serve as a NPDES permit for point source discharges from this Facility to surface waters. This Order also serves as 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 Order requirements, 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 Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.

F. Technology-based Effluent Limitations. Section 301(b) of the CWA and implementing USEPA permit regulations at Title 40, Code of Federal Regulations, Part 122.44 (40 CFR 122.44) require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR 133 and Best Professional Judgment (BPJ) in accordance with 40 CFR 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

G. Water Quality-based Effluent Limitations. Section 301(b) of the CWA 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. This Order contains requirements, expressed as a technology equivalence requirement, more stringent than secondary treatment requirements that are necessary to meet applicable water quality standards. These requirements were carried over from the previous permit.

40 CFR 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been

established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) EPA 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 Regional Water Board adopted a Water Quality Control Plan for the Sacramento and San Joaquin River Basins, Fourth Edition, Revised October 2007 (hereinafter Basin Plan), that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Beneficial uses designated for the Merced River from its source to McClure Lake are as follows: potential municipal and domestic supply (MUN); agricultural supply (AGR), hydropower generation (POW); water contact recreation, including canoeing and rafting (REC-1); non-contact water recreation, including aesthetic enjoyment (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); and wildlife habitat (WILD). The Basin Plan designates MUN as a potential use; however, it is an existing use as the Mariposa Public Utility District has a municipal water supply intake on the river downstream of the discharge.

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001, 002	**Merced River**	Existing: MUN, AGR, POW, REC-1, REC-2, WARM, COLD, WILD

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

J. State Implementation Policy. On 2 March 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 28 April 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on 18 May 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on 24 February 2005 that became effective on 13 July 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

K. Compliance Schedules and Interim Requirements. In general, an NPDES permit must include final effluent limitations that are consistent with Clean Water Act section 301 and with 40 CFR 122.44(d). There are exceptions to this general rule. The State Water Board has concluded that where the Regional Water Board's Basin Plan allows for schedules of compliance and the Regional Water Board is newly interpreting a narrative standard, it may include schedules of compliance in the permit to meet effluent limits that implement a narrative standard. See In the Matter of Waste Discharge Requirements for Avon Refinery (State Board Order WQ 2001-06 at pp. 53-55). See also Communities for a Better Environment et al. v. State Water Resources Control Board, 34 Cal.Rptr.3d 396, 410 (2005). The Basin Plan for the Sacramento and San Joaquin Rivers includes a provision that authorizes the use of compliance schedules in NPDES permits for water quality objectives that are adopted after the date of adoption of the Basin Plan, which was 25 September 1995 (See Basin Plan at page IV-16). Consistent with the State Water Board's Order in the CBE matter, the Regional Water Board has the discretion to include compliance schedules in NPDES permits when it is including an effluent limitation that is a "new interpretation" of a narrative water quality objective. This conclusion is also consistent with the United States Environmental Protection Agency policies and administrative decisions. See, e.g., Whole Effluent Toxicity (WET) Control Policy. The Regional Water Board, however, is not required to include a schedule of compliance, but may issue a Time Schedule Order pursuant to CWC Section 13300 or a Cease and Desist Order pursuant to CWC Section 13301 where it finds that the Discharger is violating or threatening to violate the permit. The Regional Water Board will consider the merits of each case in determining whether it is appropriate to include a compliance schedule in a permit, and, consistent with the Basin Plan, should consider feasibility of achieving compliance, and must impose a schedule that is as short as practicable to achieve compliance with the objectives, criteria, or effluent limit based on the objective or criteria.

For CTR constituents, Section 2.1 of the SIP provides that, based on a Discharger's request and demonstration that it is infeasible for an existing Discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or 18 May 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation that exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order includes compliance schedules and interim effluent limitations and/or discharge specifications. A detailed discussion of the basis for the compliance schedule(s) and interim effluent limitation(s) and/or discharge specifications is included in the Fact Sheet.

L. Alaska Rule. On 30 March 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 (27 April 2000).) Under the

revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after 30 May 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 30 May 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 limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD_5 and TSS. The water quality-based effluent limitations consist of restrictions on turbidity and pathogens. 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 that are necessary to meet water quality standards. These limitations are more stringent than required by the CWA. Specifically, this Order includes effluent limitations for BOD, TSS, turbidity and pathogens that are more stringent than applicable federal standards, but that are nonetheless necessary to meet numeric objectives or protect beneficial uses. The rationale for including these limitations is explained in the Fact Sheet.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on 1 May 2001. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to 30 May 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to 30 May 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 required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes 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. Resolution No. 68-16 is consistent with the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. As discussed in detail in the Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

O. Anti-Backsliding Requirements. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as in the previous Order with the exception of chlorine residual limitations. Fact Sheet, Attachment F, covers the anti-backsliding issue in this Order.

P. 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 in Attachment E establishes monitoring and reporting requirements to implement federal and State requirements.

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

R. Provisions and Requirements Implementing State Law. The provisions/requirements in subsection VI.C.7.b. of this Order are included to implement State law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

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

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

III. DISCHARGE PROHIBITIONS

A. Discharge of wastewater at a location or in a manner or of a character substantially different from that described in the Findings is prohibited.

B. The by-pass or overflow of wastes to surface waters is prohibited, except as allowed by Federal Standard Provisions I.G. and I.H. (Attachment D).

C. Creation of a condition of pollution or nuisance, as defined in Section 13050 of the CWC, is prohibited.

D. Discharge of waste classifiable as 'hazardous', as defined in Section 2521(a) of Title 23, CCR, Section 2510 et seq., or of waste classifiable as 'designated', as defined in CWC Section 13173, such as water softener brine, is prohibited.

E. Discharge of oil or residuary product of petroleum, or of chemicals known to cause cancer or reproductive toxicity, is prohibited except as specifically authorize herein.

F. Direct discharge to the Merced River when the ratio of river flow to wastewater discharge is less than 150:1, is prohibited.

G. Direct discharge to the Merced River without utilizing a diffuser, when the ratio of river flow to wastewater discharge is less than 200:1, is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Points D-001 and D-002

1. Final Effluent Limitations

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point D-001 and D-002, with compliance measured at Monitoring Location M-001 and M-002 as described in the attached MRP (Attachment E):

a. Effluent limitations specified in Table 6:

Table 6. Effluent Limitations

Parameter	Units	Average Monthly	Maximum Daily
Flow	mgd	1.0	--
BOD 5-day @ 20°C	mg/L	10	20
	lbs/day[1]	84	167
Total Suspended Solids	mg/L	10	20
	lbs/day[1]	84	167
Settleable Solids	ml/L	0.1	0.1
Total Phosphorus	mg/L	0.5	1.0
	lbs/day[1]	4.2	8.4
Copper	ug/L	9.6	19.0

1. Based on a design flow of 1.0 mgd.

b. **Percent Removal:** The average monthly percent removal of BOD 5-day 20°C and total suspended solids shall not be less than 90 percent.

c. **Acute Whole Effluent Toxicity.** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

i. 70%, for any one bioassay; and

ii. 90%, for the median of any three consecutive bioassays.

d. **Turbidity.** Effluent turbidity shall not exceed:

i. 2 NTU, as a daily average;
ii. 5 NTU, more than 5% of the time within a 24-hour period; and
iii. 10 NTU, at any time.

e. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed:

i. 2.2 most probable number (MPN)/100 mL, as a 7-day median;
ii. 23 MPN/100 mL, more than once in any 30-day period; and
iii. 240 MPN/100/100 mL, at any time.

f. **pH.** Exhibit a pH of less than 6.5 or greater than 8.5 standard units.

g. **Average Daily Discharge Flow.** The average monthly daily discharge flow shall not exceed 1.0 mgd.

2. Interim Effluent Limitations

a. During the period beginning **24 April 2008** and ending on **17 May 2010**, the Discharger shall maintain compliance with the following limitation at D-001 and D-002 with compliance measured at Monitoring Location M-001, as described in the attached MRP. This interim effluent limitation shall apply in lieu of the corresponding final effluent limitation specified for the same parameter during the time period indicated in this provision.

Table 7. Interim Effluent Limitations

Parameter	Units	Maximum Daily
Copper	ug/L	25

B. Land Discharge Specifications – Not Applicable

C. Reclamation Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

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

1. **Bacteria**. The fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, to exceed a geometric mean of

200 MPN/100 mL, nor more than ten percent of the total number of fecal coliform samples taken during any 30-day period to exceed 400 MPN/100 mL.

2. **Biostimulatory Substances**. Water to contain biostimulatory substances that promote aquatic growth in concentrations that cause nuisance or adversely affect beneficial uses.

3. **Chemical Constituents**. Chemical constituents to be present in concentrations that adversely affect beneficial uses.

4. **Color**. Discoloration that causes nuisance or adversely affects beneficial uses.

5. **Dissolved Oxygen**:

   a. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass;

   b. The 95 percentile dissolved oxygen concentration to fall below 75 percent of saturation; nor

   c. The dissolved oxygen concentration to be reduced below 7.0 mg/L at any time.

6. **Floating Material**. Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.

7. **Oil and Grease**. Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.

8. **pH**. The pH to be depressed below 6.5 or raised above 8.5.

9. **Pesticides**:

   a. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses;

   b. Pesticides to be present in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses;

   c. Total identifiable persistent chlorinated hydrocarbon pesticides to be present in the water column at concentrations detectable within the accuracy of analytical methods approved by USEPA or the Executive Officer**/**prescribed in *Standard Methods for the Examination of Water and Wastewater, 18th Edition*, or other equivalent methods approved by the Executive Officer.

   d. Pesticide concentrations to exceed those allowable by applicable antidegradation policies (see State Water Board Resolution No. 68-16 and 40 CFR §131.12.).

e. Pesticide concentrations to exceed the lowest levels technically and economically achievable.

f. Pesticides to be present in concentration in excess of the maximum contaminant levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15**/**specified in Table 64444-A (Organic Chemicals) of Section 64444 of Title 22 of the California Code of Regulations.

g. Thiobencarb to be present in excess of 1.0 µg/L

10. **Radioactivity**:

    a. Radionuclides to be present in concentrations that are harmful to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.

    b. Radionuclides to be present in excess of the maximum contaminant levels specified in Table 4 (MCL Radioactivity) of Section 64443 of Title 22 of the California Code of Regulations.

11. **Suspended Sediments**. The suspended sediment load and suspended sediment discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

12. **Settleable Material**. Substances to be present in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.

13. **Suspended Material**. Suspended material to be present in concentrations that cause nuisance or adversely affect beneficial uses.

14. **Taste and Odors**. Taste- or odor-producing substances to be present in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.

15. **Temperature**. The natural temperature to be increased by more than 5°F.

16. **Toxicity**. Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.

17. **Turbidity**. The turbidity to increase as follows:

    a. More than 1 Nephelometric Turbidity Unit (NTU) where natural turbidity is between 0 and 5 NTUs.
    b. More than 20 percent where natural turbidity is between 5 and 50 NTUs.

c. More than 10 NTU where natural turbidity is between 50 and 100 NTUs.
d. More than 10 percent where natural turbidity is greater than 100 NTUs.

B. Groundwater Limitations– Not Applicable

VI. PROVISIONS

A. Standard Provisions

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

2. The Discharger shall comply with the following provisions:

   a. If the Discharger's wastewater treatment plant is publicly owned or subject to regulation by California Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to Title 23, CCR, Division 3, Chapter 26.

   b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

      i. violation of any term or condition contained in this Order;

      ii. obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;

      iii. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and

      iv. a material change in the character, location, or volume of discharge.

      The causes for modification include:

      - *New regulations.* New regulations have been promulgated under Section 405(d) of the Clean Water Act, or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.

      - *Land application plans.* When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.

      - *Change in sludge use or disposal practice.* Under 40 CFR 122.62(a)(1), a change in the Discharger's sludge use or disposal practice is a cause for modification of the permit. It is cause for revocation and reissuance if the Discharger requests or agrees.

The Regional Water Board may review and revise this Order at any time upon application of any affected person or the Regional Water Board's own motion.

c. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Regional Water Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition.

   The Discharger shall comply with effluent standards and prohibitions within the time provided in the regulations that establish those standards or prohibitions, even if this Order has not yet been modified.

d. This Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:

   i. contains different conditions or is otherwise more stringent than any effluent limitation in the Order; or

   ii. controls any pollutant limited in the Order.

   The Order, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA then applicable.

e. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

f. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.

g. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by USEPA under Section 307 of the CWA, or amendment thereto, for any discharge to the municipal system.

h. The discharge of any radiological, chemical or biological warfare agent or high-level, radiological waste is prohibited.

i. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.

j. Safeguard to electric power failure:

i. The Discharger shall provide safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharge shall comply with the terms and conditions of this Order.

ii. Upon written request by the Regional Water Board the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past five years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Regional Water Board.

iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Regional Water Board not approve the existing safeguards, the Discharger shall, within ninety days of having been advised in writing by the Regional Water Board that the existing safeguards are inadequate, provide to the Regional Water Board and USEPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Regional Water Board, become a condition of this Order.

k. The Discharger, upon written request of the Regional Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under Regional Water Board Standard Provision VI.A.2.j.

The technical report shall:

i. Identify the possible sources of spills, leaks, untreated waste by-pass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.

ii. Evaluate the effectiveness of present facilities and procedures and state when they became operational.

iii. 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.

The Regional Water Board, after review of the technical report, may establish conditions that it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions shall be incorporated as part of this Order, upon notice to the Discharger.

l. A publicly owned treatment works (POTW) whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the Discharger shall notify the Regional Water Board by 31 January. A copy of the notification shall be sent to appropriate local elected officials, local permitting agencies and the press. Within 120 days of the notification, the Discharger shall submit a technical report showing how it will prevent flow volumes from exceeding capacity or how it will increase capacity to handle the larger flows. The Regional Water Board may extend the time for submitting the report.

m. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

n. Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Regional Water Board and USEPA.

o. The Discharger shall conduct analysis on any sample provided by USEPA as part of the Discharge Monitoring Quality Assurance (DMQA) program. The results of any such analysis shall be submitted to USEPA's DMQA manager.

p. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.

q. All monitoring and analysis instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy.

r. The Discharger shall file with the Regional Water Board technical reports on self-monitoring performed according to the detailed specifications contained in the Monitoring and Reporting Program attached to this Order.

s. The results of all monitoring required by this Order shall be reported to the Regional Water Board, and shall be submitted in such a format as to allow direct

comparison with the limitations and requirements of this Order. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.

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

u. For POTWs, prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (CWC section 1211).

v. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, maximum daily effluent limitation, 1-hour average effluent limitation, or receiving water limitation contained in this Order, the Discharger shall notify the Regional Water Board by telephone (559) 445-6281 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall include the information required by Attachment D, Section V.E.1 [40 CFR section 122.41(l)(6)(i)].

