CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

CENTRAL VALLEY REGION

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ORDER NO. R5-2007-XXXX
NPDES NO. CA0078174

WASTE DISCHARGE REQUIREMENTS FOR THE CALMAT CO., WALTER A. AND ELIZABETH A. BAUN, AND DARRELL B AND JANET DELEVAN SANGER SAND AND GRAVEL PLANT FRESNO COUNTY

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

Table 1. Discharger Information

Discharger	CalMat Co., Walter A. and Elizabeth A. Baun, and Darrell B. and Janet Delevan
Name of Facility	Sanger Sand and Gravel Plant
Facility Address	17041 E Kings Canyon Road
	Sanger, CA 93657
	Fresno County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	

The discharge by the CalMat Co., Walter A. and Elizabeth A. Baun, and Darrell D. and Janet Delevan 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
001	Process and Excavation Area water	36º, 43’, 26”, N	119º, 29’, 14” W	Kings River

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**<Adoption Date>**
This Order shall become effective on:	**<50 Days following adoption >**
This Order shall expire on:	**<Expiration Date>**
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:	**<u>180 days prior to the Order expiration date</u>**

IT IS HEREBY ORDERED, that Order No. 5-00-007 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code 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 the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **<<Adoption Date>>**.

_____

PAMELA C. CREEDON, Executive Officer

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I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	CalMat Co., and Walter A. and Elizabeth A. Baun, and Darrell D. and Delevan
Name of Facility	Sanger Sand and Gravel Plant
Facility Address	17041 E Kings Canyon Road
	Sanger, CA 93657
	Fresno County
Facility Contact, Title, and Phone	Frank Costa, General Facility Manager, (559) 434-1202
Mailing Address	11599 N Friant Road Fresno, CA 93720
Type of Facility	Sand and gravel excavation and processing facility
Facility Design Flow	2.9 (in million gallons per day)

II. FINDINGS

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

A. Background. The CalMat Co., a Delaware corporation, operates a Sanger Sand and Gravel Plant (hereinafter Facility) near Sanger. In January 1999, the Vulcan Material Company, a New Jersey corporation, became the sole owner of the stock of the Calmat Co. Subsequently, the Calmat Co. registered the name Vulcan Material Company, Western Division, which CalMat Co. uses in its business activities. In addition to the CalMat Co., Walter A. and Elizabeth A. Baun, and Darrell D. and Janet Delevan own most of the land on which the Facility is situated and are collectively referred to herein as CalMat Co., et al. or Discharger. The Discharger is currently discharging pursuant to Waste Discharge Requirements (WDRs) Order No. 5-00-007 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0078174. The Discharger submitted a Report of Waste Discharge (RWD) dated 28 July 2004 and applied for a NPDES permit renewal to discharge up to 2.9 million gallons per day (mgd) of process wastewater and excavation area dewatering water from the Facility. The application was deemed complete on 27 August 2004.

B. Facility Description. The CalMat Co. operates the sand and gravel (aggregate) excavation and processing Facility. Process wastewater is discharged to a settling pond and then to a supply pond for reuse in processing. Impounded wastewater discharges through a porous supply pond levee at Discharge Point 001 (see table on cover page) to the Kings River, a water of the United States within the South Valley Floor Hydrologic Unit (No. 551.70). Attachment B provides topographic and site detail maps of the area and 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 (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 Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4, Division 7, of the Water Code (commencing with section 13260).

D. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. 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 are also incorporated into this Order.

E. California Environmental Quality Act (CEQA).

a. The Facility, as described in this Order is considered an existing facility pursuant to Title 14, California Code of Regulations (CCR) section 15301 and therefore exempt from the California Environmental Quality Act (CEQA).

b. 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 40 California Code of Federal Regulations (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 Effluent Limitations Guidelines and Standards for the Mineral Mining and Processing Point Source Category, Construction Sand and Gravel Subcategory in 40 CFR Part 436 and Best Professional Judgment (BPJ) in accordance with 40 CFR 125.3. A detailed discussion of the TBELs 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.

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, Second Edition, for the Tulare Lake Basin* (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. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to the Kings River and groundwater are as follows:

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	• Kings River - Friant-Kern to Peoples Weir	Existing (surface water): Municipal and domestic water supply (MUN), agricultural supply (AGR), industrial process supply (PRO), water contact recreation (REC-1) and non-contact water recreation (REC-2), warm freshwater habitat (WARM), wildlife habitat (WILD), and groundwater recharge (GWR).
	• Groundwater	Existing (groundwater): Municipal and domestic supply (MUN); agricultural supply (AGR); industrial service supply (IND).

Requirements of this Order implement the Basin Plan.

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 February 24, 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 includes a provision that authorizes the use of compliance schedules in NPDES permits provided that the schedule does not allow more than ten years (from the adoption of the objective of criteria) for compliance (See Basin Plan at page IV-22). 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 Water Code section 13300 or a Cease and Desist Order pursuant to Water Code 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.

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 total suspended solids (TSS) and pH. The water quality-based effluent limitations consist of restrictions on aluminum, manganese and electrical conductivity (EC). This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. 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. Anti-degradation 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. The previous permit contained some effluent limitations for a discharge that no longer exists, and therefore not included in this Order. As discussed in detail in the Fact Sheet, Attachment F, elimination of the non-applicable effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

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

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. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).

R. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections IV.B, IV.C, V.B, and VI.C. 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 WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet (Attachment F) 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 (Attachment F) of this Order.

III. DISCHARGE PROHIBITIONS

A. Discharge of pollutants or wastewater at a location or in a manner different from that described in the Findings and the Fact Sheet (Attachment F) 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. Neither the discharge nor its treatment shall create a nuisance as defined in section 13050 of the Water Code.

D. Discharge of waste classified as “hazardous,” as defined in section 2521(a) of Title 23, California Code of Regulations (CCR), section 2510 et seq., or “designated,” as defined in section 13173 of the Water Code, is prohibited.

E. Discharges of waste from onsite and offsite ready-mix concrete operations are prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations – Discharge Point 001

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

Table 6. Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	30-day Median	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	mgd[1]	2.9	--	--	--	--
TSS	mg/L	--	20	30	--	--
	lbs/day	--	480	730	--	--
pH	standard unit	--	--	--	6.0	9.0
Electrical Conductivity	µmhos/cm	250	--	--	--	--
Aluminum, Acid Soluble	µg/L	70	--	140	--	--
	lbs/day	1.7	--	3.5	--	--

[1] Million gallons per day

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

i. 70%, minimum for any one bioassay; and

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

c. **Manganese.** Concentrations of manganese in the discharge shall not exceed the natural background quality of the receiving water (Kings River), or 0.05 mg/l, whichever is greater.

2. **Interim Effluent Limitations** – During the period beginning **<Permit Effective Date>** and ending on **<Five years from the adoption of the Order>**, the Discharger shall maintain compliance with the following limitations at Discharge Point 001, with compliance measured at Monitoring Location M-001 as described in the attached MRP. This interim effluent limit shall apply in lieu of the corresponding final effluent limit specified for the same parameter during this time period.

Table 7. Interim Effluent Limitations

Parameter	Units	Effluent Limitations		
		Average Monthly	30-day Median	Maximum Daily
Aluminum, Acid Soluble	µg/L	--	--	373
	lbs/day	--	--	9.0

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 Kings River:

1. **Un-ionized Ammonia**. Un-ionized ammonia to be present in amounts that adversely affect beneficial uses nor to be present in excess of 0.025 mg/L (as N).

2. **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 200/100 mL, nor more than ten percent of the total number of samples taken during any 30-day period to exceed 400/100 mL.

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

4. **Chemical constituents:**
   a. Chemical constituents in concentrations that adversely affect beneficial uses.
   b. Chemical constituents to exceed the MCLs specified in the following provisions of Title 22 of the CCR: Tables 64431-A (Inorganic Chemicals) and 64431-B (Fluoride) of section 64431, Table 64444-A (Organic Chemicals) of section 64444, and Tables 64449-A (Secondary MCLs-Consumer Acceptance Limits) and 64449-B (Secondary Maximum Contaminants-Ranges) of section 64449.
   c. Lead in excess of 0.015 mg/L.

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

6. **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 at centroid of flow;

b. The 95 percentile dissolved oxygen concentration to fall below 75 percent of saturation; nor
c. The dissolved oxygen concentration to be reduced below 5.0 mg/L at any time.

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

8. **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.

9. **pH.** The ambient pH to be depressed below 6.5, raised above 8.3, or changed by more than 0.3 units. A one-month averaging period may be applied when calculating the pH change of 0.3 units.

10. **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; and
    c. Pesticides to be present in concentration in excess of the maximum contaminant levels set forth in Title 22 CCR, Division 4, Chapter 15 specified in Table 64444-A (Organic Chemicals) section 64444.