B. Monitoring and Reporting Program (MRP) Requirements

1. The Discharger shall comply with the MRP in Attachment E of this Order, and future revisions thereto.

C. Special Provisions

1. Reopener Provisions

a. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.

b. This Order may be reopened to address conditions that necessitate a major modification of a permit. These conditions are described in 40 CFR 122.62, including:

i. If new or amended applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments thereto, this permit may be reopened and modified in accordance with the new or amended standards.

ii. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.

c. **Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if the State Water Board revises the SIP's toxicity control provisions that would require the establishment of numeric chronic toxicity effluent limitations, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on the new provisions.

d. **Water Effects Ratios (WER) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for copper. If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. **Chronic Whole Effluent Toxicity.** For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct chronic whole effluent toxicity testing, as specified in the Monitoring and Reporting Program (Attachment E, Section V.). Furthermore, this Provision requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exceeds the toxicity numeric monitoring trigger established in this Provision, the Discharger is required to initiate a Toxicity Reduction Evaluation (TRE), in accordance with an approved TRE Work Plan, and take actions to mitigate the impact of the discharge and prevent reoccurrence of toxicity. A TRE is a site-specific study conducted in a stepwise process to identify the source(s) of toxicity and the effective control measures for effluent toxicity. TREs are designed to identify the causative agents and sources of whole effluent toxicity, evaluate the effectiveness of the toxicity control options, and confirm the reduction in effluent toxicity. This Provision includes requirements for the Discharger to develop and submit a TRE Work Plan and includes procedures for accelerated chronic toxicity monitoring and TRE initiation.

i. **Initial Investigative Toxicity Reduction Evaluation (TRE) Work Plan. By 23 July 2008,** the Discharger shall submit to the Regional Water Board an Initial Investigative TRE Work Plan for approval by the Executive Officer. This should be a one to two page document including, at minimum:

a) A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of effluent toxicity, effluent variability, and treatment system efficiency;

b) A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility; and

c) A discussion of who will conduct the Toxicity Identification Evaluation, if necessary (i.e. an in-house expert or outside contractor).

ii. **Accelerated Monitoring and TRE Initiation.** When the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity monitoring, and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring as required in the Accelerated Monitoring Specifications. WET testing results exceeding the monitoring trigger during accelerated monitoring demonstrates a pattern of toxicity and requires the Discharger to initiate a TRE to address the effluent toxicity.

iii. **Numeric Monitoring Trigger.** The numeric toxicity monitoring trigger is > 4 **TUc** (where TUc = 100/NOEC). The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to begin accelerated monitoring and initiate a TRE.

iv. **Accelerated Monitoring Specifications.** If the monitoring trigger is exceeded during regular chronic toxicity testing, within 14-days of notification by the laboratory of the test results, the Discharger shall initiate accelerated monitoring. Accelerated monitoring shall consist of four (4) chronic toxicity tests in a six-week period (i.e. one test every two weeks) using the species that exhibited toxicity. The following protocol shall be used for accelerated monitoring and TRE initiation:

a) If the results of four (4) consecutive accelerated monitoring tests do not exceed the monitoring trigger, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring. However, notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of effluent toxicity, the Executive Officer may require that the Discharger initiate a TRE.

b) If the source(s) of the toxicity is easily identified (i.e. temporary plant upset), the Discharger shall make necessary corrections to the Facility and shall continue accelerated monitoring until four (4) consecutive accelerated tests do not exceed the monitoring trigger. Upon confirmation that the effluent toxicity has been removed, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring.

c) If the result of any accelerated toxicity test exceeds the monitoring trigger, the Discharger shall cease accelerated monitoring and initiate a TRE to investigate the cause(s) of, and identify corrective actions to reduce or

eliminate effluent toxicity. Within thirty (30) days of notification by the laboratory of the test results exceeding the monitoring trigger during accelerated monitoring, the Discharger shall submit a TRE Action Plan to the Regional Water Board including, at minimum:

1) Specific actions the Discharger will take to investigate and identify the cause(s) of toxicity, including TRE WET monitoring schedule;
2) Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and
3) A schedule for these actions.

3. Best Management Practices and Pollution Prevention

a. **Pollutant Minimization Program**. The Discharger shall develop and conduct a Pollutant Minimization Program (PMP) as further described below when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either: 1) A sample result is reported as DNQ and the effluent limitation is less than the RL; or 2) A sample result is reported as ND and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP, Section X.

The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

i. 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;

ii. Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;

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

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

v. An annual status report that shall be sent to the Regional Water Board including:

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

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

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

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

4. Construction, Operation and Maintenance Specifications

a. The Discharger shall implement best practicable treatment and control, including proper operation and maintenance, to comply with this Order.

b. Percolation ponds shall be managed to prevent breeding of mosquitoes. Vegetation management operations in areas where nesting birds are present shall be carried out either before or after, but **not during**, the **April 1** to **June 30** bird nesting season.

c. Objectionable odors originating at this Facility shall not be perceivable beyond the limits of the WWTF and percolation pond areas, or at the outfall to the Merced River.

d. Dissolved oxygen in the upper zone (1-foot) of effluent in percolation ponds of less than 1.0 mg/L will be considered an indication that the ponds are organically overloaded and threatening to violate Discharge Prohibition III.C. Should the DO be below 1.0 mg/L for three consecutive sampling events, the Discharger shall report the findings to the Regional Water Board within 7 days with a proposal that will insure a consistent DO of at least 1.0 mg/L within 30 days.

e. The Discharger shall not allow pollutant-free wastewater to be discharged into the collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.

f. The Facility shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

g. Public contact with wastewater shall be precluded through such means as fences and signs controlling access to the Facility, or other acceptable alternatives

h. Physical facilities shall be designed and constructed according to accepted engineering practice and shall be capable of full and consistent compliance with this Order when properly operated and maintained. Proper operation and maintenance shall be described in an Operation and Maintenance ("O&M") manual prepared by the design engineer. The operation and maintenance manual shall be reviewed at least every time a significant change, alteration, or expansion is made to the Facility. The Discharger shall certify in every annual report whether the operation and maintenance manual is complete and reflective of the Facility, and whether operation, maintenance, and staffing for the year being reported was as prescribed in the O&M manual.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Pretreatment Requirements.

Pursuant to 40 CFR 122.41(e), the Discharger must properly operate and maintain all facilities of treatment and control (and related appurtenances) to achieve compliance with the conditions of this permit. Proper control includes an enforceable ordinance or memorandum of agreement with Yosemite Concession Services that ensures grease and trash disposed to the collection system does not cause sewer collection spills.

b. Sludge/Biosolids Discharge Specifications

i. Collected screenings, residual sludge, biosolids, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer, and consistent with *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste,* as set forth in Title 27, CCR, Division 2, Subdivision 1, Section 20005, et seq. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, composting sites, soil amendment sites) that are operated in accordance with valid waste discharge requirements issued by a regional water quality control board will satisfy these specifications.

ii. Sludge and solid waste shall be removed from screens, sumps, ponds, clarifiers, etc. as needed to ensure optimal plant performance.

iii. The treatment of sludge generated at the Facility shall be confined to the Facility property and conducted in a manner that precludes infiltration of waste constituents into soils. In addition, the storage of residual sludge, solid waste, and biosolids on Facility property shall be temporary and controlled, and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils.

iv. The use and disposal of biosolids shall comply with existing Federal and State laws and regulations, including permitting requirements and technical standards included in 40 CFR 503. If the State Water Board and the Regional Water Board are given the authority to implement regulations contained in 40 CFR 503, this Order may be reopened to incorporate appropriate time schedules and technical standards. The Discharger must comply with the standards and time schedules contained in 40 CFR 503 whether or not they have been incorporated into this Order.

c. Sludge/Biosolids Disposal Requirements

Any proposed change in sludge or biosolids use or disposal practice from that described herein as hauled off by an authorized, independent party shall be reported to the Executive Officer and USEPA Regional Administrator at least **90 days** in advance of the change.

d. **Collection System.** Requirements of this Order do not apply to the Discharger's collection system.

6. Other Special Provisions

a. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Regional Water Board (Attachment D, Section II.C.).

b. To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory and certification requirements in the federal Standard Provisions (Attachment D, Section V.B.) and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

c. The Discharger shall for each fiscal year (July-June) pay the required annual filing fee in accordance with the current fee schedule established by the State Water Board by the due date specified in the annual invoice (typically issued during October of each fiscal year). The fee is for privilege of discharge authorized by this Order.

d. Except as expressly identified and authorized in this Order, the Discharger shall not use surface or groundwater as dilution to achieve compliance with effluent limitations in this Order.

7. Compliance Schedules

a. Compliance Schedules for Final Effluent Limitations for Copper

i. **By 18 May 2010,** the Discharger shall comply with the final effluent limitations for copper. On **12 March 2008**, the Discharger submitted a compliance schedule justification for copper. The compliance schedule justification included all items specified in Paragraph 3, items (a) through (d), of section 2.1 of the SIP. As this compliance schedule is greater than one year, the Discharger shall submit semi-annual progress reports in accordance with the Monitoring and Reporting Program (Attachment E, Section X.D.1.) The Discharger submitted a revised compliance schedule justification on 7 April 2008.

ii. **Corrective Action Plan/Implementation Schedule.** The Discharger shall submit to the Regional Water Board by **23 July 2008**, a corrective action plan

and implementation schedule to assure compliance with the final effluent limitations for copper**.**

iii. **Treatment Feasibility Study.** The Discharger is required to perform an engineering treatment feasibility study examining the feasibility, costs and benefits of different treatment options that may be required to remove copper from the discharge. A work plan and time schedule for preparation of the treatment feasibility study shall be completed and submitted to the Regional Water Board **23 July 2008**, for approval by the Executive Officer. The treatment feasibility study shall be completed and submitted to the Regional Water Board **by 18 November 2009**, and progress reports shall be submitted in accordance with the Monitoring and Reporting Program (Attachment E, Section X.D.1.).

iv. The Discharger's revised compliance schedule justification requests the Regional Water Board consider a time schedule order to provide additional time to comply with the copper limit, as the Discharger does not believe it can comply by 18 May 2010. As described in more detail in Fact Sheet Section VII.B.7.a., additional time will be necessary to comply with the final copper limit. A separate time schedule order will be considered at a later date.

b. **Compliance Schedule for Sludge Bed Modifications:**

The Discharger shall complete construction of proposed modifications to sludge beds to ensure compliance with Provision VI.C.5.b.iii, above.

Task	**Compliance Date**
i. Submit work plan and proposed time schedule for sludge bed modification	**By 24 July 2009**
ii. Completion of modifications	**Not to exceed 3 years from adoption of Order.**

Technical reports submitted pursuant to this Provision are subject to the requirements of Section X of Attachment E and Executive Officer approval.

Until final compliance, the Discharger shall submit semi-annual progress reports in accordance with the Monitoring and Reporting Program (Attachment E, Section X.D.1.).

VII. COMPLIANCE DETERMINATION

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

A. BOD and TSS Effluent Limitations. Compliance with the final effluent limitations for BOD and TSS required shall be ascertained by 12-hour composite samples. Compliance with effluent limitations for percent removal shall be calculated using the arithmetic mean of 20°C BOD (5-day) and total suspended solids in effluent samples collected over a monthly period as a percentage of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.

B. Average Monthly Daily Flow Effluent Limitations. The Average Monthly Daily Flow represents the daily average flow determined over a calendar month.

C. Total Coliform Organisms Effluent Limitations. For each day that an effluent sample is collected and analyzed for total coliform organisms, the 7-day median shall be determined by calculating the median concentration of total coliform bacteria in the effluent utilizing the bacteriological results of the last seven days for which analyses have been completed. If the 7-day median of total coliform organisms exceeds a most probable number (MPN) of 2.2 per 100 milliliters, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period.

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:

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.

Best Practicable Treatment or Control (BPTC): BPTC is a requirement of State Water Resources Control Board Resolution 68-16 – "Statement of Policy with Respect to Maintaining High Quality of Waters in California" (referred to as the "Antidegradation Policy"). BPTC is the treatment or control of a discharge necessary to assure that, *"(a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained."* Pollution is defined in CWC Section 13050(l). In general, an exceedance of a water quality objective in the Basin Plan constitutes "pollution".

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

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

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

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

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

arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

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

Detected, but Not Quantified (DNQ) are those sample results less than the 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 U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

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.

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.

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

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

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

Reporting Level (RL) is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied

to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

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

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

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

where:

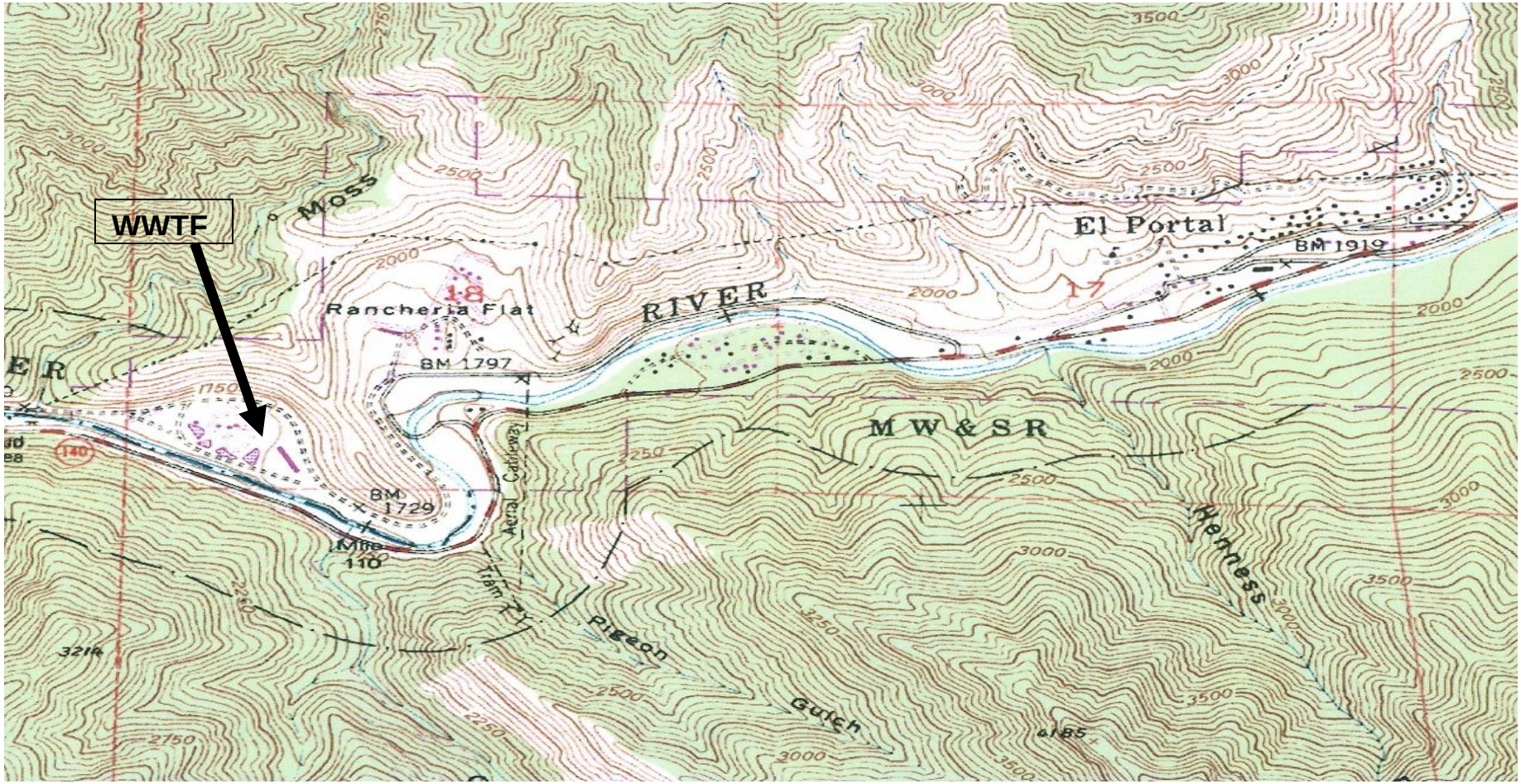
x is the observed value;

μ is the arithmetic mean of the observed values; and

n is the number of samples.

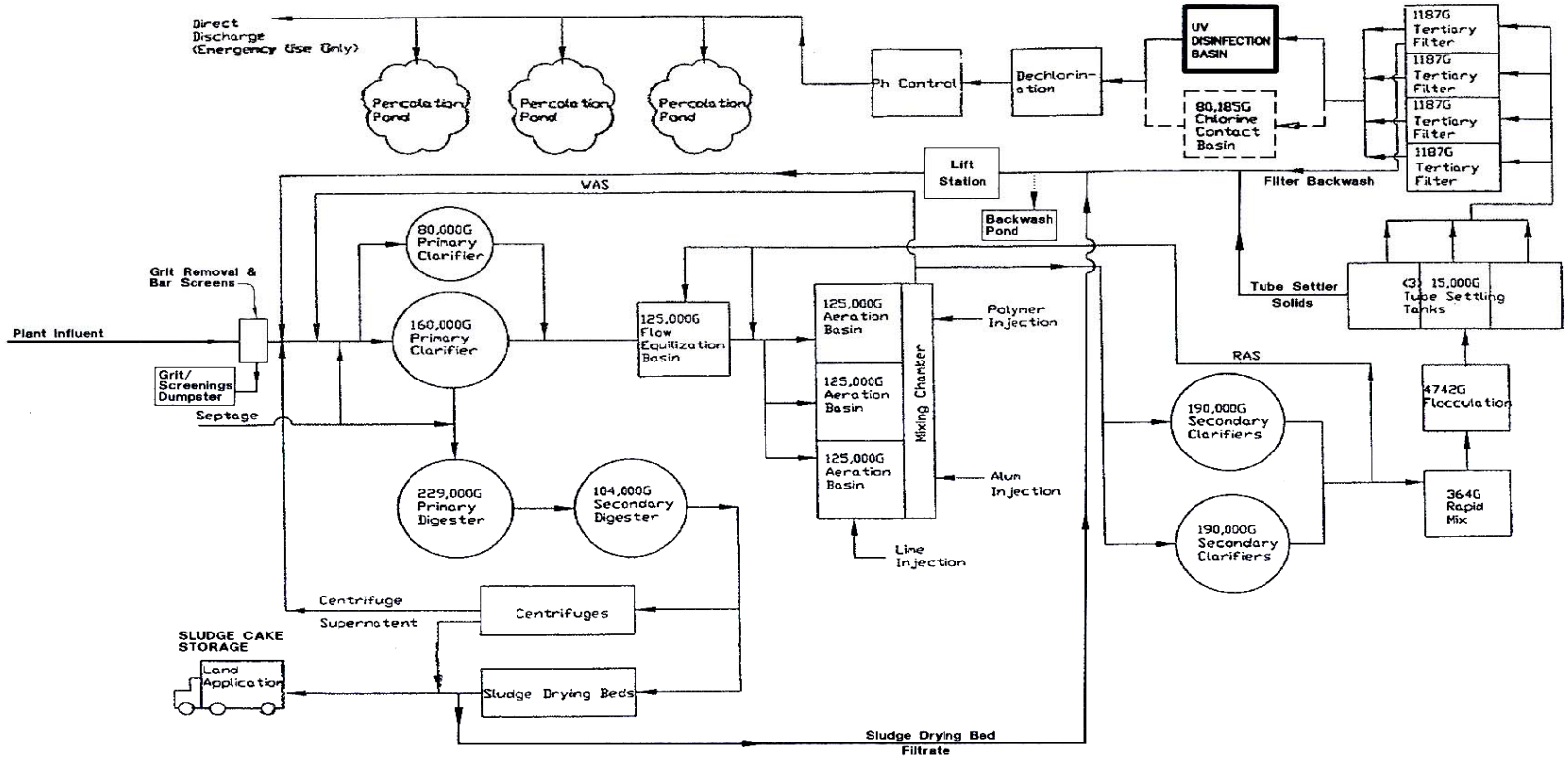
Toxicity Reduction Evaluation (TRE) is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps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

ATTACHMENT B – MAP



Drawing Reference: **EL PORTAL** U.S.G.S TOPOGRAPHIC MAP 7.5 MINUTE QUADRANGLE *Not to scale*	SITE LOCATION MAP USDI, NPS, YOSEMITE NATIONAL PARK EL PORTAL WASTEWATER FACILITY MARIPOSA COUNTY	N W E S

ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D –STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

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

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

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

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

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

F. Inspection and Entry

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

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

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

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

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

G. Bypass

1. Definitions

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

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

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

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

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

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

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

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

5. Notice

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

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

H. Upset

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

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was

caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).).

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

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

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

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

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

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

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

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

IV. STANDARD PROVISIONS – RECORDS

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

B. Records of monitoring information shall include:

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

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

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

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

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

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

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

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

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

3. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard

Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

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

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

C. Monitoring Reports

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

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

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

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time

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

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

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

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

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

F. Planned Changes

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

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

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

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

G. Anticipated Noncompliance

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

H. Other Noncompliance

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

I. Other Information

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

VI. STANDARD PROVISIONS – ENFORCEMENT

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

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

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

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

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

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Table of Contents

List of Tables

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Title 40, Code of Federal Regulations, Part 122.48 (40 CFR 122.48) requires 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, which implement the federal and State regulations.

I. GENERAL MONITORING PROVISIONS

A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of this Regional Water Board.

B. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the California Department of Public Health. In the event a certified laboratory is not available to the Discharger, analyses performed by a non-certified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Regional Water Board staff. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to procedures approved by the Regional Water Board.

C. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Public Health. Laboratories that perform sample analyses shall be identified in all monitoring reports.

D. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.

E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.

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

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	M-INF	Facility headworks
D-001	M-001	Downstream from the last connection through which wastes can be admitted to the outfall prior to discharge to ponds
D-002	M-002	Downstream from the last connection through which wastes can be admitted to the outfall prior to discharge to river
	R-001	Upstream monitoring, south of El Portal supply well #2. 119°47'41"W, 37°40'22"N
--	R-002	Downstream monitoring, downstream from Bridge crossing at Railroad Flat, 119°49'01"W, 37°40'09"N
	SPL-001	Water Supply
	PND-001	Percolation Ponds
	BIO-001	Sampling to be done prior to removal from faciltiy

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

1. The Discharger shall monitor influent to the WWTF at Monitoring Location M-INF as follows:

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
BOD 5-day 20°C	mg/L, lbs/day	12-hr Composite[1]	1/week	2
Suspended Solids	mg/L, lbs/day	12-hr Composite[1]	1/week	2
Settleable Solids	ml/L	Grab	1/day	2
pH	Standard units	Grab	1/day	2
Electrical Conductivity @ 25°C	µmhos/cm	12-hr Composite[1]	1/week	2

1. 12-hour flow proportional composite

2. Pollutants shall be analyzed using the analytical methods described in 40 CFR 136

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location M-001

1. The Discharger shall monitor the facility effluent when discharge is to Percolation Ponds as follows:

Table E-3. Effluent Monitoring D-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Flow	mgd	Meter	Continuous	
pH		Grab	1/day	1
Settleable Solids	mL/L	Grab	1/day	1
Temperature[2]	°C	Grab	1/week	1
BOD 5-day 20°C	mg/L	12-hr Composite[3]	1/week	1
Total Suspended Solids	mg/L	12-hr Composite[3]	1/week	1
Total Coliform Organisms	MPN/100 mL	Grab	1/week	1
Electrical Conductivity @ 25°C	µmhos/cm	12-hr Composite[3]	1/week	1
Turbidity	NTU	Meter	Continuous	1
Ammonia (as N) [4, 5]	mg/L	Grab	2/month	1
Hardness	mg/L	12-hr Composite[3]	1/month	
Copper[8]	ug/L	12-hr Composite[3]	1/month	1
Aluminum[8, 9]	ug/L	12-hr Composite[3]	1/month	1, 10
Total Phosphorus	mg/L	12-hr Composite[3]	4/year	1
Nitrate (as N)	mg/L	Grab	4/year	1
Nitrite (as N)	mg/L	Grab	4/year	1
Minerals[6]	mg/L	12-hr Composite[3]	4/year	1
Metals[7]	mg/L	12-hr Composite[3]	4/year	1

1. Pollutants shall be analyzed using the analytical methods described in 40 CFR 136; for priority pollutants the methods must meet the lowestminimum levels (MLs) specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Board or the State Board.
2. Effluent Temperature monitoring shall be at the Outfall location.
3. 12-hour flow proportioned composite.
4. Concurrent with biotoxicity monitoring.
5. Report as total ammonia nitrogen; record temperature and pH at time of collection.
6. Minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), total dissolved solids, and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).
7. Metals referred to in this program shall include aluminum, arsenic, barium, cadmium, chromium, copper, lead mercury, nickel, selenium, silver, and zinc.
8. Concurrent with hardness and pH monitoring.
9. Monitoring frequency may be reduced to quarterly sampling after 12 months of monitoring.
10. Either total or acid-soluble (inductively coupled plasma/atomic emission spectrometry or inductively coupled plasma/mass spectrometry) analysis method, as supported by USEPA's Ambient Water Quality Criteria for Aluminum document (EPA 440/5-86-008).

B. Monitoring Location M-002

1. The Discharger shall monitor the facility effluent when discharge is directly to the river as follows:

Table E-4. Effluent Monitoring D-002

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Flow	mgd	Meter	Continuous	
pH		Grab	1/day	1
Settleable Solids	mL/L	Grab	1/day	1
Temperature[2]	°C	Grab	1/day	1
BOD 5-day 20°C	mg/L	12-hr Composite[3]	2/week	1
Total Suspended Solids	mg/L	12-hr Composite[3]	2/week	1
Total Coliform Organisms	MPN/100 mL	Grab	1/day	1
Electrical Conductivity @ 25°C	µmhos/cm	12-hr Composite[3]	1/week	1
Turbidity	NTU	Meter	Continuous	1
Ammonia (as N) [4, 5]	mg/L	Grab	2/week	1
Total Phosphorus	mg/L	12-hr Composite[3]	1/month	1
Copper[8]	ug/L	12-hr Composite[3]	1/month	1
Aluminum[8]	ug/L	12-hr Composite[3]	1/month	1
Hardness	mg/L	12-hr Composite[3]	1/month	1
Nitrate (as N)	mg/L	Grab	1/week	1
Nitrite (as N)	mg/L	Grab	1/week	1
Minerals[6]	mg/L	12-hr Composite[3]	4/year	1
Metals[7]	mg/L	12-hr Composite[3]	4/year	1

1. Pollutants shall be analyzed using the analytical methods described in 40 CFR 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Board or the State Board.
2. Effluent Temperature monitoring shall be at the Outfall location.
3. 12-hour flow proportioned composite.
4. Concurrent with biotoxicity monitoring.
5. Report as total ammonia nitrogen; record temperature and pH at time of collection.
6. Minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), total dissolved solids, and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).
7. Metals referred to in this program shall include aluminum, arsenic, barium, cadmium, chromium, copper, lead mercury, nickel, selenium, silver, and zinc.
8. Concurrent with hardness and pH monitoring.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. **Acute Toxicity Testing.** The Discharger shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. The Discharger shall meet the following acute toxicity testing requirements:

1. *Monitoring Frequency* – the Discharger shall perform, **quarterly** acute toxicity testing, concurrent with effluent ammonia sampling.

2. *Sample Types* – For static non-renewal and static renewal testing, the samples shall be flow proportional 12-hour composites and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location M-001.

3. *Test Species* – Test species shall be **rainbow trout (*Oncorhchus mykiss*)**

4. *Methods* – The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition. Temperature, total residual chlorine, and pH shall be recorded at the time of sample collection. No pH adjustment may be made unless approved by the Executive Officer.

5. *Test Failure* – If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.

B. **Chronic Toxicity Testing**. The Discharger shall conduct three species chronic toxicity testing to determine whether the effluent is contributing chronic toxicity to the receiving water. The Discharger shall meet the following chronic toxicity testing requirements:

1. *Monitoring Frequency* – the Discharger shall perform **quarterly** three species chronic toxicity testing. After four quarters with no chronic toxicity, sampling frequency may be reduced to annual testing.

2. *Sample Types* – Effluent samples shall be flow proportional 12-hour composites and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location specified in the Monitoring and Reporting Program. The receiving water control shall be a grab sample obtained from the R-001 sampling location, as identified in the Monitoring and Reporting Program.

3. *Sample Volumes* – Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.

4. *Test Species* – Chronic toxicity testing measures sublethal (e.g. reduced growth, reproduction) and/or lethal effects to test organisms exposed to an effluent compared to that of the control organisms. The Discharger shall conduct chronic toxicity tests with:

   - The cladoceran, water flea, *Ceriodaphnia dubia* (survival and reproduction test);

   - The rainbow trout, *Oncorhynchus mykiss* (larval survival and growth test); and

- The green alga, *Selenastrum capricornutum* (growth test).

5. *Methods* – The presence of chronic toxicity shall be estimated as specified in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition,* EPA/821-R-02-013, October 2002.
6. *Reference Toxicant* – As required by the SIP, all chronic toxicity tests shall be conducted with concurrent testing with a reference toxicant and shall be reported with the chronic toxicity test results.
7. *Dilutions* – The chronic toxicity testing shall be performed using the dilution series identified in Table E-5, below. The receiving water control shall be used as the diluent (unless the receiving water is toxic).
8. *Test Failure* –The Discharger must re-sample and re-test as soon as possible, but no later than fourteen (14) days after receiving notification of a test failure. A test failure is defined as follows:

    a. The reference toxicant test or the effluent test does not meet all test acceptability criteria as specified in the *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition*, EPA/821-R-02-013, October 2002 (Method Manual), and its subsequent amendments or revisions; or

    b. The percent minimum significant difference (PMSD) measured for the test exceeds the upper PMSD bound variability criterion in Table 6 on page 52 of the Method Manual. (A retest is only required in this case if the test results do not exceed the monitoring trigger specified in Special Provisions VI.C.2.a.iii.)

Table E-5. Chronic Toxicity Testing Dilution Series

Sample	Dilutions (%)					Controls	
	100	50	25	12.5	6.3	Receiving Water	Laboratory Water
% Effluent	100	50	25	12.5	6.3	0	0
% Receiving Water	0	50	75	87.5	93.7	100	0
% Laboratory Water	0	0	0	0	0	0	100

C. **WET Testing Notification Requirements**. The Discharger shall notify the Regional Water Board within 24-hrs after the receipt of test results exceeding the monitoring trigger during regular or accelerated monitoring, or an exceedance of the acute toxicity effluent limitation.