11. **Radioactivity:**
    a. Radionuclides to be present in concentrations that are harmful/deleterious 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 Title 22 CCR section 64443.

12. **Salinity.** Electrical conductivity @ 25 ºC to exceed 200 µmhos/cm.

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

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

15. **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.

16. **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/or to domestic or municipal water supplies.

17. **Temperature.** The natural receiving water temperature to increase more than 5°F.

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

19. **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

Release of waste constituents from any storage, treatment, or disposal component associated with the Facility wastewater operations shall not cause underlying groundwater to contain waste constituents in concentrations greater than natural background water quality.

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 CWA, 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), 04(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, 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 Regional Water Board not approve the existing safeguards, the Discharger shall, within ninety days of having been advised in writing by Regional Water Board that the existing safeguards are inadequate, provide to 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 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.m.

The technical report shall:

i. Identify the possible sources of spills, leaks, untreated waste bypass, 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, which 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. The Discharger shall file with the Regional Water Board a RWD at least 180 days before making any material change in the character, location, or volume of the discharge. A material change includes, but is not limited to, the following:

i. Adding a major industrial waste discharge to a discharge of essentially domestic sewage, or adding a new process or product by an industrial facility resulting in a change in the character of the waste.

ii. Significantly changing the disposal method or location, such as changing the disposal to another drainage area or water body.

iii. Significantly changing the method of treatment.

iv. Increasing the discharge flow beyond that specified in the Order.

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 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 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 Water Code, including, but not limited to, sections 13385, 13386, and 13387.

u. 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. (Water Code 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) 445-5116 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 122.41(l)(6)(i)].

B. Monitoring and Reporting Program (MRP) Requirements

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

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. Conditions that necessitate a major modification of a permit 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. **Pollution Prevention.** This Order requires the Discharger prepare a pollution prevention plan pursuant to Water Code section 13263.3(d)(3) for aluminum. Based on a review of the pollution prevention plan, this Order may be reopened for addition and/or modification of effluent limitations and requirements for this constituent.

d. **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.

e. **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. 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.

f. **Constituent Study.** If after review of the study results it is determined that the discharge has reasonable potential to cause or contribute to an exceedance of a water quality objective this Order may be reopened and effluent limitations added for the subject 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 also procedures for accelerated chronic toxicity monitoring and TRE initiation.

i. **Initial Investigative Toxicity Reduction Evaluation (TRE) Work Plan. Within 90 days of the effective date of this Order,** 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 > **1 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 three (3) monthly chronic toxicity tests using the species that exhibited toxicity. The following protocol shall be used for accelerated monitoring and TRE initiation:

a) If the results of three (3) 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 facility upset), the Discharger shall make necessary corrections to the facility and shall continue accelerated monitoring until three (3) 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 monitoring toxicity test exceeds the monitoring trigger, the Discharger shall cease accelerated monitoring and begin 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

b. **Discharge Point and Receiving Water Monitoring Evaluation**. Within **365 days** following adoption of this Order, the Discharger shall submit a technical report that includes the following:

i. An evaluation of the accuracy and precision of the flows reported as discharged from Discharge Point 001. If the flow cannot be accurately monitored, the report must propose a time schedule for the installation of a flow-metering device (or other acceptable method) to accurately monitor flow at Discharge Point 001.

ii. An evaluation of the effectiveness of Discharge Point 001 to provide adequate mixing of the discharge with the Kings River at the point of discharge. The report must include an evaluation of the effluent and receiving water-monitoring data to determine if the existing receiving water sampling location is representative of a complete mixing of the effluent from Discharge Point 001 with the Kings River. If complete mixing is not occurring at Discharge Point 001 or prior to sampling of the receiving water, the report shall propose modifications and time schedule to change and/or alter the method (e.g., directly piped, diffuser, etc.) of discharge to the Kings River at Discharge Point 001 and/or the receiving water sampling location, if appropriate.

c. **Constituent Study**. According to Section 1.2 of the SIP, the Discharger must report data for all the priority pollutants listed in the CTR. The data are used to determine reasonable potential for these constituents to cause or contribute to an exceedance of applicable water quality criteria and to calculate effluent limitations. On 27 February 2001 the Discharger was directed to conduct a receiving water and effluent monitoring study in accordance with the SIP. The Discharger has sampled the effluent and receiving water for most priority pollutants, but has not sampled for asbestos. The Discharger shall comply with the following time schedule in conducting a study of asbestos' potential effect on surface water quality:

Task	Description	Compliance Date
i.	Submit work plan and time schedule to sample the effluent and receiving water two times.	**60 days of following adoption of Order.**
ii.	Begin Study	**30 days following approval of Task i.**
iii.	Complete Study	**By date in approved time schedule.**
iv.	Submit Study Report	**15 days following completion of Task iii.**

d. **Manganese Background Study.** To determine compliance with the manganese effluent and receiving water limits, the Discharger shall submit within 365 days of the adoption of the Order, a work plan with time schedule to characterize natural surface water quality in the Kings River for manganese. The work plan must describe the different sources of manganese in the Kings River, and if these

concentrations are naturally occurring or from anthropogenic sources. This Order may be reopened and additional manganese limitations added.

e. **Groundwater Monitoring.** To determine compliance with Groundwater Limitation V.B or to otherwise ensure consistency with the Basin Plan, the Discharger shall submit a groundwater monitoring installation work plan that satisfies Attachment G, Standard Monitoring Well Provisions for Waste Discharge Requirements. The monitoring well network shall include one or more background monitoring wells and sufficient number of designated monitoring wells to evaluate the extent to which, if any, the settling and storage ponds may or do release waste constituents to groundwater. The work plan may also propose, as appropriate, the use of existing monitoring wells near or at the Facility. All wells shall comply with appropriate standards as described in California Well Standards Bulletin 74-90 (June 1991) and Water Well Standards: State of California Bulletin 94 81 (December 1981), and any more stringent standards adopted by the City or County pursuant to Water Code section 13801.

The Discharger shall install approved monitoring wells and commence groundwater monitoring in accordance with this Order's Monitoring and Reporting Program (MRP). After the first sampling event, the Discharger shall report on its sampling protocol as specified in this Order's MRP. After completion of Task d outlined below, the Discharger shall characterize background quality of monitored constituents in a technical report. For each groundwater monitoring parameter/constituent identified in the Monitoring and Reporting Program, the report shall present a summary of monitoring data, calculation of the concentration in background monitoring wells, and a comparison of natural background groundwater quality to that in wells used to monitor the Facility. Determination of natural background quality shall be made using the methods described in Title 27 CCR section 20415(e)(10), and shall be based on data from at least eight consecutive quarterly groundwater monitoring events. For each monitoring parameter/constituent, the report shall compare measured concentrations for compliance monitoring wells with the calculated background concentration. The Discharger shall comply with the following compliance schedule in implementing the work required by this Special Provision:

	Task	**Compliance Date**
a.	Submit technical report: implementation schedule and monitoring well installation work plan.	**<60 days following adoption of this Order>**
b.	Implement monitoring well installation work plan.	**90 days following completion of Task a. and approval of the Executive Officer.**
c.	Complete monitoring well installation and commence groundwater monitoring.	**In accordance with the approved implementation schedule.**
d.	Submit technical report: monitoring well installation report of results.	**In accordance with the approved implementation schedule.**

	Task	Compliance Date
e.	Report on sampling procedures as described in the MRP.	**1st day of the second month following the first sampling event.**
f.	Submit technical report: background quality.	**2 years following completion of Task d.**

Technical reports submitted pursuant to this Provision are subject to the requirements of Provision VI.A.m and are subject to Executive Officer approval.

If the monitoring shows that any measured waste constituent concentration exceeds natural background water quality, the technical report shall evaluate the cause of the exceedance and evaluate the degradation for consistency with Resolution 68-16 and make appropriate recommendations. In no case shall the discharge be allowed to cause exceedance of Basin Plan water quality objectives. This Order may be reopened thereafter to ensure consistency with Resolution 68-16, including the addition of numeric groundwater limitations.

3. Best Management Practices and Pollution Prevention

See section VI.C.7.a

4. Construction, Operation and Maintenance Specifications

1. Ponds shall be managed to prevent breeding of mosquitoes. In particular,

   a. An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.

   b. Weeds shall be minimized.

   c. Dead algae, vegetation, and debris shall not accumulate on the water surface.

5. Special Provisions for Municipal Facilities (POTWs Only) - Not Applicable

6. Other Special Provisions

a. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition or limitation contained in this Order, the Discharger shall notify the Regional Water Board by telephone (559) 445-5116 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 Federal Standard Provision V.E.1.

b. 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 this office.

c. To assume operation under this Order, the succeeding owner or operator must apply in writing to the Regional Water Board 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 paragraph of Standard Provision V.B, Attachment D, 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 Water Code. Transfer shall be approved or disapproved in writing by the Regional Water Board Executive Officer.