D. **WET Testing Reporting Requirements**. All toxicity test reports shall include the contracting laboratory's complete report provided to the Discharger and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals. At a minimum, whole effluent toxicity monitoring shall be reported as follows:

1. **Chronic WET Reporting.** Regular chronic toxicity monitoring results shall be reported to the Regional Water Board within 30 days following completion of the test, and shall contain, at minimum:

   a. The results expressed in TUc, measured as 100/NOEC, and also measured as $100/LC_{50}$, $100/EC_{25}$, $100/IC_{25}$, and $100/IC_{50}$, as appropriate.

   b. The statistical methods used to calculate endpoints;

   c. The statistical output page, which includes the calculation of the percent minimum significant difference (PMSD);

   d. The dates of sample collection and initiation of each toxicity test; and

   e. The results compared to the numeric toxicity monitoring trigger.

   Additionally, the monthly discharger self-monitoring reports shall contain an updated chronology of chronic toxicity test results expressed in TUc, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency, i.e., either quarterly, monthly, accelerated, or TRE. (Note: items a through c, above, are only required when testing is performed using the full dilution series.)

2. **Acute WET Reporting.** Acute toxicity test results shall be submitted with the monthly discharger self-monitoring reports and reported as percent survival.

3. **TRE Reporting.** Reports for Toxicity Reduction Evaluations shall be submitted in accordance with the schedule contained in the Discharger's approved TRE Work Plan.

4. **Quality Assurance (QA).** The Discharger must provide the following information for QA purposes (If applicable):

   a. Results of the applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD, and dates tested.

   b. The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.

   c. Any information on deviations or problems encountered and how they were dealt with.

VI. PERCOLATION POND MONITORING REQUIREMENTS

A. Monitoring Location-Percolation Ponds

1. The Discharger shall monitor Percolation Ponds as follows:

Table E-6. Pond Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dissolved Oxygen	mg/L	Grab[1]	As required[2]	---
pH	Standard Units	Grab	1/week	---

1. Sample shall be collected from opposite to the inlet of ponds and analyzed for dissolved oxygen. Samples shall be collected between 0800 and 0900 hours. Time of sampling shall be recorded.
2. If offensive odor detected by or brought to the attention of WWTF personnel, monitor affected pond(s) daily until dissolved oxygen ≥ 1.0 mg/L.

The Discharger shall inspect the condition of percolation ponds once per week and record visual observations in a bound logbook. Notations shall include observations of vegetation, scum or debris accumulation on pond surface or banks and their location, presence of burrowing animals or insects, and pond color. A summary of entries made in the log and any corrective actions taken shall be submitted along with the monitoring report the following month.

VII. RECLAMATION MONITORING REQUIREMENTS

(Not Applicable)

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Receiving Water Monitoring Location R-001 and R-002

1. When discharging to D-001 (Percolation Ponds), the Discharger shall monitor the Merced River at R-001 and R-002 as follows:

Table E-7a. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	cfs	USGS gauging station at Pohono Bridge	1/month	
Dissolved Oxygen	mg/L	Grab	1/month	1
pH	Standard Units	Grab	1/month	1
Temperature	°F (°C)	Grab	1/month	1
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/month	1

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Aluminum[2,6]	ug/L	Grab	1/month	1,7
Ammonia (as N)[3]	mg/L	Grab	4/year	1
Hardness	mg/L	Grab	1/month	1
Turbidity	NTU	Grab	4/year	1
Fecal Coliform Organisms	MPN/100 mL	Grab	4/year	1
Nitrate (as N)	mg/L	Grab	1/month	1
Copper[2]	ug/L	Grab	1/month	1
Zinc[2]	ug/L	Grab	4/year	1
Minerals[4]	mg/L	Grab	1/year	1
Metals[5]	mg/L	Grab	1/year	1

1. Pollutants shall be analyzed using the analytical methods described in 40 CFR 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Board or the State Board.
2. Hardness and pH shall be determined at the time of sample collection.
3. Temperature and pH shall be determined at the time of sample collection.
4. Minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), total dissolved solids, and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).
5. Metals referred to in this program shall include aluminum, arsenic, barium, cadmium, chromium, copper, lead mercury, nickel, selenium, silver, and zinc.
6. Monitoring frequency may be reduced to quarterly sampling after 24 months of monitoring.
7. Either total or acid-soluble (inductively coupled plasma/atomic emission spectrometry or inductively coupled plasma/mass spectrometry) analysis method, as supported by USEPA's Ambient Water Quality Criteria for Aluminum document (EPA 440/5-86-008).

2. When discharging to D-002 (direct discharge to the Merced River) the Discharger shall monitor the Merced River at R-001 and R-002 as follows:

Table E-7b. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	cfs	USGS gauging station at Pohono Bridge	1/day	
Dissolved Oxygen	mg/L	Grab	1/day	1
pH	Standard Units	Grab	1/day	1
Temperature	°F (°C)	Grab	1/day	1
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/day	1
Aluminum[2]	ug/L	Grab	1/month	1
Ammonia (as N)[3]	mg/L	Grab	1/week	1
Hardness	mg/L	Grab	1/month	1
Turbidity	NTU	Grab	1/month	1

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Fecal Coliform Organisms	MPN/100 mL	Grab	1/day	1
Nitrate (as N)	mg/L	Grab	2/month	1
Copper	ug/L	Grab	2/month	1
Zinc	ug/L	Grab	4/year	1
Minerals[4]	mg/L	Grab	1/year	1
Metals[5]	mg/L	Grab	1/year	1

1. Pollutants shall be analyzed using the analytical methods described in 40 CFR 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Board or the State Board.
2. Hardness and pH shall be determined at the time of sample collection.
3. Temperature and pH shall be determined at the time of sample collection.
4. Minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), total dissolved solids, and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).
5. Metals referred to in this program shall include aluminum, arsenic, barium, cadmium, chromium, copper, lead mercury, nickel, selenium, silver, and zinc.

3. In conducting the receiving water sampling, a log shall be kept of the receiving conditions throughout the reach bounded by R-001 and R-002. Attention shall be given to the presence of:

    a. Floating or suspended matter
    b. Discoloration
    c. Bottom deposits
    d. Aquatic life
    e. Visible films, sheens coatings
    f. Fungi, slimes, or objectionable growth
    g. Potential nuisance conditions

Notes on receiving water conditions shall be summarized in the monitoring reports.

IX. OTHER MONITORING REQUIREMENTS

A. Priority Pollutants

The State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (known as the State Implementation Policy or SIP). The SIP states that the Regional Water Boards will require periodic monitoring for pollutants for which criteria or objectives apply and for which no effluent limitations have been established. Accordingly, the Regional Water Board is requiring, as part of this Order, that the Discharger conduct **annual** (1/Year) effluent monitoring (Monitoring Location M-001) and receiving water monitoring (Monitoring Location R-001) of priority pollutants. Priority pollutants are defined as USEPA Priority Pollutants and consist of the constituents listed in the most recent National Toxics Rule and California Toxics Rule. The Discharger must analyze pH and hardness of the effluent and receiving water at the same time as priority pollutants.

B. Sludge/Biosolids

Sludge in this document means the solid, semisolid, and liquid residues removed during the primary, secondary, or advanced wastewater treatment processes. Biosolids refers to sludge that has been treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and state regulations as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities.

Residues from the centrifuges and drying beds are assumed to qualify as Class B biosolids. For convenience, the following refers to sludge but is applicable to biosolids as well.

1. Monitoring Location BIO-001

   a. A composite sample of sludge shall be collected **annually** at Monitoring Location BIO-001 in accordance with EPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, and tested for priority pollutants listed in 40 CFR 122 Appendix D, Tables II and III (excluding total phenols).

   b. A composite sample of sludge shall be collected when sludge is removed from the sludge beds or the centrifuges for disposal in accordance with USEPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, and tested for the metals listed in Title 22.

   c. Sampling records shall be retained for a minimum of **five years**. A log shall be kept of sludge quantities generated and of handling and disposal activities. The frequency of entries is discretionary; however, the log should be complete enough to serve as a basis for part of the annual report.

Table E-8. Sludge Monitoring Requirements (Monitoring Location BIO-001)

Parameter	Units	Sample Type	Minimum Sampling Frequency[2]	Required Analytical Test Method
pH	Standard Units	Grab	1/Year	[1, 2]
Fecal Coliform	MPN/100 ml	Grab	1/Year	[1, 2]
Ammonia Nitrogen, Total (as N)	mg/kg	Grab	1/Year	[1, 2]
Nitrate Nitrogen, Total (as N)	mg/kg	Grab	1/Year	[1, 2]
Phosphorous, Total	mg/kg	Grab	1/Year	[1, 2]
Potassium, Total	mg/kg	Grab	1/Year	[1, 2]
Metals[3]	mg/kg	Grab	1/Year	[1, 2]

1. Pollutants shall be analyzed using the analytical methods described in 40 CFR 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.
2. When sludge is removed from the treatment units (or at least annually), but prior to disposal, a composite sample of sludge shall be analyzed, on a dry weight basis.

3. Arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel selenium and zinc analysis of soluble concentrations of heavy metals shall also be included as needed. Sampling records shall be retained for a minimum of five years. A log shall be kept of sludge quantities generated and of handling and disposal activities. Additional sludge sampling may be requested at subsequent intervals, depending upon review of analytical results. An annual sludge monitoring report shall be submitted and shall include all of the above information.

C. Municipal Water Supply

The Discharger shall monitor the Municipal Water Supply as follows. The Discharger shall utilize its database of the production from the municipal wells supplying El Portal and Yosemite Valley. The chemical analysis shall be the most recent analysis in accordance with the requirements of Title 22.

Table E-9. Municipal Water Supply Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Electrical Conductivity @ 25°C[1]	µmhos/cm	Grab	1/year	3
Standard Minerals[2]	mg/L	Grab	1/year	3

1. If the water supply is from more than one source, the EC shall be reported as a weighted average and include copies of supporting calculations.
2. Minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), total dissolved solids, and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).
3. Pollutants shall be analyzed using the analytical methods described in 40 CFR 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

2. Upon written request of the Regional Water Board, the Discharger shall submit a summary monitoring report. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).

3. **Compliance Time Schedules.** For compliance time schedules included in the Order, the Discharger shall submit to the Regional Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the compliance time schedule.

4. The Discharger shall report to the Regional Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of

reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986.

5. **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 Part 136.

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

   a. Sample results greater than or equal to the 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.

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

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

   b. 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.

B. Self Monitoring Reports (SMRs)

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

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit continuously, daily, weekly, monthly, quarterly and annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order.

3. With the exception of flow, all constituents monitored on a continuous basis (metered), shall be reported as daily maximums, daily minimums, and daily averages; flow shall be reported as the total volume discharged per day for each day of discharge

4. If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the calculation and reporting of the values required in the discharge monitoring report form. Such increased frequency shall be indicated on the discharge monitoring report form.

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

Table E-10. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	**Permit effective date**	**All**	**First day of second calendar month following month of sampling**
1/day	**Permit effective date**	**(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.**	**First day of second calendar month following month of sampling**
1/week	**Sunday following permit effective date or on permit effective date if on a Sunday**	**Sunday through Saturday**	**First day of second calendar month following month of sampling**
1/month 2/month	**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**	**First day of second calendar month following month of sampling**

4/year	**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**	**May 1 August 1 November 1 February 1**
2/year	**Closest of January 1 or July 1 following (or on) permit effective date**	**January 1 through June 30 July 1 through December 31**	**August 1 February 1**
1/year	**January 1 following (or on) permit effective date**	**January 1 through December 31**	**February 1**

6. In addition to the signatory requirements of Standard Provisions (Attachment D), all monitoring reports shall be signed: by the chief operator of the Facility and, if the chief operator of the Facility is not in direct line of supervision of the laboratory function for a discharger conducting any of its own analyses, also by the chief of the laboratory.

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

   a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the Facility is operating in compliance with interim and/or final effluent limitations. The highest daily maximum for the month, monthly and weekly averages, and medians, and removal efficiencies (%) for BOD and Total Suspended Solids, shall be determined and recorded as needed to demonstrate compliance. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

   b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory.

   c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D) and 6, above, to the address listed below:

      Regional Water Quality Control Board
      NPDES Unit
      Central Valley Region
      1685 "E" Street
      Fresno, CA 93706-2007

C. Discharge Monitoring Reports (DMRs)

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

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharger shall submit the original DMR and one copy of the DMR to the address 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 cannot be accepted unless they follow the exact same format as EPA form 3320-1.

D. Other Reports

1. **Progress Reports.** As specified in the compliance time schedules required in Special Provisions VI, progress reports shall be submitted in accordance with the following reporting requirements. At minimum, the progress reports shall include a discussion of the status of final compliance, whether the Discharger is on schedule to meet the final compliance date, and the remaining tasks to meet the final compliance date.

Table E-11. Reporting Requirements for Special Provisions Progress Reports

Special Provision	Reporting Requirements
Compliance Schedules for Final Effluent Limitations for copper, compliance with final effluent limitations. (VI.C.7.a.)	**1 February**, annually, until final compliance
Compliance Schedules for sludge bed modifications. (VI.C.7.b.)	**1 February, 1 September**, semi-annually, after approval of work plan until final compliance.

2. Within **60 days** of permit adoption, the Discharger shall submit a report outlining minimum levels, method detection limits, and analytical methods for approval, with a goal to achieve detection levels below applicable water quality criteria. At a minimum, the Discharger shall comply with the monitoring requirements for CTR constituents as outlined in Section 2.3 and 2.4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, adopted 2 March 2000 by the State Water Resources Control Board. All peaks identified by analytical methods shall be reported.

3. **Annual Operations Report**. By **30 January** of each year, the Discharger shall submit a written report to the Executive Officer containing the following:

   a. The names, certificate grades, and general responsibilities of all persons employed at the Facility.

   b. The names and telephone numbers of persons to contact regarding the plant for emergency and routine situations.

   c. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.

   d. A statement certifying whether the current operation and maintenance manual, and contingency plan, reflect the wastewater treatment facility as currently constructed and operated, and the dates when these documents were last revised and last reviewed for adequacy.

   e. The Discharger may also be requested to submit an annual report to the Regional Water Board with both tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

ATTACHMENT F – FACT SHEET

Table of Contents

List of Tables

ATTACHMENT F – FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	**5C220701002**
Discharger	U.S. Department of Interior, National Park Service, Yosemite National Park
Name of Facility	El Portal Wastewater Treatment Facility
Facility Address	5083 Foresta Road
	El Portal, CA 95318
	Mariposa County
Facility Contact, Title and Phone	Paul Laymon, Utilities Manager, (209) 379-1077
Authorized Person to Sign and Submit Reports	Michael J Tollefson, Superintendent, (209) 372-0201
Mailing Address	P O Box 700, El Portal, CA 95318
Billing Address	Same as mailing address
Type of Facility	Publicly Owned Treatment Works
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	B
Pretreatment Program	N
Reclamation Requirements	None
Facility Permitted Flow	1.0 million gallons per day (mgd)
Facility Design Flow	1.0 mgd
Watershed	Yosemite Hydrologic Area (No. 537.50)
Receiving Water	Merced River
Receiving Water Type	Inland surface water, river

A. The U.S. Department of Interior, National Park Service, Yosemite National Park, (hereinafter Discharger) is the owner of El Portal Waste Water Treatment Facility (hereinafter Facility or WWTF), a POTW.

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

B. The Facility discharges wastewater to the Merced River, a water of the United States and a Wild and Scenic River, and is currently regulated by Waste Discharge Requirements (WDRs) Order No. 5-01-243 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0081759, which was adopted on 19 October 2001. The terms and conditions of Order No. 5-01-243 have been continued and remain in effect until new WDRs and NPDES permit are adopted.