7. Compliance Schedules

a. **Corrective Action Plan/Implementation Schedule.** The Discharger shall submit to the Regional Water Board a corrective action plan and implementation schedule to assure compliance with the final effluent limitations for aluminum by **<Five years following the adoption of the Order>**.

Task	Description	Compliance Date
i.	Submit Method of Compliance Work Plan and Time Schedule[1]	**30 days following adoption of Order**
ii.	Submit a Pollution Prevention Plan (PPP)[2] pursuant to section 13263.3 of the Water Code for aluminum	**6 months of the adoption of the Order**
iii.	Begin to implement approved Method of Compliance Work plan pursuant to the Time Schedule.	**30 days following Executive Officer written approval of task i**
iv.	Submit written status report[3].	**3 months following completion of task iii**
v.	Full compliance with effluent limitations. Submit certification that the approved method is fully implemented.	**5 years of adoption of the Order.**

[1] The Method of Compliance Work Plan and Time Schedule shall include (a) an investigation of the source of aluminum in the discharge, an analysis of the methods that could be used to ensure compliance, proposed method(s) of compliance, and a proposed time schedule (not to exceed five years from the adoption of this Order) for implementing the proposed method(s) of compliance; and/or (b) a mixing zone/dilution study that proposes an alternative effluent limit with a mixing zone and demonstrates that the proposed mixing zone will not adversely impact beneficial uses. The study must identify the size of the mixing zone considering the applicable procedures in USEPA's *Water Quality Standards Handbook* and the *Technical Support Document for Water Quality Based Toxics Control* (TSD). The Method of Compliance Work Plan and Time Schedule is subject to Executive Officer approval and section VI.C.7.a requirements in this Order.

[2] The PPP shall meet the requirements specified in Water Code section 13263.3.

[3] The written status report shall detail what steps have been implemented towards achieving compliance with the Time Schedule and Effluent Limitations IV.A.1.a.

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.

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 Water Code 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).

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 means 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 means 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.

Natural Background Groundwater/Surface Water means the concentration or measure of constituents or indicator parameters in groundwater or surface water that have not been affected by waste constituents from the treatment or disposal system(s) being monitored or other anthropogenic sources.

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:

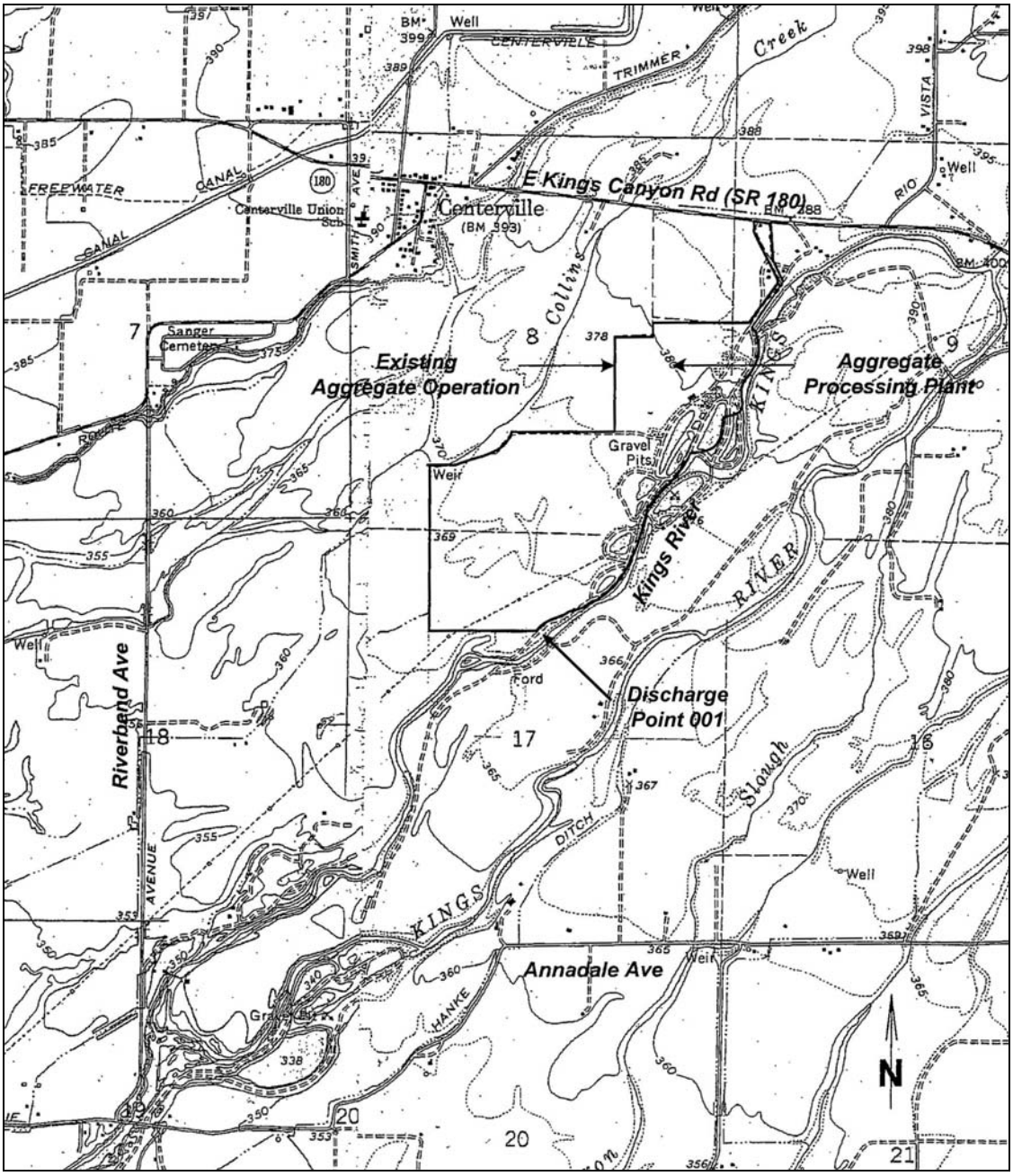
x is the observed value;

μ is the arithmetic mean of the observed values; and

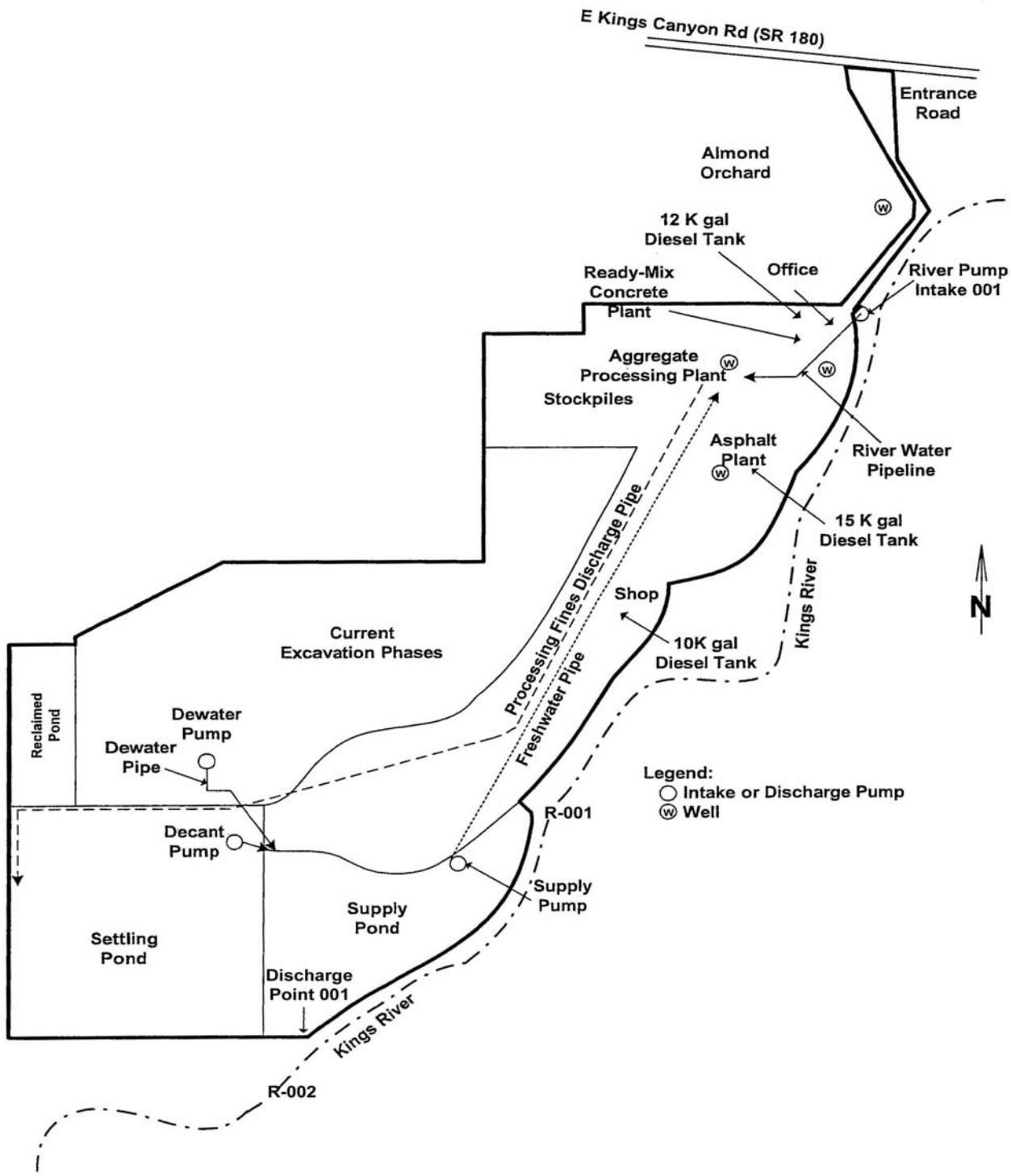
n is the number of samples.

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 – TOPOGRAPHIC MAP

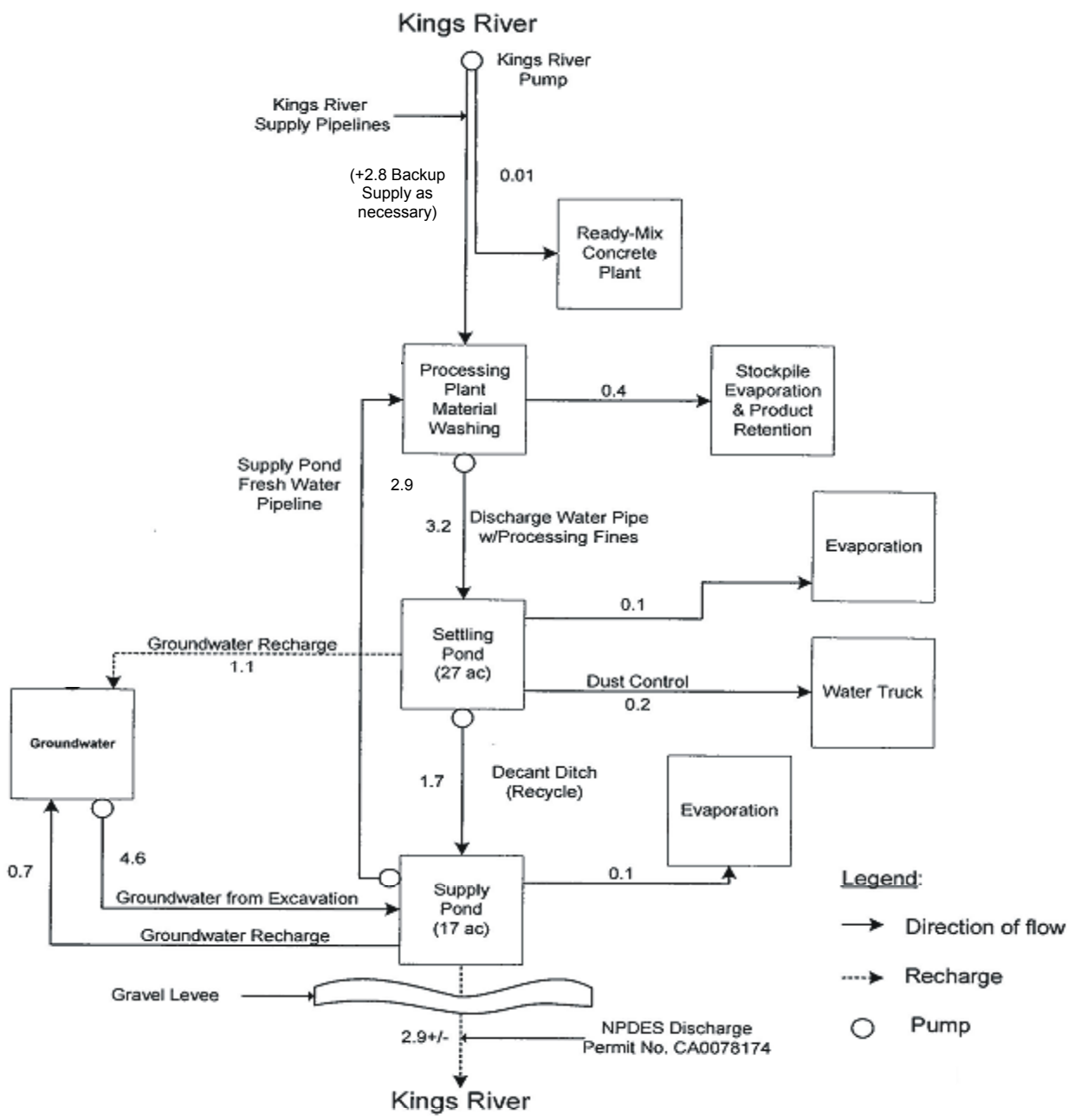


Drawing Reference:	SITE LOCATION MAP	
U.S.G.S TOPOGRAPHIC MAP 7.5 MINUTE QUADRANGLE *Not to scale*	CALMAT CO., et al. SANGER SAND AND GRAVEL PLANT FRESNO COUNTY	N W E S



Drawing Reference:	FACILITY DETAIL	
Report of Waste Discharge dated July 2004 prepared by Buada Associates *Not to scale*	CALMAT CO., et al. SANGER SAND AND GRAVEL PLANT FRESNO COUNTY	N W E S

ATTACHMENT C – FLOW SCHEMATIC



Drawing Reference:	FLOW SCHEMATIC	
Modified from Report of Waste Discharge dated July 2004 prepared by Buada Associates *Not to scale*	CALMAT CO., et al. SANGER SAND AND GRAVEL PLANT FRESNO COUNTY	

ATTACHMENT D – FEDERAL STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

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

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR 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 CFR 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 CFR 122.41(i); Water Code, section 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 CFR 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 CFR 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 CFR 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 CFR 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 CFR 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 CFR 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 CFR 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 CFR 122.41(m)(4)(i)):

    a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR 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 CFR 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 CFR 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 CFR 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 CFR 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 CFR 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 CFR 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 CFR 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 CFR 122.41(n)(3)):

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

   b. The permitted facility was, at the time, being properly operated (40 CFR 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 CFR 122.41(n)(3)(iii)); and

   d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 CFR 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 CFR 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 CFR 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 CFR 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 CFR 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 CFR 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 CFR 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 CFR 122.41(j)(2).)

B. Records of monitoring information shall include:

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

2. The individual(s) who performed the sampling or measurements (40 CFR 122.41(j)(3)(ii));

3. The date(s) analyses were performed (40 CFR 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 CFR 122.41(j)(3)(iv));

5. The analytical techniques or methods used (40 CFR 122.41(j)(3)(v)); and

6. The results of such analyses. (40 CFR 122.41(j)(3)(vi).)

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

1. The name and address of any permit applicant or Discharger (40 CFR 122.7(b)(1)); and

2. Permit applications and attachments, permits and effluent data. (40 CFR 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 CFR 122.41(h); Water Code section 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 CFR 122.41(k).)

2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 CFR 122.22(a)(1).)

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 CFR 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 CFR 122.22(b)(2)); and

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

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR 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 CFR 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 CFR 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 CFR 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 CFR 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 CFR 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 CFR 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 CFR 122.41(l)(6)(i).)

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

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

   b. Any upset that exceeds any effluent limitation in this Order. (40 CFR 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 CFR 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 CFR 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 CFR 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 subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 CFR 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 CFR 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 CFR 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 CFR 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 CFR 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. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe (40 CFR 122.42(a)):

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 CFR 122.42(a)(1)):

    a. 100 micrograms per liter (µg/L) (40 CFR 122.42(a)(1)(i));

b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 CFR 122.42(a)(1)(ii));

c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 CFR 122.42(a)(1)(iii)); or

d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 CFR 122.42(a)(1)(iv).)