C. The Discharger filed a report of waste discharge and submitted an application for renewal of its WDRs and NPDES permit on 28 September 2006. A site visit was conducted on 3 July 2007, to observe operations and collect additional data to develop permit limitations and conditions.

II. FACILITY DESCRIPTION

The WWTF provides sewerage service for the unincorporated community of El Portal and for Yosemite Valley in Yosemite National Park, and serves a population of approximately 2200 permanent residents and up to 20,000 visitors per day to the Park during the peak summer months. The WWTF monthly average daily design flow capacity is 1.0 mgd and currently treats a monthly average flow of about 0.4 mgd. Visitors to Yosemite Valley produce most of the sewage discharged to the WWTF. The sewage is generated at public and private visitor service facilities, restaurants, park service housing facilities and picnic areas. Tertiary treated wastewater from the WWTF is discharged to percolation ponds adjacent to and hydraulically connected to the Merced River, or directly to the Merced River. The direct discharge occurs through a pipe outfall when river flows provide a dilution ratio of 200 parts river water to one part effluent (e.g. 200:1) and through a diffuser when the dilution ratio is between 200:1 and 150:1. Direct discharge is prohibited when the dilution ratio is less than 150:1. Direct discharge has not occurred since 1995.

A. Description of Wastewater and Biosolids Treatment or Controls

The WWTF consists of head works with bar screening, grit removal, and grinders, primary clarification, flow equalization, activated sludge, secondary clarification, coagulant and polymer injections, rapid mix flocculation, final sedimentation, sand filtration, ultraviolet disinfection, and a 0.1-acre lined waste pond for wash down from the settling tanks and contact basins. All wastewater from the waste pond is returned to the headworks. The Discharger removes phosphorus by adding alum in the secondary treatment units. Biosolids handling units currently consist of two anaerobic digesters operated in series, two centrifuges, and ten concrete-lined sludge drying beds. Biosolids are hauled off site by a contractor to a permitted facility.

B. Discharge Points and Receiving Waters

1. The Facility is in Section 18, T3S, R20E, MDB&M, as shown in Attachment B, a part of this Order.

2. Discharge to the River from the ponds occurs at Discharge Point 001, via seepage from the percolation ponds. Direct discharge to the River occurs at Discharge Point 002 at Latitude 37°40'00"N and longitude 119°48'30"W. The Merced River is a tributary to the San Joaquin River. The discharge occurs within the Yosemite Hydrologic Area (No. 537.50).

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

Effluent limitations contained in the existing Order for discharges from Discharge Points No. 001 and 002 (Monitoring Locations EFF-001 and EFF-002) and representative monitoring data submitted by the Discharger are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation			Monitoring Data (2003 To 2007)	
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
Flow	mgd	1.0			1.084	1.35
Settleable Solids	ml/L	0.1		0.1	0.0	0.0
pH	pH Units			>6.5, <9.0		6.7/8.5
Turbidity	NTU	2 NTU (30-day average)		5 NTU>5% of the time during 12-hour period	0.945	
Chlorine Residual	mg/L			.02	ND	ND
Electrical Conductivity at 25°C						850
Temperature	°C				24	26
Total Coliform Organisms	MPN/ 100 mL		2.2[1]	23	<2	8
5-day Biochemical Oxygen Demand	mg/L, lbs/day	10		20 84	3	5
Total Suspended Solids	mg/L, lbs/day	10		20 84	4	6
Ammonia (as N)	mg/L				4	4

Parameter	Units	Effluent Limitation			Monitoring Data (2003 To 2007)	
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
Nitrate (as N)	mg/L					46
Total Phosphorus	mg/L, lb/day	0.5 4.2		1.0 8.4		ND
Chloroform	ug/L					79
Bromodichlo romethane	ug/L					9.5
Dibromochlo romethane	ug/L					1.0
Bromoform	ug/L					1.0
Copper	ug/L					19.70
Zinc	ug/L					23.7

1. 7-day median limitation

D. Compliance Summary

The Discharger has submitted the required monthly and annual reports to the Regional Water Board in accordance with WDRs Order No. 5-01-243 and has met effluent requirements with a few minor exceptions. In May and June 2006, as a result of large snowpack and high temperatures, high volume runoff levels resulted in excessive infiltration and infow into the collection system, which resulted in influent flows to the WWTF of over the 1.0 mgd limit. The monthly average daily flow for May 2006 was 1.077 mgd and for June 2006 was 1.084 mgd.

Cleanup and Abatement Order No. 5-00-703 and Time Schedule Order No. 5-00-210 were issued as a result of several sanitary sewer overflows from the WWTF's collection system and remain in effect. During the current term of WDRs Order No. 5-01-243, there were 27 spills from the collection system reported between 2003 and 2007. Two of the spills entered the Merced River, including the largest spill of 6200 gallons in June 2005.

More recent compliance inspections of the WWTF did not identify any violations.

E. Planned Changes

The Discharger has upgraded its disinfection process from chlorination and dechlorination to ultraviolet disinfection.

The Discharger continues to repair, rehabilitate and replace its sanitary sewer collection system in Yosemite Valley.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the applicable plans, policies, and regulations identified in Section II of the Limitations and Discharge Requirements (Findings). This section provides supplemental information, where appropriate, for the plans, policies, and regulations relevant to the discharge.

A. Legal Authority

See Limitations and Discharge Requirements - Findings, Section II.C.

B. California Environmental Quality Act (CEQA)

See Limitations and Discharge Requirements - Findings, Section II.E.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans**. The Regional Water Board approved a Water Quality Control Plan for the Sacramento and San Joaquin River Basins, Fourth Edition, revised October 2007 (Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The designated beneficial uses of the Merced River, sources to Lake McClure, downstream of the discharge are: potential municipal and domestic supply (MUN); agricultural supply (AGR), hydropower generation (POW); water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); and wildlife habitat (WILD). Although the Basin Plan lists MUN as a potential beneficial use, it is an existing use as the Mariposa Public Utility District has a municipal supply intake on the Merced River downstream of the discharge.

   The Basin Plan on page II-1.00 states: "*Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning…*" and with respect to disposal of wastewaters states that "...*disposal of wastewaters is [not] a prohibited use of waters of the State; it is merely a use which cannot be satisfied to the detriment of beneficial uses.*"

   The federal CWA Section 101(a)(2), states: "*it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983.*" Federal Regulations, developed to implement the requirements of the CWA, create a rebuttable presumption that all waters be designated as fishable and swimmable. 40 CFR 131.2 and 131.10, require consideration of all waters' beneficial uses as public water supply, protection and propagation of fish, shell fish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. 40 CFR 131.3(e) defines existing beneficial uses as those uses actually attained after November 28, 1975, whether or not they are included in the water quality standards. 40 CFR 131.10 requires that

uses be obtained by implementing effluent limitations, requires that all downstream uses be protected and states that in no case shall a state adopt waste transport or waste assimilation as a beneficial use for any waters of the United States.

This Order continues Effluent Limitations requiring a tertiary level of treatment, or equivalent, to protect the beneficial uses of the receiving water.

2. **Antidegradation Policy.** See Limitations and Discharge Requirements - Findings, Section II.N.

3. **Anti-Backsliding Requirements.** See Limitations and Discharge Requirements - Findings, Section II.O.

4. ***Emergency Planning and Community Right to Know Act***. Section 13263.6(a), California Water Code, requires that "*the Regional Water Board shall prescribe effluent limitations as part of the waste discharge requirements of a POTW for all substances that the most recent toxic chemical release data reported to the state emergency response commission pursuant to Section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. Sec. 11023) (EPCRKA) indicate as discharged into the POTW, for which the State Water Board or the Regional Water Board has established numeric water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective*".

   The most recent toxic chemical data report does not indicate any reportable off-site releases or discharges to the collection system for this facility. Based on information from EPCRA, there is no reasonable potential to cause or contribute to an excursion above any numeric water quality objectives included within the Basin Plan or in any State Water Board plan, so no effluent limitations are included in this permit pursuant to CWC section 13263.6(a).

   However, as detailed elsewhere in this Order, available effluent data indicate that there are constituents present in the effluent that have a reasonable potential to cause or contribute to exceedances of water quality standards and require inclusion of effluent limitations based on federal and State laws and regulations.

5. ***Storm Water Requirements*.** USEPA promulgated Federal Regulations for storm water on 16 November 1990 in 40 CFR 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from wastewater treatment facilities. Wastewater treatment plants are applicable industries under the storm water program and are obligated to comply with the Federal Regulations. All storm water from the WWTF is returned to the headworks.

6. ***Endangered Species Act.*** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance

with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

D. Other Plans, Polices and Regulations

1. The discharge authorized herein and the treatment and storage facilities associated with the discharge of treated municipal wastewater, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27, California Code of Regulations (CCR), section 20005 *et seq*. (hereafter Title 27). The exemption, pursuant to Title 27 CCR section 20090(a), is based on the following:

   a. The waste consists primarily of domestic sewage and treated effluent;

   b. The waste discharge requirements are consistent with water quality objectives; and

   c. The treatment and storage facilities described herein are associated with a municipal wastewater treatment plant.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Effluent limitations and toxic and pretreatment effluent standards established pursuant to Sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 304 (Information and Guidelines), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act (CWA) and amendments thereto that are applicable to the discharge are contained herein.

The federal CWA mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or federal law [33 U.S.C., § 1311(b)(1)(C); 40 CFR 122.44(d)(1)]. NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular pollutants. Pursuant to 40 CFR 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that "*are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality*." 40 CFR 122.44(d)(1)(vi) further provides that "[w]*here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits.*"

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent

limitations: 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 to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where numeric water quality objectives have not been established. The Regional Water Board's Basin Plan, page IV-17.00, contains an implementation policy ("Policy for Application of Water Quality Objectives") that specifies that the Regional Water Board "*will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives*." This Policy complies with 40 CFR 122.44(d)(1). With respect to narrative objectives, the Regional Water Board must establish effluent limitations using one or more of three specified sources, including (1) EPA's published water quality criteria, (2) a proposed state criterion (*i.e*., water quality objective) or an explicit state policy interpreting its narrative water quality criteria (*i.e*., the Regional Water Board's "Policy for Application of Water Quality Objectives")(40 CFR 122.44(d)(1) (vi) (A), (B) or (C)), or (3) an indicator parameter. The Basin Plan contains a narrative objective requiring that: "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life*" (narrative toxicity objective). The Basin Plan states that material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The Basin Plan also limits chemical constituents in concentrations that adversely affect surface water beneficial uses. For waters designated as MUN, the Basin Plan specifies that, at a minimum, waters shall not contain concentrations of constituents that exceed Maximum Contaminant Levels (MCL) of CCR Title 22. The Basin Plan further states that, to protect all beneficial uses, the Regional Water Board may apply limits more stringent than MCLs.

A. Discharge Prohibitions

The first five prohibitions, listed below and as set forth in the Order, represent acts that are totally unacceptable to the Regional Water Board. The last two are also unacceptable to the Regional Water Board and are carried over from WDRs Order No. 5-01-243.

1. Prohibition A concerns a substantial change in location or manner of the discharge, or a change in its character, from what was provided in the RWD and evaluated for compliance with the California Water Code and CWA. Discharge requirements in this Order may not be protective of water quality if there is a substantial change, and hence such is prohibited.

2. Prohibition B prohibits bypass pursuant to 40 CFR 122.41 (m)(4), with federal allowance for exceptions set forth in section 1.G of Attachment D, Standard Provisions.

3. Prohibition C reflects two general situations that, if created, justify cleanup or abatement enforcement activities and assessment of administrative civil liabilities.

4. Prohibition D concerns two categories of waste that are subject to full containment as prescribed by Title 23 and Title 27 of the California Code of Regulations and, if discharged, have high potential for creating a condition that would violate Prohibition C as well.

5. Prohibition E incorporates prohibitions as set forth in the Basin Plan and not covered by the preceding prohibitions.

6. Prohibition F prohibits direct discharge to the river unless the ratio of river flow to wastewater discharge is greater than 150:1. Under this ratio and based on the effluent limits prescribed in the Order, the impact on the river quality is insignificant.

7. Prohibition G prohibits direct discharge without a diffuser when the ratio of river flow to wastewater is between 150:1 and 200:1 to assure that the discharge is dispersed effectively throughout the river.

B. Technology-Based Effluent Limitations

1. Scope and Authority

40 CFR 125.3(a)(1) requires technology-based effluent limitations for municipal Dischargers to be placed in NPDES permits based on Secondary Treatment Standards or Equivalent to Secondary Treatment Standards.

USEPA promulgated Secondary Treatment Standards are in 40 CFR 133. These technology-based effluent limitations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of biochemical oxygen demand (BOD_5), total suspended solids (TSS), and pH.

2. Applicable Technology-Based Effluent Limitations

a. **BOD_5 and TSS.** As illustrated in Table F-3 below, this Order carries over from WDRs Order No. 5-01-243 tertiary effluent limitations for BOD_5 and TSS to protect the beneficial uses of the Merced River. These limits reflect the technical capability of the existing tertiary process and are more stringent than those in 40 CFR 133.

b. **Flow.** The WWTF was designed to provide a tertiary level of treatment for up to a design flow of 1.0 mgd. Therefore, this Order contains an Average Daily Discharge Flow effluent limit of 1.0 mgd.

Summary of Technology-based Effluent Limitations
Discharge Points EFF-1 and EFF-2

Table F-3. Summary of Technology-based Effluent Limitations

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Conventional Pollutants			
Biochemical Oxygen Demand (BOD) (5 day @ 20ºC)[2]	mg/L	10	20
	lbs/day[1]	84	167
Total Suspended Solids (TSS)[2]	mg/L	10	20
	lbs/day[1]	84	167
Settleable Solids	ml/L	0.1	0.1

1. Based on the average monthly flow of 1.0 mgd
2. The average monthly percent removal of 5-day biochemical oxygen demand (BOD) and total suspended solids (TSS) shall not be less than 90 percent.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

40 CFR 122.44(d)(1)(i) specifies permits are required to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential (RP) to cause, or contribute to an in-stream excursion above any state water quality standard. The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other State plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

a. **Receiving Water.** Beneficial uses of the Merced River are MUN, AGR, POW, REC-1, REC-2, WARM, COLD and WILD. The Merced River is a Wild and Scenic River and a tributary to the San Joaquin River.

b. **Hardness.** While no effluent limitation for hardness is necessary in this Order, hardness is critical to the assessment of the need for, and the development of, effluent limitations for certain metals. Effluent limitations for the discharge must be set to protect the beneficial uses of the receiving water for all discharge conditions. For purposes of establishing water quality-based effluent limitations, a reported hardness value of 140.0 mg/L as $CaCO_3$ was used.

c. **Assimilative Capacity/Mixing Zone.** Analysis of the discharge documented in WDRs Order No. 5-01-243 indicates that underflow from the percolation ponds eventually emerges completely mixed when it combines with the Merced River.

However, the Discharger has not submitted a specific dilution study or mixing zone analysis for CTR constituents to determine the ability of the receiving water to assimilate pollutants without exceeding water quality objectives. Thus, effluent limits for CTR constituents are applied at the point of discharge into the percolation ponds or into the Merced River.