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels" (40 CFR 122.42(a)(2)):

a. 500 micrograms per liter (µg/L) (40 CFR 122.42(a)(2)(i));

b. 1 milligram per liter (mg/L) for antimony (40 CFR 122.42(a)(2)(ii));

c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 CFR 122.42(a)(2)(iii)); or

c. The level established by the Regional Water Board in accordance with section 122.44(f). (40 CFR 122.42(a)(2)(iv).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Title 40 of the Code of Federal Regulations (CFR) 122.48 requires that all NPDES permits specify monitoring and reporting requirements. California Water Code sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and 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 State Department of Health Services. In the event a certified laboratory is not available to the Discharger, analyses performed by a noncertified 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 Health Services. 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
001	M-001	Inside the supply pond at the point of discharge through the levee and as close as possible to the levee. 36º, 43', 26" N Latitude, 119º, 29', 14" W Longitude, or an alternative approved location.
--	PND-001	Settling pond.
--	PND-002	Supply pond.
--	R-001	On the Kings River at least 100 feet upstream from the farthest point of the end of the supply pond levee or an alternative approved discharge point.
--	R-002	On the Kings River 300 feet downstream from the farthest point of the end of the supply pond levee or an alternative approved discharge point.
--	SPL-001	Kings River water pumped prior to use.
--	SPL-002	Groundwater pumped during excavation.
--	G-001	Groundwater wells constructed after the adoption of this order.

III. INFLUENT MONITORING REQUIREMENTS – NOT APPLICABLE

IV. DISCHARGE/EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location M-001

1. The Discharger shall monitor the process wastewater just inside the supply pond or other discharge point approved by the Executive Officer at M-001 as follows:

Table E-2. Discharge Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow[1]	mgd	Continuous	1/day	
pH	standard unit	Grab	1/week[2]	[3]
Electrical Conductivity at 25ºC (EC)	µmhos/cm	Grab	1/month[2]	[3]
Total Suspended Solids (TSS)	mg/L	Grab	1/month	[3]
Aluminum, Acid Soluble	µg/L	Grab	1/month	[3, 4]
Manganese, Total Recoverable	mg/L	Grab	1/month	[3]
Iron, Total Recoverable	mg/L	Grab	1/month	[3]
Total Petroleum Hydrocarbons as Diesel (TPH-d)	µg/L	Grab	1/month	[3]
Standard Minerals[5]	mg/L	Grab	1/year[2]	[3]
Priority Pollutants[6, 7]	µg/L	Grab	2/permit cycle[8]	[3]

Footnotes Next Page

Footnotes

[1] Until Special Provision VI.C.2.c is satisfied, monthly average discharge flow to the Kings River shall be estimated. The methodology, including calculations to estimate discharge flow shall be submitted in monthly monitoring reports.

[2] Concurrent with receiving surface water sampling.

[3] Samples shall be analyzed using the methods and procedures described in the 40 CFR 136. The Discharger shall use a Department of Health Services licensed laboratory capable of providing method detection limits and minimum levels sufficient to determine compliance with effluent limitations.

[4] Compliance can be demonstrated using either total, or acid-soluble (inductively coupled plasma/atomic emission spectrometry or inductively coupled plasma/mass spectrometry) analysis methods, as supported by USEPA's Ambient Water Quality Criteria for Aluminum document (EPA 440/5-86-008), or other standard methods that exclude aluminum silicate particles as approved by the Executive Officer.

[5] Standard minerals shall include the following: boron, calcium, chloride, iron, magnesium, potassium, sulfate, sodium, manganese, phosphorus, total alkalinity (including alkalinity series), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).

[6] For priority pollutant constituents with effluent limitations, detection limits shall be below the effluent limitations. If the lowest minimum level (ML) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP) is not below the effluent limitation, the detection limit shall be the lowest ML. For priority pollutant constituents without effluent limitations, the detection limits shall be equal to or less than the lowest ML published in Appendix 4 of the SIP.

[7] Concurrent with receiving surface water sampling.

[8] Must be sampled in June 2007 and June 2009.

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.

2. *Sample Types* – For static non-renewal and static renewal testing, the samples shall be grab samples 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 fathead minnows (*Pimephales promelas*).

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 annually, three species chronic toxicity testing.

2. *Sample Types* – Effluent samples shall be grab samples 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 RSW-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 fathead minnow, *Pimephales promelas* (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 100% effluent and two controls. If toxicity is found in any effluent test, the Discharger must immediately retest using the dilution series identified in Table E-3, below. The receiving water control shall be used as the diluent.

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. 2.a.iii.>)

Table E-3. Chronic Toxicity Testing Dilution Series

Sample	Dilutions (%)					Controls	
	100	75	50	25	12.5	Receiving Water	Laboratory Water
% Effluent	100	75	50	25	12.5	0	0
% Receiving Water	0	25	50	75	87.5	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.** 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 dates of sample collection and initiation of each toxicity test; and

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

   Additionally, the 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 one-time, accelerated, or TRE.

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.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECLAMATION MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE AND GROUNDWATER

A. Monitoring Locations R-001 and R-002

1. The Discharger shall monitor the Kings River at R-001 and R-002 as follows:

Table E-5. Receiving Surface Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
TSS	mg/L	Grab	1/month	[1]
pH	standard unit	Grab	1/week	[1]
Temperature	ºF	Grab	1/week	[1]
EC	µmhos/cm	Grab	1/month	[1]
Aluminum, Acid Soluble[2]	µg/L	Grab	1/month	[1]
Manganese, Total Recoverable	mg/L	Grab	1/month	[1]
TPH-d	µg/L	Grab	1/month	[1]
Dissolved Oxygen	mg/L	Grab	1/month	[1]
Turbidity	NTU	Grab	1/month	[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 Appendix 4 of the SIP; for a given pollutant where no methods are specified, use methods approved by this Regional Water Board or the State Water Board.

[2] Compliance can be demonstrated using either total, or acid-soluble (inductively coupled plasma/atomic emission spectrometry or inductively coupled plasma/mass spectrometry) analysis methods, as supported by USEPA's Ambient Water Quality Criteria for Aluminum document (EPA 440/5-86-008), or other standard methods that exclude aluminum silicate particles as approved by the Executive Officer.

2. In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by R-001 and R-002. Notes on receiving water conditions shall be summarized in the monitoring reports. Attention shall be given to the presence of:

   i. Floating or suspended matter
   ii. Discoloration
   iii. Bottom deposits
   iv. Aquatic life
   v. Visible films, sheens coatings
   vi. Fungi, slimes, or objectionable growths
   vii. Potential nuisance conditions

B. Monitoring Location G-001

1. Groundwater monitoring shall commence within 30 days after the installation of groundwater monitoring wells pursuant to Special Provision VI.C.2.e. Groundwater samples shall be collected from approved groundwater monitoring wells. Prior to collecting samples and after measuring the water level, the monitoring well shall be purged to remove water that has been standing within the well screen and casing that may not be chemically representative of formation water (e.g., until the temperature, specific conductivity, and pH have stabilized). Depending on the hydraulic conductivity of the geologic setting, the volume removed during purging is typically from 3 to 5 volumes of the standing water within the well casing and screen, or additionally the filter pack pore volume. Samples shall be collected using standard USEPA methods. As monitoring wells are installed, they will be automatically added to the monitoring and reporting program and shall be monitored as follows:

Table E-6. Receiving Groundwater Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Depth to Groundwater[1]	feet	Grab	1/Quarter	
Groundwater Elevation	feet	Grab	1/Quarter	
Gradient	feet/feet	calculated	1/Quarter	
Gradient Direction	--	calculated	1/Quarter	
Temperature	ºF	Grab	1/Quarter	
pH	standard unit	Grab	1/Quarter	
Electrical Conductivity at 25ºC	µmhos/cm	Grab	1/Quarter	
Total Dissolved Solids	mg/L	Grab	1/Quarter	[2]
Aluminum	µg/L	Grab	1/Quarter	[3]
Manganese	mg/L	Grab	1/Quarter	[3]
Chloride	mg/L	Grab	1/Quarter	
Boron	mg/L	Grab	1/Quarter	
Iron	µg/L	Grab	1/Quarter	[3]
Manganese	µg/L	Grab	1/Quarter	[3]
Arsenic	µg/L	Grab	1/Quarter	[3]
TPH-d	µg/L	Grab	1/Quarter	

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Footnotes

[1] Groundwater elevation shall be used to calculate the direction and gradient of groundwater flow. Elevations shall be measured to the nearest one-hundredth of a foot from mean sea level. The groundwater elevation shall be measured prior to purging the wells.

[2] TDS shall be determined using EPA Method No. 160.1 for combined organic and inorganic TDS and EPA Method No. 160.4 for inorganic TDS or equivalent analytical procedures specified in 40 CFR Part 136, and reported as TDS, VDS (volatile dissolved solids), and IDS (inorganic dissolved solids).

[3] Samples placed in an acid-preserved bottle must first be filtered through a 0.45 µm nominal pore size filter. If field filtering is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24 hours with a request (on the chain-of-custody form) to immediately filter then preserve the sample.

IX. OTHER MONITORING REQUIREMENTS

A. Pond Monitoring – Monitoring Location PND-001 and PND-002

1. The Discharger shall inspect the condition of the ponds once per week and write visual observations in a bound logbook. Notations shall include observations of whether weeds are developing in the water or along the bank, and their location; whether burrowing animals or insects are present; and the color of the ponds (*e.g.*, dark sparkling green, dull green, yellow, gray, tan, brown, *etc.*). A summary of the entries made in the log during each month shall be submitted along with the monitoring report the following month.

B. Monitoring Location SPL-001 and SPL-002

1. The Discharger shall monitor the Water Supply at SPL-001 and SPL-002 as follows. A sampling station shall be established where a representative sample of the groundwater and Kings River of each can be obtained. Water supply samples shall be collected at approximately the same time as effluent samples.

Table E-7. Water Supply Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Dissolved Solids	mg/L	Grab	1/year	[1]
Electrical Conductivity @ 25°C[2]	µmhos/cm	Grab	1/year	
Standard Minerals[3]	mg/L	Grab	1/year	[4]

[1] TDS shall be determined using EPA Method No. 160.1 for combined organic and inorganic TDS and EPA Method No. 160.4 for inorganic TDS or equivalent analytical procedures specified in 40 CFR Part 136, and reported as TDS, VDS (volatile dissolved solids), and IDS (inorganic dissolved solids).

[2] As the water supply is from more than one source, the EC shall be reported as a weighted average and include copies of supporting calculations.

[3] Standard minerals shall include the following: boron, calcium, chloride, iron, magnesium, potassium, sulfate, sodium, manganese, phosphorus, total alkalinity (including alkalinity series), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).

[4] Groundwater samples that are placed in an acid-preserved bottle must first be filtered through a 0.45 µm nominal pore size filter. If field filtering is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24 hours with a request (on the chain-of-custody form) to immediately filter then preserve the sample.

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. **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 ($\pm$ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

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

   d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the

Discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.

5. **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. Monitoring results shall be submitted to the Regional Water Board by the **first day** of the second month following sample collection. Quarterly and annual monitoring results shall be submitted by the **first day of the second month following each calendar quarter, semi-annual period, and year**, respectively.

3. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly whether the discharge complies with waste discharge requirements. The highest daily maximum for the month, monthly and weekly averages, and medians, shall be determined and recorded as needed to demonstrate compliance.

4. 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.

5. 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.

6. A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. 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. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions.

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

   Central Valley Regional Water Quality Control Board
   Fresno Branch Office
   1685 "E" Street
   Fresno, CA 93706-2007

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

Table E-8. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
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	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
1/quarter	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
1/year	January 1 following or on permit effective date	January 1 through December 31	February 1

C. Discharge Monitoring Reports (DMRs)

1. When requested by USEPA, the Discharger shall complete and submit DMRs. The submittal date shall be no later than the submittal date specified in the MRP for Discharger SMRs.

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:

Submit SMRs to:
State Water Resources Control Board Discharge Monitoring Report Processing Center Post Office Box 671 Sacramento, CA 95812

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 or modified cannot be accepted.

D. Other Reports

1. **Progress Reports.** As specified in the compliance time schedule required in Special Provisions VI, progress reports shall be submitted on **1 June each year** until the final compliance with the aluminum effluent limitation is met. 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.

2. **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 plant 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.

3. 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.

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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 identified as "not applicable" have been determined to not apply to this Discharger. Sections or subsections of this Order not 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	5D102010001
Discharger	CalMat Co., Walter A. and Elizabeth A. Baun, and Darrell D. and Janet Delevan
Name of Facility	Sanger Sand and Gravel Plant
Facility Address	17041 E Kings Canyon Road Sanger, CA 93657 Fresno County
Facility Contact, Title and Phone	Frank Costa, General Plant Manager, (559) 434-1202
Authorized Person to Sign and Submit Reports	Max Pfaff, Plant Manager, (559) 434-1202
Mailing Address	11599 N Friant Road Fresno, CA 93720
Billing Address	SAME
Type of Facility	Industrial, SIC 1442. Sand and gravel (aggregate) excavation and processing facility, SIC 2951 Asphalt Batch
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	B
Pretreatment Program	Not Applicable
Reclamation Requirements	Not Applicable
Facility Permitted Flow	2.9 (in million gallons per day)
Facility Design Flow	2.9 (in million gallons per day)
Watershed	South Valley Floor Hydrologic Unit (No. 551.70)
Receiving Water	Kings River
Receiving Water Type	River

A. The CalMat Co., a Delaware corporation, is the operator of the Sanger Sand and Gravel Plant (hereinafter Facility), a sand and gravel (aggregate) excavation and processing facility with an asphalt batch plant. In January 1999, the Vulcan Material Company, a New Jersey corporation, became the sole owner of the stock of the Calmat Co. Subsequently, the Calmat Co. registered the name Vulcan Material Company, Western Division, which CalMat Co. uses in its business activities. The CalMat Co. has a long term lease agreement with Walter A. and Elizabeth A. Baun, and Darrell D. and Janet Delevan whom own most of the property (Assessor's Parcel Nos. 333-021-28 and 36; 333-041-08, 10; 333-190-19; and 333-200-01 and 02) at 17041 E Kings Canyon Road, Sanger, CA 93657 on which the Facility is located. CalMat only owns the property that contains the settling pond. Together the CalMat Co., and Walter A. and Elizabeth A. Baun, and Derrell D. and Janet Delevan are hereinafter referred to as Discharger or CalMat Co. et al.

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 CalMat Co. is the nation's largest producer of construction aggregates particularly providing large quantities of aggregates to build roads and non-residential properties, according to its website.

C. The Facility discharges wastewater to the Kings River, a water of the United States, and is currently regulated by Waste Discharge Requirements (WDRs) Order No. 5-00-007, National Pollutant Discharge Elimination System (NPDES) Permit No. CA0078174, adopted on 28 January 2000. The terms and conditions of the current Order have been automatically continued and remain in effect until new WDRs and NPDES permit are adopted.

D. The Discharger filed a report of waste discharge and submitted an application for renewal of its WDRs and NPDES permit on 28 July 2004. A site visit was conducted on 15 October 2004, to observe operations and collect additional data to develop permit limitations and conditions.

II. FACILITY DESCRIPTION

The Facility excavates aggregate and operates an aggregate processing plant and settling and supply ponds on a 200-acre site just west of the Kings River on East Kings Canyon Road near Sanger. Surface water drainage from the Facility is to the Kings River. The Discharger processes approximately 400 to 800 tons of aggregate deposits hourly. The products are then sold to outside customers or to the on-site ready-mix concrete plant. Builders Concrete operates the on-site ready-mix concrete plant through a sublease with the CalMat Co, which leases the land from Walter A. and Elizabeth A. Baun, and Darrell D. and Janet Delevan. The supply water for Builders Concrete is from the Kings River, however, it does not receive wastewater from or discharge wastewater to the Facility. The Facility normally operates 8 to 12 hours per day, but is permitted to operate 24 hours per day to meet market demand. The Facility employs approximately 44 people.

A. Site History

1. In March 1989, an oil slick on the Kings River downstream from the Facility was reported to the California Department of Fish and Game. Contamination sources responsible for the discharge were identified at the Facility. The primary source of the discharge was diesel fuel that had leaked or spilled from an on-site aboveground tank (AGT) owned by Sanger Rock and Sand (former owner). In addition, there was a leaking 8,500-gallon under-ground storage tank (UST) that caused diesel and pentachlorophenol (PCP) groundwater contamination. Both the AGT and UST were removed.

2. The Discharger took measures to avoid further discharges of petroleum products to the Kings River. To mitigate the migration of the hydrocarbon into the Kings River, the Facility installed an interceptor trench with a conventional pump and treat system. Prior to 2005, treated extracted groundwater was blended with the water pumped from the Kings River for use as wash water at the Facility and then discharged to the Facility's settling and supply ponds under WDRs Order No. 5-00-007.

3. In early 2005, the Discharger began to operate an in-situ chemical oxidation technique in lieu of the groundwater extraction and treatment system. This includes injecting hydrogen peroxide to cause iron to form hydroxyl radicals. These radicals react directly with the residual petroleum hydrocarbon contaminants and oxidize them to carbon dioxide and water. Because groundwater injection was used, there was no longer any discharge associated with the decommissioned groundwater extraction and treatment system, and therefore this discharge is not included in this permit.

4. As part of the cleanup activities, the Discharger monitors groundwater elevation and quality in monitoring wells and piezometers within the immediate area of impact. Groundwater monitoring data from March 2005 through March 2006 show concentrations in groundwater of TPH-d ranging from less than 50 to 2,040 µg/L. The highest concentrations being present in one of the piezometers.