3. Determining the Need for WQBELs

a. Based on information submitted as part of the application and as directed by monitoring and reporting programs, the Regional Water Board finds that the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard for copper. Water quality-based effluent limitations (WQBELs) for copper are included in this Order. A summary of the reasonable potential analysis (RPA) is provided in Attachment G, and a detailed discussion of the RPA for each detected constituent is provided below.

b. The Regional Water Board conducted the RPA for CTR constituents in accordance with Section 1.3 of the SIP. Although the SIP applies directly to the control of CTR priority pollutants, the State Water Board has held that the Regional Water Board may use the SIP as guidance for water quality-based toxics control.[1] The SIP states in the introduction "*The goal of this Policy is to establish a standardized approach for permitting discharges of toxic pollutants to non-ocean surface waters in a manner that promotes statewide consistency."* In this Order, the RPA procedures from the SIP were used to evaluate reasonable potential for CTR constituents. Other RPA procedures are contained in the USEPA's *Technical Support Document for Water Quality Based Toxics Control.*

c. WQBELs were calculated in accordance with section 1.4 of the SIP, as described in Attachment F, Section IV.C.4.

d. **Aluminum.** The Discharger submitted the result of 16 effluent samples collected from 2001 through 2007 for analysis of total recoverable aluminum. The maximum effluent limit concentration (MEC) was 190 ug/L of total aluminum and the average was 48 ug/L. No aluminum results of the upstream receiving water have been submitted. While the MEC of 190 ug/L exceeds the chronic USEPA National Recommended Ambient Water Quality Criteria of 87 ug/L, absent receiving water aluminum data there is not adequate available information to demonstrate that aluminum has the reasonable potential to cause, or contribute to, an excursion above an applicable water quality objective in the Merced River. Additional data must be collected to adequately characterize the presence of aluminum in the receiving water and the discharge's potential impact thereon.

   This Order requires sampling of the effluent and receiving water for aluminum to determine whether aluminum in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan's narrative toxicity objective. This Order may be reopened if the results indicate that the discharge has RP for aluminum.

1 See, Order WQO 2001-16 (Napa) and Order WQO 2004-0013 (Yuba City)

The Discharger has requested using alternate aluminum testing protocol to meet monitoring requirements. In USEPA's *Ambient Water Quality Criteria for Aluminum – 1988* [EPA 440/5-86-008], USEPA states that "[a] *cid-soluble aluminum...is probably the best measurement at the present...";* however, USEPA has not yet approved an acid-soluble test method for aluminum. Replacing the ICP/AES portion of the analytical procedure with ICP/MS would allow lower detection limits to be achieved. Based on USEPA's discussion of aluminum analytical methods, this Order allows the use of the alternate aluminum testing protocol described above to meet monitoring requirements.

e. **Ammonia.** The EPA 1999 *Update of Ambient Water Quality Criteria for Ammonia* provides the latest applicable water quality criteria for this constituent. The concentration of ammonia that will be toxic to aquatic life decreases with rising temperatures and pH. WDRs Order No. 5-01-243 required the Discharger to collect ammonia, pH, and temperature data for the effluent and the Merced River upstream and downstream of the discharge. Data from January 2003 to 31 December 2007 provides 92 effluent ammonia samples. Of these, the MEC for ammonia was 4.0 mg/L. Over 90% of the samples were non-detect. The maximum upstream (R1) concentration for ammonia was non-detect at a typical detection limit of 1.0 mg/L. To determine the maximum in-stream concentration of ammonia (Cr) that could be caused by the discharge, the following criteria were used:

WWTF Design Flow = 1 mgd
The MEC = 4.0 mg/L (NH3-N)
7Q10 low river flow = 7.6 mgd from USGS gauging station #11266500 at Pohono Bridge
Maximum river ammonia concentration is 0.5 mg/L (NH3-N).

$$Cr = \frac{(1\ mgd)(4\ mg/L) + (7.6\ mgd)(0.5\ mg/L)}{(8.6)}$$

$$Cr = 0.91\ mg/L$$

To determine if the discharge has a reasonable potential to cause toxicity in the Merced River with ammonia the most restrictive chronic and acute criteria were determined using effluent, upstream Merced River (R1) and downstream Merced River (R2) pH and temperature data.

Instream continuous chronic criteria (CCC) and continuous maximum criteria (CMC) can be calculated using the following equations.

$$CCC_{30-day} = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) \times MIN\left(2.85, 1.45 \cdot 10^{0.028(25-T)}\right), \text{ and}$$

$$CMC = \left(\frac{0.275}{1+10^{7.204-pH}} + \frac{39.0}{1+10^{pH-7.204}}\right),$$

where *T* is in degrees Celsius.

The minimum $CCC_{30\text{-}day}$ criteria is 1.34 mg/L. The minimum CMC is 5.45 mg/L. As the Cr is less than the CCC and the CMC, the discharge does not have the RP to cause an exceedance of a water quality criteria for ammonia in the Merced River. This conclusion is supported by R1 and R2 receiving water data that have consistently been non-detect for ammonia at both R1 and R2.

f. **Copper.** The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for copper. The applicable chronic criterion (maximum four-day average concentration) is 12.4 µg/L and the applicable acute criterion (maximum one-hour average concentration) is 19.2 µg/L, as total recoverable. The MEC for total copper was 19.7 µg/L, based on 31 samples collected between April 2003 and April 2007. Therefore, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for copper. An AMEL and MDEL for total copper, respectively, are included in this Order based on CTR criteria for the protection of freshwater aquatic life (See Attachment F, Table F-4 for WQBEL calculations). Based on the sample results in the effluent, it does not appear that the Discharger can meet these new limitations. Thus a compliance schedule and an interim limit is included in this Order.

g. **Zinc.** The MEC for zinc was 220 ug/L, based on 28 samples. A value of 220 ug/L was reported in June 2004. The remaining samples range from 8.3 to 23.7 ug/L. The 220 ug/L value is being considered an outlier. Thus the discharge does not have a reasonable potential to exceed the CTR criteria of 159.34 ug/L for the protection of freshwater aquatic life in the Merced River and effluent limitations for zinc are not included in this Order.

h. **Dichlorobromomethane and Dibromochloromethane.** These constituents are trihalomethanes, which are formed when chlorine reacts with organic materials. From January 2003 through December 2007, the Discharger analyzed its effluent 45 times for dichlorobromomethane and dibromochloromethane. The MECs for these constituents were 9.5 ug/L and 1.2 ug/L, respectively. The CTR criteria for these constituents are 0.56 ug/L and 0.41 ug/L, respectively. However, in October 2007, the Discharger replaced its chlorine based disinfection system with UV disinfection. Since implementing UV disinfection, results for these constituents have been non-detect. As the Discharger does not use significant amounts of chlorine elsewhere in its operations, there is no longer RP for these constituents to cause an exceedance of a water quality objective in the Merced River. Thus this permit does not include effluent limitations for these compounds.

i. **Nitrate.** The California Department of Public Health set the primary drinking water standard for nitrite and nitrate-nitrogen at 10 mg/L. Self-monitoring data from 2003 through 2007 indicate the highest measured nitrate-nitrogen concentration in effluent is 46 mg/L. To determine if nitrate-nitrogen has a reasonable potential to exceed human health criteria in the Merced River, complete mixing at critical flow (harmonic mean for human health criteria) was used with the following criteria:

Design Flow = 1 mgd,
Maximum estimated effluent nitrate-nitrogen concentration = 46 mg/L

Harmonic Mean = 48.3 mgd from USGS gauging station # 11266500 at Pohono Bridge
Maximum observed river nitrate-nitrogen concentration < 0.5 mg/L (collected 2 June 1999)

$$C_r = \frac{(1 \text{ mgd})(46 \text{ mg/L}) + (48.3 \text{ mgd})(0.5 \text{ mg/L})}{49.3 \text{ mgd}}$$

$C_r = 1.42 \text{ mg/L} < 10.0 \text{ mg/L}$

Thus the discharge does not have a reasonable potential to exceed the primary drinking water level for nitrate-nitrogen in the Merced River and effluent limitations for nitrate are not included in this Order.

j. **Pathogens**. To protect identified beneficial uses from pathogens the wastewater must be adequately treated. The principal infectious agents (pathogens) that may be present in raw sewage are classified into three broad groups: bacteria, parasites, and viruses. It is not practical or necessary to be exact in quantifying pathogens in this circumstance as they are living and mobile, multiply exponentially and are impractical to quantify exactly and regulate by weekly average limitations. Tests for detection and enumeration of indicator organisms, rather than of pathogens, are used. The accepted general indicator for pathogenic bacteria is coliform bacteria and its population has been authenticated as a reliable standard. Test results allow prediction of coliform organisms populations as a most probable number and limitations typically are specified in terms of daily maximum and a 7-day median.

The California Department of Public Health (DPH) developed guidelines for discharges to surface waters. For streams with a designated beneficial use of MUN and a 20:1 to 100:1 ratio of stream flow to effluent flow, DPH recommends no discharge. Where other alternatives are not feasible, DPH recommends treatment, consisting of chemical coagulation, sedimentation, and filtration, which will remove approximately 99.5% of pathogens, and disinfection of the tertiary effluent to ensure greater removal to a median of 2.2 MPN/100 mL total coliform organisms or less, based on the last seven samples. For flow ratios greater than 100:1, DHS recommends disinfection to a median of 23 MPN/100 mL, based on the last seven samples.

The effluent limitations for 7-day median and daily maximum total coliform organisms are established at 2.2 and 23 MPN/100 mL, respectively, are consistent with DPH guidance and reflect past performance at the WWTF. The coliform limits have been in previous permits and section 402(o) of the Clean Water Act establishes express statutory language prohibiting the backsliding of

effluent limitations. The beneficial uses of the Merced River downstream of the discharge include MUN, REC-1, and REC-2. The level of disinfection prescribed by the proposed Order is protective of these beneficial uses, assures that the discharge will not cause or contribute to cause exceedances of the water quality objective for fecal coliform in the receiving water, and assures compliance with section 402(o) of the Clean Water Act.

Hence, a total coliform population of 2.2 MPN/100 ml, in the opinion of the DPH, ensures the risk of disease from pathogenic bacteria is at an acceptable level for any of the identified direct uses.

To ensure that other pathogen groups are successfully reduced requires a high degree of filtration as well as achieving the disinfection level described above. Filtration ensures a higher quality effluent by removing finer organic material and it increases the effectiveness and reliability of the disinfection process. The performance standard for effective filtration is measured in turbidity. Tertiary treatment technology can consistently achieve an average daily turbidity of 2 nephelometric turbidity units. Monitoring turbidity allows immediate detection of filter failure that enables rapid corrective action, whereas coliform testing requires several hours or days to identify high coliform concentrations.

A disinfected tertiary effluent that achieves this turbidity and the total coliform density previously described ensures that the risk of disease from all pathogen groups is at an acceptable level for any of the identified direct uses.

To ensure the Facility achieves appropriate disinfected tertiary treatment, this Order contains effluent limitations reflecting a tertiary level of treatment and disinfection, or fail-safe equivalent, and associated monitoring for D-001 compliance.

k. **pH.** The Basin Plan includes a water quality objective for surface waters that the "…pH shall not be depressed below 6.5 nor raised above 8.5. Effluent Limitations for pH are included in this Order based on the Basin Plan objectives for pH.

l. **Electrical Conductivity**. Electrical conductivity (EC) is a good indicator of salinity in domestic wastewaters and natural waters. Discharger self-monitoring data from January 2003 to December 2007 indicates the maximum effluent EC is 850 umhos/cm. The maximum upstream river EC during the same period is 260 umhos/cm. To determine the maximum instream EC level (Cr) that could be caused by the discharge, the following criteria was used:

WWTF Design Flow = 1 mgd,
The maximum effluent EC = 850 umhos/cm,
7Q10 low river flow = 7.6 mgd from USGS gauging station #11266500 at Pohono Bridge,

Maximum river EC = 207 umhos/cm.

$$Cr = \frac{(1\ mgd)(850\ umhos/cm) + (7.6\ mgd)(207 umhos/cm)}{(8.6\ mgd)}$$

Cr = 281 umhos/cm

Thus there is no RP for the discharge to cause or contribute to an exceedance of a water quality for EC in the Merced River and effluent EC limits are not included in this Order. Nonetheless, the incremental increase of the effluent EC does exceed what is normally accepted as a reasonable increment above the EC of the source water. This Order requires the Discharger to implement influent monitoring for EC to help determine the source of the effluent EC.

m. **Settleable Solids.** For inland surface waters, the Basin Plan states that "[w]ater shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses." This Order contains average monthly and average daily effluent limitations for settleable solids.

Because the amount of settleable solids is measured in terms of volume per volume without a mass component, it is impracticable to calculate mass limitations for inclusion in this Order. A daily maximum effluent limitation for settleable solids is included in the Order, in lieu of a weekly average, to ensure that the treatment works operate in accordance with design capabilities.

n. **Biostimulatory Substances**. The Water Quality objective does not allow biostimulatory substances that promote aquatic growth in concentrations that cause nuisance or adversely affect beneficial uses. The Order carries over the previous Order's effluent limitation for total phosphorus that was based on an evaluation by the California Department of Water Resources (DWR) using data from a 1980 study conducted by the Discharger concerning the potential for algal growth in the Merced River. DWR determined that effluent phosphorus concentration would need to remain below 0.5 mg/L to prevent excessive algal growth in the Merced River. An effluent limit for phosphorus of 0.5 mg/L is included in this Order.

o. **Toxicity.** See Section IV.C.5. of the Fact Sheet regarding whole effluent toxicity.

4. WQBEL Calculations

a. Effluent limitations for copper were calculated in accordance with section 1.4 of the SIP. The following paragraphs describe the methodology used for calculating effluent limitations.

b. **Effluent Limitation Calculations.** In calculating maximum effluent limitations, the effluent concentration allowances were set equal to the criteria/standards/objectives.

$$ECA_{acute} = CMC \qquad ECA_{chronic} = CCC$$

where:

ECA_{acute} = effluent concentration allowance for acute (one-hour average) toxicity criterion

$ECA_{chronic}$ = effluent concentration allowance for chronic (four-day average) toxicity criterion

CMC = criteria maximum concentration (one-hour average)

CCC = criteria continuous concentration (four-day average, unless otherwise noted)

Acute and chronic toxicity ECAs were then converted to equivalent long-term averages (LTA) using statistical multipliers and the lowest is used. Additional statistical multipliers were then used to calculate the maximum daily effluent limitation (MDEL) and the average monthly effluent limitation (AMEL).

$$AMEL = mult_{AMEL}\left[\min\left(\underbrace{M_A ECA_{acute}}_{LTA_{acute}}, M_C ECA_{chronic}\right)\right]$$

$$MDEL = mult_{MDEL}\left[\min\left(\underbrace{M_A ECA_{acute}}_{LTA_{acute}}, \underbrace{M_C ECA_{chronic}}_{LTA_{chronic}}\right)\right]$$

where: $mult_{AMEL}$ = statistical multiplier converting minimum LTA to AMEL
$mult_{MDEL}$ = statistical multiplier converting minimum LTA to MDEL
M_A = statistical multiplier converting CMC to LTA
M_C = statistical multiplier converting CCC to LTA

Water quality-based effluent limitations were calculated for copper as follows in Table F-4.

Table F-4 WQBEL Calculations
Copper

	Acute	Chronic
Criteria, dissolved (µg/L) [1]	19.22	12.44
Dilution Credit	No Dilution	No Dilution
ECA Multiplier [2]	0.321	0.527
LTA	6.17	6.55
AMEL Multiplier (95th%) [3][4]	1.55	[6]
AMEL (µg/L)	9.6	[6]
MDEL Multiplier (99th%) [5]	3.11	[6]
MDEL (µg/L)	19	[6]

[1] CTR aquatic life criteria, based on a hardness of 140 mg/L as $CaCO_3$.
[2] Acute and Chronic ECA Multiplier calculated at 99th percentile per section 1.4.B, Step 3 of SIP or per sections 5.4.1 and 5.5.4 of the TSD.
[3] Assumes sampling frequency n=>4.
[4] The probability basis for AMEL is 95th percentile per section 1.4.B, Step 5 of SIP.
[5] The probability basis for MDEL is 99th percentile per section 1.4.B, Step 5 of SIP.
[6] Limitations based on acute LTA (Chronic LTA > Acute LTA)

5. Whole Effluent Toxicity (WET)

For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct whole effluent toxicity testing for acute and chronic toxicity, as specified in the Monitoring and Reporting Program (Attachment E, Section V.). This Order also contains effluent limitations for acute toxicity and requires the Discharger to implement best management practices to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity.

a. **Acute Aquatic Toxicity.** The Basin Plan contains a narrative toxicity objective that states, "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*" (Basin Plan at III-8.00) The Basin Plan also states that, "…*effluent limits based upon acute biotoxicity tests of effluents will be prescribed where appropriate*…". USEPA Region 9 provided guidance for the development of acute toxicity effluent limitations in the absence of numeric water quality objectives for toxicity in its document titled "Guidance for NPDES Permit Issuance", dated February 1994. In section B.2. "Toxicity Requirements" (pgs. 14-15) it states that, "*In the absence of specific numeric water quality objectives for acute and chronic toxicity, the narrative criterion 'no toxics in toxic amounts' applies. Achievement of the narrative criterion, as applied herein, means that ambient waters shall not demonstrate for acute toxicity: 1) less than 90% survival, 50% of the time, based on the monthly median, or 2) less than 70% survival, 10% of the time, based on any monthly median. For chronic toxicity, ambient waters shall not demonstrate a test result of greater than 1 TUc."* Accordingly, effluent limitations for acute toxicity have been included in this Order as follows:

Acute Toxicity. Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

i. 70 %, for any one bioassay; and
ii. 90%, for the median of any three consecutive bioassays

b. **Chronic Aquatic Toxicity.** The Basin Plan contains a narrative toxicity objective that states, "All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life." (Basin Plan at III-8.00) Adequate WET data is not available to determine if the discharge has reasonable potential to cause or contribute to an in-stream excursion above of the Basin Plan's narrative toxicity objective. Attachment E of this Order requires quarterly chronic WET monitoring for demonstration of compliance with the narrative toxicity objective.

In addition to WET monitoring, Special Provisions VI.C.2.a. requires the Discharger to submit to the Regional Water Board an Initial Investigative TRE Work Plan for approval by the Executive Officer, to ensure the Discharger has a plan to immediately move forward with the initial tiers of a TRE, in the event effluent toxicity is encountered in the future. The provision also includes a numeric toxicity monitoring trigger and requirements for accelerated monitoring, as well as, requirements for TRE initiation if a pattern of toxicity is demonstrated.

D. Final Effluent Limitations

1. Mass-based Effluent Limitations.

40 CFR 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 CFR 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations provided in 40 CFR 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g. CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

Mass-based effluent limitations were calculated based upon the permitted average daily discharge flow allowed in Section IV.A.1.a. of the Limitations and Discharge Requirements.

2. Averaging Periods for Effluent Limitations.

40 CFR 122.45 (d) requires average weekly and average monthly discharge limitations for publicly owned treatment works (POTWs) unless impracticable. However, for toxic pollutants and pollutant parameters in water quality permitting, the USEPA recommends the use of a maximum daily effluent limitation in lieu of average weekly effluent limitations for two reasons. "*First, the basis for the 7-day*

average for POTWs derives from the secondary treatment requirements. This basis is not related to the need for assuring achievement of water quality standards. Second, a 7-day average, which could comprise up to seven or more daily samples, could average out peak toxic concentrations and therefore the discharge's potential for causing acute toxic effects would be missed." (TSD, pg. 96) This Order utilizes maximum daily effluent limitations in lieu of average weekly effluent limitations for copper, as recommended by the TSD for the achievement of water quality standards and for the protection of the beneficial uses of the receiving stream.

3. Satisfaction of Anti-Backsliding Requirements.

Some effluent limitations in this Order are less stringent that those in the previous Order. As discussed below this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations. Order No. 5-01-243 requires that chlorine residual not exceed 0.02 mg/L. This limitation is being eliminated from the Order as chlorine is no longer being used for disinfection since activation of a new ultraviolet disinfection system in October 2007. The receiving water dissolved oxygen limitation is being reduced from 8.0 to 7.0 mg/L, as the 8.0 limitation in the previous Order was erroneously set according to the Basin Plan for a different section of the Merced River. These changes are consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Resources Control Board Resolution 68-16. Further, any impact on existing water quality will be insignificant.

4. Satisfaction of Antidegradation Policy

The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16. This Order does not allow any increase in flow or mass of pollutants discharged. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. The impact on existing water quality will be insignificant.

E. Interim Effluent Limitations

1. **Copper.** The SIP, section 2.2.1, requires that if a compliance schedule is granted for a CTR or NTR constituent, the Regional Water Board shall establish interim requirements and dates for their achievement in the NPDES permit. The interim limitations must be based on current WWTF performance or existing permit limitations, whichever is more stringent.

   The interim limitations for copper in this Order are based on the WWTF performance. In developing the interim limitations, where there are ten sampling data points or more, sampling and laboratory variability is accounted for by establishing interim limits that are based on normally distributed data where 99.9% of the data points will lie within 3.3 standard deviations of the mean (*Basic Statistical*

   Methods for Engineers and Scientists, Kennedy and Neville, Harper and Row). Therefore, the interim limitations in this Order are established as the mean plus 3.3 standard deviations of the available data.

Table 5 summarizes the calculations of the interim effluent limitations for copper:

Table F-5. Interim Effluent Limitation Calculation Summary

Parameter	Units	MEC	Mean	Std. Dev.	# of Samples	Interim Limitation
Copper	ug/L	19.7	8.14	5.01	31	25

F. Land Discharge Specifications – Not Applicable

G. Reclamation Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

The Basin Plan contains water quality objectives to protect the beneficial uses of surface water and groundwater. These include numeric objectives and narrative objectives, including objectives for chemical constituents, toxicity, and tastes and odors.

A. Surface Water

This Order contains Receiving Surface Water Limitations based on the Basin Plan numerical and narrative water quality objectives as follows:

a. **Ammonia.** The Basin Plan states that, "[w]*aters shall not contain un-ionized ammonia in amounts which adversely affect beneficial uses. In no case shall the discharge of wastes cause concentrations of un-ionized ammonia (NH_3) to exceed 0.025 mg/l (as N) in receiving waters.*"

b. **Bacteria.** The Basin Plan includes a water quality objective that "*[I]n water designated for contact recreation (REC-1), the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 ml*." Numeric Receiving Water Limitations for bacteria are included in this Order.

c. **Biostimulatory Substances**. The Basin Plan includes a water quality objective that "*[W]ater shall not contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses."* Receiving Water Limitations for biostimulatory substances are included in this Order.

d. **Color**. The Basin Plan includes a water quality objective that "*[W]ater shall be free of discoloration that causes nuisance or adversely affects beneficial uses."* Receiving Water Limitations for color are included in this Order.

e. **Chemical Constituents**. The Basin Plan includes a water quality objective that *"[W]aters shall not contain chemical constituents in concentrations that adversely affect beneficial uses."* Receiving Water Limitations for chemical constituents are included in this Order.

f. **Dissolved Oxygen.** The Merced River has been designated as having the beneficial use of cold freshwater aquatic habitat (COLD). For water bodies designated as having COLD as a beneficial use, the Basin Plan includes a water quality objective of maintaining a minimum of 7.0 mg/L of dissolved oxygen. Since the beneficial use of COLD does apply to the Merced River, a receiving water limitation of 7.0 mg/L for dissolved oxygen was included in this Order.

g. **Floating Material**. The Basin Plan includes a water quality objective that *"[W]ater shall not contain floating material in amounts that cause nuisance or adversely affect beneficial uses."*. Receiving Water Limitations for floating material are included in this Order..

h. **Oil and Grease**. The Basin Plan includes a water quality objective that *"[W]aters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses."* Receiving Water Limitations for oil and grease are included in this Order.

i. **pH**. The Basin Plan includes water quality objective that the pH of water shall not be depressed below 6.5 or raised above 8.5.

j. **Pesticides**. The Basin Plan includes a water quality objective for pesticides beginning on page III-6.00. Receiving Water Limitations for pesticides are included in this Order.

k. **Radioactivity**. The Basin Plan includes a water quality objective that *"[R]adionuclides shall not be present in concentrations that are harmful to human, plant, animal or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life."* The Basin Plan states further that *"[A]t a minimum, waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of radionuclides in excess of the maximum contaminant levels (MCLs) specified in Table 4 (MCL Radioactivity) of Section 64443 of Title 22 of the California Code of Regulations…"* Receiving Water Limitations for radioactivity are included in this Order.

l. **Suspended Sediment.** The Basin Plan includes a water quality objective that *"[T]he suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses"* Receiving Water Limitations for suspended sediments are included in this Order.

m. **Settleable Material.** The Basin Plan includes a water quality objective that *"[W]aters shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses."* Receiving Water Limitations for settleable material are included in this Order. .

n. **Suspended Material.** The Basin Plan includes a water quality objective that *"[W]aters shall not contain suspended material in concentrations that cause*

o. **Taste and Odors**. The Basin Plan includes a water quality objective that *"[W]ater shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses."* Receiving Water Limitations for taste- or odor-producing substances are included in this Order.

p. **Temperature.** The Merced River has the beneficial uses of both COLD and WARM. The Basin Plan includes the objective that "[a]*t no time or place shall the temperature of COLD or WARM intrastate waters be increased more than 5ºF above natural receiving water temperature*." This Order includes a receiving water limitation based on this objective.

q. **Toxicity**. The Basin Plan includes a water quality objective that *"[A]ll waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life."* Receiving Water Limitations for toxicity are included in this Order and are based on the Basin Plan objective.

r. **Turbidity.** The Basin Plan includes a water quality objective that "*[I]ncreases in turbidity attributable to controllable water quality factors shall not exceed the following limits:*

- *Where natural turbidity is between 0 and 5 Nephelometric Turbidity Units (NTUs), increases shall not exceed 1 NTU.*
- *Where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20 percent.*
- *Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs.*
- *Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent*."

A numeric Receiving Surface Water Limitation for turbidity is included in this Order and is based on the Basin Plan objective for turbidity.

B. Groundwater

1. The designated beneficial uses of the underlying groundwater are municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply.

2. Groundwater normally flows west towards the Merced River and occurs about 8 to 11 feet below ground surface. During peak river flows, the groundwater levels can

rise to within 1 foot of the ground surface, which causes groundwater flow to reverse direction and flow towards the east.

Although the Board has not adopted closure waste discharge requirements for the El Portal Landfill, the Discharger monitors groundwater from four wells near the landfill as part of its landfill closure effort. Monitoring Well 1 (MW-1), MW-2, and MW-3 are downgradient of the landfill, while MW-4 is upgradient of the landfill but directly downgradient of the Discharger's sludge drying beds. The groundwater monitoring for the closed landfill is regulated under Title 27 of the CCR. The table below summarizes monitoring data for the four monitoring wells from 2001-2003:

	EC (µmhos/cm)		Nitrate (as N) (mg/L)		Chloroform (µg/L)	
Monitoring Well	Average	Maximum	Average	Maximum	Average	Maximum
MW-1	610	780	25	41	19.5	50.0
MW-2	635	780	24	34	1.8	3.1
MW-3	620	720	13	24	0.8	1.0
MW-4	535	720	33	50	45.3	72.0

Since MW-4 is downgradient of the WWTF's sludge drying beds and upgradient from the El Portal Landfill, the Discharger's historic sludge handling operations and use of disinfected effluent to irrigate plants near the sludge beds may have caused or contributed to cause degradation with chloroform and nitrate. However, due to the reversal of groundwater flow direction under conditions of high river flow, it is possible that waste constituents in groundwater passing through MW-4 originate from landfill leachate or other sources of waste constituents (e.g., abandoned septic tank and leachfields, former biosolids and incinerator ash stockpiles). These sources and the variable direction of groundwater flow make it difficult to determine background conditions.

Nonetheless, the Discharger has implemented and proposes to implement measures to affect BPTC with respect to WWTF discharges. As described above, the Discharger has switched from chlorine disinfection to UV disinfection. The Discharger has also ceased irrigation with effluent. These measures eliminate the WWTF effluent as a source of nitrate and chloroform or other trihalomethanes in groundwater near the sludge drying beds. The Discharger also proposes to reseal its lined sludge drying beds, which will eliminate them as a potential source of nitrate in underlying groundwater. This Order includes a compliance schedule to ensure the beds are resealed.

3. The percolation ponds to which effluent is discharged are separated from the Merced River only by a road constructed on a base of large cobbles and sand. As described above, effluent discharged to the percolation ponds flows through sand and gravel and emerges as river flow.

4. The discharge as proposed represents BPTC and eliminates WWTF discharges as potential contributors to groundwater degradation. Given this, groundwater limitations are unnecessary.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

A. Influent Monitoring

Influent monitoring is required to collect data on the characteristics of the wastewater and to assess compliance with effluent limitations (*e.g.*, BOD and TSS reduction requirements).

B. Effluent Monitoring

Pursuant to the requirements of 40 CFR 122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to assess the impacts of the discharge on the receiving waters. To assess compliance with effluent limitations, this Order requires effluent monitoring for those constituents with limitations.

C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity.** Quarterly 96-hour bioassay testing is required to demonstrate compliance with the effluent limitation for acute toxicity.

2. **Chronic Toxicity.** Quarterly chronic whole effluent toxicity testing is required for one year in order to demonstrate compliance with the Basin Plan's narrative toxicity objective. If no toxicity is present, toxicity monitoring may be reduced to once a year.

D. Receiving Water Monitoring

1. Surface Water

Receiving water monitoring is necessary to assess compliance with receiving water limitations and to assess the impacts of the discharge on the receiving stream.

2. Groundwater

As described above, the Discharger has implemented or is required by this Order to implement measures to eliminate WWTF discharges that potentially adversely impact groundwater. This notwithstanding, identified groundwater impacts near the WWTF sludge beds will continue to be monitored under a separate monitoring and reporting

program. If further investigation is determined to be necessary, it will be addressed through Regional Water Board action separate from this Order.

E. Other Monitoring Requirements

1. Biosolids Monitoring

Biosolids monitoring is required to ensure compliance with the biosolids disposal requirements (Special Provisions VI.C.5.b. and c.). Biosolids disposal requirements are imposed pursuant to 40 CFR Part 503 to protect public health and prevent groundwater degradation.