5. The Discharger submitted *Remediation Monitoring Report/Request for Closure* (Closure Report), dated May 2006, and prepared by ENV America Incorporated. The Closure Report states, "the pumping and treatment system, along with remediation excavations appear to have successfully reduced concentrations of TPH-d in groundwater; however, residual contamination still persists in groundwater." The Closure Report further states, "Favorable conditions for continued biological activity are expected to further reduce any remaining TPH-d concentration." A Regional Water Board letter dated 29 September 2006 approved the Discharger's request for closure, but directed the Discharger to not immediately destroy the existing monitoring well network for potential use in the evaluation of the discharges from the Facility to the settling and supply ponds.

B. Site Conditions

1. Groundwater flow under the Facility is predominately to the southeast towards the Kings River but may fluctuate with river stage. Depth to first encountered groundwater ranges from about 4 to 15 feet below ground surface (bgs). Groundwater in the area is of good quality. Data from existing monitoring wells and piezometers within the general vicinity show electrical conductivity @ 25 ºC (EC) ranging from about 140 to 400 µmhos/cm, nitrate as (N) from <0.05 to 4.9 mg/L, and total Kjeldahl nitrogen (TKN) from <0.05 to 5 mg/L.

2. Surface soils in the vicinity of the Facility are largely clean sands and gravels with some silty overbank materials.

3. Annual precipitation in the area is about 12 inches and the average annual pan evaporation is about 60 inches.

C. Description of Treatment or Controls

1. Wastewater is disposed of by evaporation and percolation in the settling and supply ponds and by subsequent discharge from the supply pond to the Kings River.

2. Approximately 3.6 million gallons per day (mgd) of water is used to wash aggregate at the Facility; approximately 2.9 mgd is pumped from the supply pond and approximately 0.7 mgd of surface water is pumped from the Kings River, as shown in Attachment C. No chemicals are added during washing. The Facility may use up to 3.6 mgd of Kings River water during pond pump station maintenance.

3. After the material is washed, approximately 3.2 mgd of wash water containing processing fines (clay and silt) is discharged to an unlined 27-acre-settling pond. An estimated 1.1 mgd percolates to groundwater from the settling pond. The Discharger uses approximately 0.2 mgd of the wastewater from the settling pond to control dust on paved and unpaved roads surrounding the Facility. Approximately 1.7 mgd of water from the settling pond is decanted to the supply pond.

4. Approximately 4.6 mgd of groundwater is pumped to the unlined 17-acre supply pond from dewatering the excavation pits. An estimated 0.7 percolates to groundwater from supply pond. From the supply pond, about 2.9 mgd of wastewater is discharged to the Kings River through a porous levee made of river stones and gravel that is approximately 10 feet high, 10 feet wide at the top, 30 feet wide at the base and 75 feet long (hereinafter Discharge Point 001).

D. Discharge Points and Receiving Waters

1. WDRs Order No. 5-00-007 identified the discharge to the Kings River as Discharge Point 004. This Order renames Discharge Point 004 as Discharge Point 001. References to Discharge Point 004 of WDRs Order No. 5-00-007 will hereafter be referred to as Discharge Point 001. Discharge Point 001 is in the northeast quarter of Section 17 in the South Valley Floor Hydrologic Unit.

2. The Facility is located in Sections 8, 9, & 17 of T14S, R22E, MDB&M, as shown in Attachment B (Figures B-1 and B-2), a part of this Order.

3. Discharge Point 001 is at Latitude 36º, 43', 26" N and Longitude 119º, 29', 14" W.

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

Effluent limitations contained in and representative monitoring data for discharges from Discharge Point 001 for the term of the WDRs Order No. 5-00-007 are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation		Monitoring Data (March 2000 – June 2006)		
		Average Monthly	Maximum Daily	Lowest Daily Discharge	Highest Daily Discharge	Long Term Average Discharge[1]
TSS[2]	mg/L	20	30	Not Detected	21	5.9
Manganese	µg/L	--	50	Not Detected	140	20
EC[3]	µmhos/cm	--	--	26	220	175
TPH-d[4]	µg/L	50	100	Not Detected	220	31
DO[5]	mg/L	--	--	4	9.1[6]	6.1
pH[7]	Standard Units	--	6.0-9.0[8]	7.2	8.7	--

1 To calculate the long-term average, ½ of the Practical Quantitation Limit (PQL) for non-detects was used. PQLs were used since Method Detection Limits (MDLs) were not available in the laboratory reports.
2 Total suspended solids
3 Electrical conductivity at 25ºC
4 Total Petroleum Hydrocarbons as Diesel
5 Dissolved oxygen
6 The Discharger reported improbable dissolved oxygen values four times (5/04 – 192.6 mg/L and 6/04, 7/04, 12/04 – 40 mg/L). These values were not used to determine the maximum dissolved oxygen concentration, or included in the long term average discharge calculation.
7 Data set is from self monitoring reports reported weekly averages.
8 Minimum to maximum range

F. Compliance Summary

1. During the monitoring period of March 2000 through June 2006 the Discharger violated the following effluent limitations established by WDRs Order No. 5-00-007 for Discharge Point 001.

Table F-3. Effluent Violations at Discharge Point 001

Parameter	Units	Effluent Limitation		Number of Violations	
		Monthly Average	Maximum Daily	Monthly Average Violations	Maximum Daily Violations
TSS	mg/L	20	40	1	--
TPH-d	µg/L	20	50	3[1]	3[1]
Manganese[2]	µg/L	--	50	--	1 (27)[3]

[1] Violations occurred prior to the termination of the discharge from the groundwater extraction and treatment system.

[2] Effluent Limitation C.5 in Order No. 5-00-007 states, the "[c]oncentration of manganese in the discharge shall not exceed the background quality of the Kings River, or 0.05 mg/L, whichever is greater."

[3] The number in the parentheses denotes the number of times the discharge appeared to cause the downstream manganese concentration to be greater than upstream.

2. During the monitoring period of March 2000 through June 2006 the Discharger has sporadically caused or threatened to cause potential violations of the following receiving water limitations established by WDRs Order No. 5-00-007:

Table F-4. Receiving Water Limitations

WDRs Order No. 5-00-007:	Condition
Receiving Water Limitation D.1	The discharge shall not cause the receiving water to contain concentrations of DO to fall below 7 mg/L.[1]
Receiving Water Limitation D.7	The discharge shall not cause the receiving water turbidity to increase more than 1 NTU when background levels are between 0 and 5 NTUs; to increase 20% when background levels are between 5 and 50 NTUs; to increase 10 NTUs when background levels are between 50 and 100 NTUs; and 10% when background levels are greater than 100 NTUs
Receiving Water Limitation D.8	The discharge shall not cause normal ambient pH to fall below 6.5, exceed 8.3, or change by more than 0.3 units."

[1] WDRs Order No. 5-00-007 applied a DO limit of 7 mg/L. The Basin Plan states that the water quality objective for DO from the King's River from the Friant-Kern to Peoples Weir is 5 mg/L.

A Regional Water Board Notice of Violation (NOV), dated 10 May 2001, cited the Discharger for violations of turbidity Receiving Water Limitation D.7 of WDRs Order No. 5-00-007 during three months in 2000. By letter dated 7 June 2001, the Discharger indicated that the violations were caused by wastewater short-circuiting in the settling pond, causing wastewater to be pumped directly to the storage pond prior to adequate settling and subsequent discharge. To remedy the problem, the Discharger constructed a levee in the settling pond prevent short-circuiting and provide sufficient time for the wastewater to properly settle prior to being pumped to the storage pond.

Since the above NOV, the Discharger has sporadically violated or threatened to violate the turbidity, pH, and DO receiving water limitations. These incidences of potential violations may be the result of incomplete mixing of the discharge with the receiving waters. As a result, the downstream receiving water samples may not be representative. This Order requires the Discharger to conduct a discharge point and receiving water-monitoring evaluation to determine whether an alternative discharge point and/or alternative sampling points are appropriate.

G. Planned Changes

1. The Discharger plans to expand the Facility's site operations by purchasing nearby properties for future excavations. The Facility discharge flow is expected to increase along with the increase in production. In mid-2005, the Fresno County Department of Public Works and Planning circulated a Notice of Preparation (NOP) for the expansion of the Facility. The NOP indicates that the Discharger is requesting a construction use permit to expand the existing operation of 220-acres, to 440 acres. The NOP also indicates that the Discharger proposes to change its method of extraction from dry mining to wet mining, phased over a period of 50 years. This will result in the sales of approximately 1 million tons per year to 2.5 million tons per year, depending on market demand. Fresno County intends to circulate a draft Environmental Impact Report (EIR) in 2006 that will assess, in part, the potential water quality impacts as a result of the new operations.