2. Water Supply Monitoring

Water supply monitoring is required to evaluate the source of constituents in the wastewater.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

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

Section 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with section 123.25, this Order omits federal conditions that address enforcement authority specified in sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Reopener Provisions

a. **Whole Effluent Toxicity.** This Order requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity through a Toxicity Reduction Evaluation (TRE). This Order may be reopened to include a numeric chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric chronic toxicity water quality objective is adopted by the State Water Board, this

Order may be reopened to include a numeric chronic toxicity limitation based on that objective.

b. **Water Effects Ratio (WER) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for copper. If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

2. Special Studies and Additional Monitoring Requirements

a. **Chronic Whole Effluent Toxicity Requirements.** The Basin Plan contains a narrative toxicity objective that states, "All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life." (Basin Plan at III-8.00.) Adequate WET data is not available to determine if the discharge has reasonable potential to cause or contribute to an in-stream excursion above of the Basin Plan's narrative toxicity objective. Attachment E of this Order requires annual chronic WET monitoring for demonstration of compliance with the narrative toxicity objective.

In addition to WET monitoring, this provision requires the Discharger to submit to the Regional Water Board an Initial Investigative TRE Work Plan for approval by the Executive Officer, to ensure the Discharger has a plan to immediately move forward with the initial tiers of a TRE, in the event effluent toxicity is encountered in the future. The provision also includes a numeric toxicity monitoring trigger and requirements for accelerated monitoring, as well as, requirements for TRE initiation if a pattern of toxicity is demonstrated.

Monitoring Trigger. A numeric toxicity monitoring trigger of > 4 TUc (where TUc = 100/NOEC) is applied in the provision, based on available receiving water dilution. Therefore, a TRE is triggered when the effluent exhibits a pattern of toxicity at 25% effluent.

Accelerated Monitoring. The provision requires accelerated WET testing when a regular WET test result exceeds the monitoring trigger. The purpose of accelerated monitoring is to determine, in an expedient manner, whether there is a pattern of toxicity before requiring the implementation of a TRE. Due to possible seasonality of the toxicity, the accelerated monitoring should be performed in a timely manner, preferably taking no more than 2 to 3 months to complete.

The provision requires accelerated monitoring consisting of four chronic toxicity tests in a six week period (i.e. one test every two weeks) using the species that exhibited toxicity. Guidance regarding accelerated monitoring and TRE initiation is provided in the *Technical Support Document for Water Quality-based Toxics*

Control, EPA/505/2-90-001, March 1991 (TSD). The TSD at page 118 states, "EPA recommends if toxicity is repeatedly or periodically present at levels above effluent limits more than 20 percent of the time, a TRE should be required." Therefore, four accelerated monitoring tests are required in this provision. If no toxicity is demonstrated in the four accelerated tests, then it demonstrates that toxicity is not present at levels above the monitoring trigger more than 20 percent of the time (only 1 of 5 tests are toxic, including the initial test). However, notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of effluent toxicity (i.e. toxicity present exceeding the monitoring trigger more than 20 percent of the time), the Executive Officer may require that the Discharger initiate a TRE.

See the WET Accelerated Monitoring Flow Chart (Figure F-1), below, for further clarification of the accelerated monitoring requirements and for the decision points for determining the need for TRE initiation.

TRE Guidance. The Discharger is required to prepare a TRE Work Plan in accordance with USEPA guidance. Numerous guidance documents are available, as identified below:

- *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants,* (EPA/833B-99/002), August 1999.

- Generalized Methodology for Conducting Industrial TREs*, (EPA/600/2-88/070), April 1989.*

- *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures,* Second Edition, EPA 600/6-91/005F, February 1991.

- *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I*, EPA 600/6-91/005F, May 1992.

- *Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting acute and Chronic Toxicity,* Second Edition, EPA 600/R-92/080, September 1993.

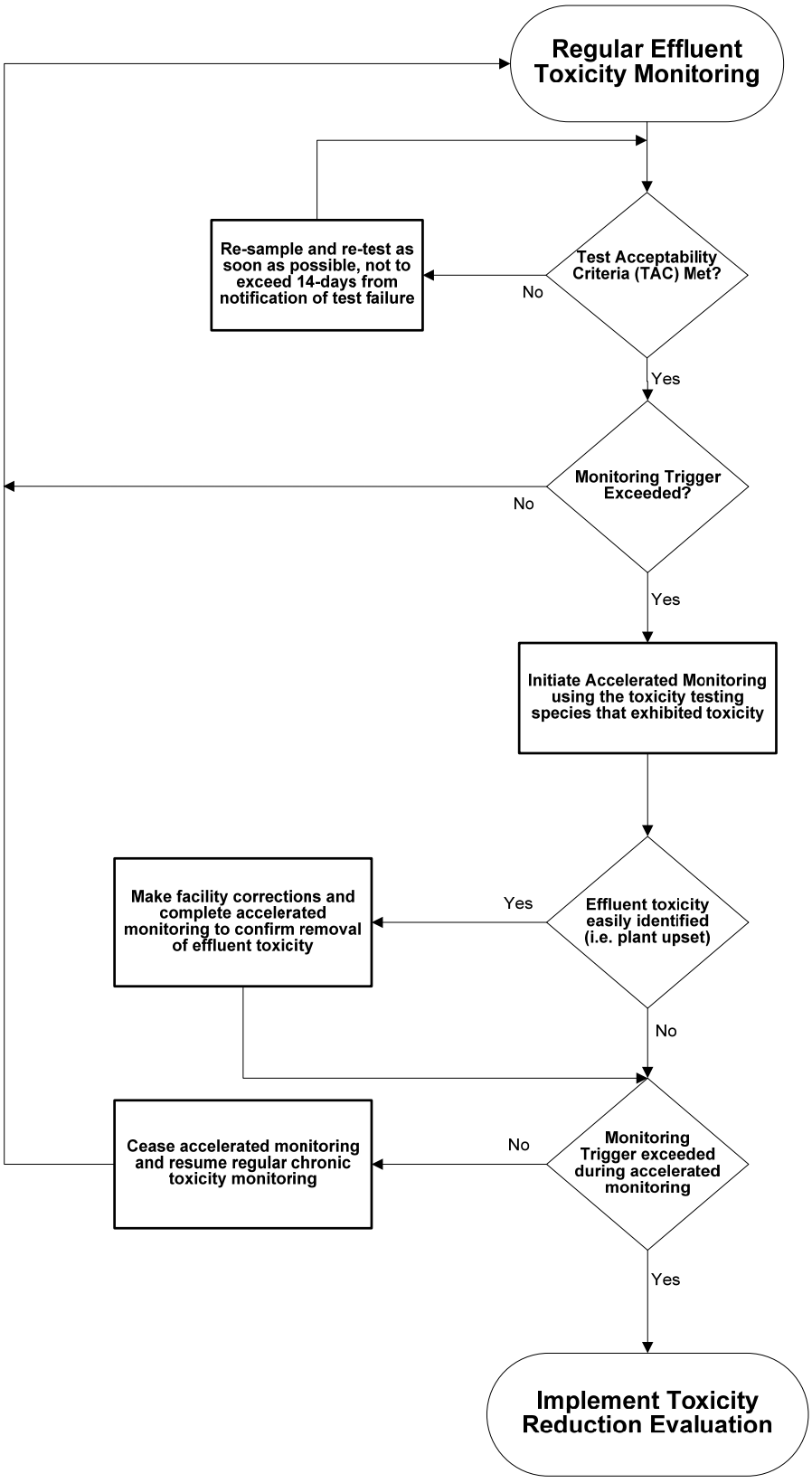
- *Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity*, Second Edition, EPA 600/R-92/081, September 1993.

- *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, EPA-821-R-02-012, October 2002.

- *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, EPA-821-R-02-013, October 2002.

- *Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001, March 1991*

Figure F-1
WET Accelerated Monitoring Flow Chart



3. Best Management Practices and Pollution Prevention

Pollution Minimization Program A PMP is required in this Order, per CWC 13263.3, to reduce all potential sources of a priority pollutant through pollutant minimization strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation.

4. Construction, Operation, and Maintenance Specifications

Provisions in the Order contain:

a. a specification particular to the use of ponds that is essentially standard practice as to preventing mosquitoes.

b. a requirement for disinfected tertiary treatment for reasons explained elsewhere in this Fact Sheet.

c. a requirement to monitor dissolved oxygen in ponds and maintain at least 1.0 mg/L to manage odors, and to ensure odors that originate at the Facility do not migrate off-site in objectionable concentrations.

d. a requirement for 100-year flood protection.

e. a requirement to control public access to the Facility.

f. clarification that clean water from any source allowed into the system cannot compromise compliance with the Order.

g. a general requirement that the Facility complies with accepted design standards and operate in accordance with an up-to-date Operations and Maintenance Manual.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. **Sanitary Sewer Systems**

The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ (General Order) on May 2, 2006. The General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions. The Discharger enrolled as required and must comply with both the General Order and this Order.

The Discharger's collection system is part of the wastewater collection, treatment, and disposal system. Pursuant to federal regulations, the Discharger must properly operate and maintain its collection system [40 CFR 122.41(e)], report any non-compliance [40 CFR 122.41(l)(6) and (7)], and mitigate any discharge from the collection system in violation of this Order [40 CFR section 122.41(d)].

The General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating SSOs. Matters concerning the collection system will be regulated under the General Order.

6. Other Special Provisions

Special provisions included in this Order include:

a. a requirement for notification of transfer of control and provision that transfer is subject to approval of Executive Officer,

b. clarification that clean water from any source cannot with the Order or, as per the Basin Plan, be used for dilution to comply with the Order,

c. a requirement to pay annual fees.

7. Compliance Schedules

The use and location of compliances schedules in the permit depends on the Discharger's ability to comply and the source of the applied water quality criteria.

a. The Discharger submitted a request, and justification dated 12 March 2008, and a revised justification dated 7 April 2008, for a compliance schedule for copper. A compliance schedule is appropriate, because the Discharger must conduct studies and may need to upgrade the WWTF to comply. The compliance schedule justification included all items specified in Paragraph 3, items (a) through (d), of Section 2.1 of the SIP. This Order establishes a compliance schedule for the new, final, water quality-based effluent limitation for copper and requires full compliance by 18 May 2010. This Order requires submittal of annual progress reports. These reports serve as interim requirements that will allow the Regional Water Board to evaluate the Discharger's progress towards compliance.

The revised compliance schedule justification states that the Discharger intends to conduct both mixing zone and water effect ratio studies for copper. Concurrently, the Discharger will conduct engineering feasibility and alternatives screening studies. Completion of these activities will take approximately two years or until April 2010. Should construction of additional WWTF upgrades be required, the compliance schedule justification indicates it would take the Discharger approximately three years to complete the bid, pre-design, design, and construction activities, or until April 2013. Given that this extends beyond the 18 May 2010 compliance date in this Order, the Discharger requests that the Regional Water Board adopt a time schedule order to provide additional time to

comply with the final copper limit. The schedule provided by the Discharger is reasonable and consideration of a time schedule Order subsequent to the adoption of this Order is appropriate.

b. The Discharger was required by the previous Order to complete a BPTC analysis to determine if the sludge beds may be causing or contributing to groundwater degradation and pollution for nitrate and trihalomethanes. The Discharger tested its sludge beds to determine if they leak and are a potential source of nitrate and trihalomethane pollution. Test results were inconclusive. The Discharger has proposed to reseal the joints in the sludge drying beds and to slip-line the collection pipeline to the beds to eliminate the sludge beds as a potential source of nitrate and trihalomethanes. The Order establishes a compliance schedule for completion of this work. A compliance schedule is appropriate as the Discharger must bid and construct modifications to the sludge drying beds. This Order requires submittal of semi-annual progress reports. These reports will allow the Regional Water Board to evaluate the Discharger's progress towards compliance.

VIII. PUBLIC PARTICIPATION

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

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the Mariposa Gazette on 6 March 2008.

B. Written Comments

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

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by noon on **7 April 2008**.

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: 24/25 April 2008
Time: 8:30 am
Location: Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Dr., Suite #200
Rancho Cordova, CA 95670

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

Please be aware that dates and venues may change. Our Web address is http://www.waterboards.ca.gov/rwqcb5/ where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

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

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

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (559) 445-5116.

F. Register of Interested Persons

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

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Debra Bates at (559) 445-6281.

ATTACHMENT G – REASONABLE POTENTIAL ANALYSIS SUMMARY

	Min Effluent Hardness (mg/L)	140
	Min Eff pH (s.u.)	6.7
	Max Eff pH (s.u.)	8.5
	Max Temp (*C)	26
	Effluent Flow (mgd)	1
	R1 Flow (7Q10 (mgd))	7.6
	R1 Flow (harmonic mean(mgd))	48.3

CTR #	Parameter	Units	n	MEC	WQO	Source	RP
6	Copper	ug/L	28	19.7	**12.44**	CTR CCC	Y
					19.22	CTR CMC	
					200	Water Quality for Agriculture	
					1300	CTR HH and California Primary MCL	
					1000	California Secondary MCL	
13	Zinc	ug/L	28	220	**159.34**	CTR CCC/CMC	N[1]
					2000	Water Quality for Agriculture	
					2100	USEPA IRIS	
					5000	California Secondary MCL	
20	Bromoform	ug/L	22	1.00	4.30	CTR HH	N[2]
					80	California Primary MCL	
					100	USEPA Primary MCL	
23	Dibromochloromethane	ug/L	22	1.00	**0.40**	CTR HH	N[2]
					80	USEPA Primary MCL	
					100	California Primary MCL	
26	Chloroform	ug/L	28	79	**80**	USEPA Primary MCL	N[2]
					100	California Primary MCL	
					1240	USEPA National Ambient WQ Criteria	
27	Bromodichloromethane	ug/L	33	9.5	**0.56**	CTR HH	N[2]
					80	USEPA Primary MCL	
					100	California Primary MCL	
	Aluminum	ug/L	18	190	**87**	USEPA Nat. Recommended Criteria CCC	N[3]
					750	USEPA Nat. Recommended Criteria CMC	
					200	California Secondary MCL	
					600	California Public Health Goal	
					1000	California Primary MCL	
					5000	Water Quality for Agriculture	
	Ammonia	mg/L	92	4.00	**1.39**	USEPA Nat. Recommended Criteria CCC	N[4]
					5.45	USEPA Nat. Recommended Criteria CMC	
					1.50	Odor Threshold	

	Chloride	mg/L	16	44	**175**	Basin Plan	N
					106	Water Quality for Agriculture	
					230	USEPA Nat. Recommended Criteria CCC	
					860	USEPA Nat. Recommended Criteria CMC	
					250	California Secondary MCL	
	Conductivity	umho/cm	934	1337	**1000**	Basin Plan	N[4]
					700	Water Quality for Agriculture	
	Sulfate	mg/L	16	71	**250-500**	California Secondary MCL	N
					500	USEPA Drinking Water Advisory	
	Total Dissolved Solids	mg/L	16	460	**450**	Water Quality for Agriculture	N[4]
					500	California Secondary MCL	
	Nitrate	mg/L	36	67.00	10.00	California Primary MCL	N[4]

1 MEC is outlier.
2 No THMs detected since implementation of UV
3 No receiving water data; not enough information to determine RP
4 No RP with dilution