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 Authorities

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

B. California Environmental Quality Act (CEQA)

The proposed permit does not authorize a change in discharge flow rate or character. The Facility, as described in this Order is considered an existing facility pursuant to Title 14, California Code of Regulations (CCR) section 15301 and therefore exempt from the California Environmental Quality Act (CEQA). Further, the action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA (Public Resources Code section 21000 et seq.), in accordance with CWC section 13389. Also see Section II.E.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans**. The Regional Water Board adopted a *Water Quality Control Plan, Second Edition, for the Tulare Lake Basin* (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 beneficial uses of the Kings River from Friant-Kern to Peoples Weir downstream of the discharge are Municipal and domestic water supply (MUN), agricultural supply (AGR), industrial process supply (PRO), water contact recreation (REC-1), non-contact water recreation (REC-2), warm freshwater habitat (WARM), wildlife habitat (WILD), and groundwater recharge (GWR).

The Basin Plan on page II-1 states: *"Protection and enhancement of beneficial uses of water against quality degradation is a basic requirement of water quality planning under the Porter-Cologne Water Quality Control Act. In setting water quality objectives, the Regional Water Board must consider past, present, and probable future beneficial uses of water."* and with respect to disposal of wastewaters states that "...*use of waters for disposal of wastewaters is not included as a beneficial use…and are subject to regulation as activities that may harm protected uses."*

2. **Federal Clean Water Act.** 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. Federal Regulations, 40 CFR 131.2 and 131.10, require that all waters of the State regulated to protect the beneficial uses of 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. Section 131.3(e), 40 CFR, defines existing beneficial uses as those uses actually attained after November 28, 1975, whether or not they are included in the water quality standards. Federal Regulation, 40 CFR 131.10 requires that uses be obtained by implementing effluent limitations, requires that all downstream uses be protected.

3. **Thermal Plan – Not Applicable.**

4. **Bay-Delta Plan – Not Applicable.**

5. **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 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. As discussed in detail in Section IV.D.4 of this Fact Sheet, the discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16.

6. **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 that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. This Order does not continue the internal wastestream limitations for TPH-d and flow for the groundwater treatment system discharge itself because it has been decommissioned and the discharge no longer exists. The removal of the internal effluent limitations for a non-existing wastestream is consistent with the anti-backsliding requirements contained in 40 CFR 122.44(l), which applies where there have been substantial alterations or additions to a facility.

7. **Emergency Planning and Community Right to Know Act – Not Applicable**

8. **Stormwater Requirements.** USEPA promulgated Federal Regulations for storm water on November 16, 1990 in 40 CFR Parts 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from construction, sand and gravel, asphalt batch plants, and ready-mix concrete plant. Storm water discharges from the Facility are regulated under the General Permit for Discharges of Storm Water Associated with Industrial Activities (State Water Resources Control Board, Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001). The Discharger's waste discharger identification number (WDID) for the storm water permit is 5F101019186.

9. **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. Impaired Water Bodies on CWA 303(d) List

1. The Kings River between Friant-Kern and Peoples Weir is not listed as an impaired water body.

E. Other Plans, Polices and Regulations

1. The discharge to the settling and storage ponds as authorized herein is exempt from requirements of Title 27, CCR, section 20005, *et seq*. (hereafter Title 27). The exemption, pursuant to Title 27 CCR, section 20090(a), is provided if the following conditions are met:

   a. Waste discharge requirements are issued;

   b. The waste discharge requirements implement the Basin Plan and allow discharge only in accordance with the Basin Plan; and

   c. The wastewater is nonhazardous and it is unnecessary to manage it as a hazardous waste according to Title 22, CCR, Division 4.5, Chapter 11.

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., section 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 Federal Regulations, 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*." Federal Regulations, 40 CFR 122.44(d)(1)(vi), further provide 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 discharges 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-21 "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 requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, discoloration, toxic substances, radionuclides, or taste and odor

producing substances that adversely affect beneficial uses. 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 municipal supply, 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

1. As stated in Section I.G of Attachment D, Standard Provisions, this Order prohibits bypass from any portion of the treatment facility (e.g., settling pond). Federal Regulations, 40 CFR 122.41 (m), define "bypass" as the intentional diversion of waste streams from any portion of a treatment facility. This section of the 40 CFR 122.41 (m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. In considering the Regional Water Board's prohibition of bypasses, the State Water Board adopted a precedential decision, Order No. WQO 2002-0015, which cites the Federal Regulations, 40 CFR 122.41(m), as allowing bypass only for essential maintenance to assure efficient operation.

2. As stated in Section III.E, this Order prohibits the discharge of wastes from ready-mix concrete operations. This prohibition is necessary, as concrete operations may discharge waste constituents, such as metals, in a manner that could alter the overall character and therefore threat to water quality of the discharge to the Kings River. A concrete ready-mix plant exists onsite and on property owned by Walker A. and Elizabeth A. Baun and Derrel D. Delevan, and is leased to CalMat, which is leased to Builders Concrete, increasing the likelihood of a potential discharge from that facility.

B. Technology-Based Effluent Limitations

1. Scope and Authority

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

- Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

- Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

- Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

- New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires USEPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 CFR 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the permit writer must consider specific factors outlined in 40 CFR 125.3.

2. Applicable Technology-Based Effluent Limitations

a. **Total Suspended Solids (TSS).** WDRs Order No. 5-00-007 established a 30-day median effluent limitation of 20 mg/L and a daily maximum effluent limitation of 30 mg/L for total suspended solids (TSS), which are TBELs developed using BPJ. This Order carries over the TBELs established by WDRs Order No. 5-00-007.

b. **Flow.** The Discharger estimates, under current production, that the Facility's effluent flow is 2.9 mgd. This Order establishes an average monthly effluent flow limitation of 2.9 mgd, based on the Discharger's estimated current production-based flow rate. This Order requires the Discharger to evaluate how flow is currently being monitored to determine if additional flow metering is necessary to determine actual monthly average discharge flow.

c. **pH.** Effluent Limitations Guidelines and Standards for the Mineral Mining and Processing Point Source Category, Construction Sand and Gravel Subcategory in 40 CFR 436 (ELG) requires discharges of process generated wastewater pollutants from facilities that recycle wastewater for use in processing not to cause pH to be depressed below 6.0, nor raised above 9.0 standard units. This ELG applies to the Facility and is carried over from the TBELs established by WDRs Order No. 5-00-007.

d. Final TBELs for Discharge Point 001 are summarized in the following table.

Table F-5. Summary of Technology-based Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	30-day Median	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	mgd	2.9	--	--	--	--
TSS	mg/L	--	20	30	--	--
	lbs/day	--	480	730	--	--
pH	s.u.	--	--	--	6.0	9.0

C. Water Quality-Based Effluent Limitations

1. Scope and Authority

As specified in 40 CFR 122.44(d)(1)(i), permits are required to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an 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, and any applicable water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

a. **Receiving Water.** As mentioned, the beneficial uses of the Kings River from the Friant Kern to People Weir are Municipal and domestic water supply (MUN), agricultural supply (AGR), industrial process supply (PRO), water contact recreation (REC-1), non-contact water recreation (REC-2), warm freshwater habitat (WARM), wildlife habitat (WILD), and groundwater recharge (GWR).

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. The *California Toxics Rule*, at (c)(4), states the following:

"Application of metals criteria. (i) *For purposes of calculating freshwater aquatic life criteria for metals from the equations in paragraph (b)(2) of this section, for waters with a hardness of 400 mg/L or less as calculating carbonate, the actual ambient hardness of the surface water* <u>*shall*</u> *be used in those equations*." [emphasis added]

The State Water Board, in footnote 19 to Water Quality Order No. 2004-0013, stated: "*We note that…the Regional Water Board…applied a variable hardness value whereby effluent limitations will vary depending on the actual, current hardness values in the receiving water. We recommend that the Regional Water Board establish either fixed or seasonal effluent limitations for metals, as*

provided in the SIP, rather than 'floating' effluent limitations."

Effluent limitations for the discharge must be set to protect the beneficial uses of the receiving water for all discharge conditions. In the absence of the option of including condition-dependent, "floating" effluent limitations that are reflective of actual conditions at the time of discharge, effluent limitations must be set using the worst-case condition (*e.g.*, lowest ambient hardness) in order to protect beneficial uses for all discharge conditions. For purposes of establishing water quality-based effluent limitations, a reported hardness value of 31 mg/L as $CaCO_3$ was used.

c. **Assimilative Capacity/Mixing Zone**. In 1999, the Kings River Water Association, the Kings River Conservation District and the Department of Fish and Game renewed and re-entered into the Kings River Fisheries Management Program Framework Agreement (hereafter Agreement). In general, the Agreement is to promote a greater level of certainty relative to the use and availability of Kings River water resources. Included in the Agreement is a minimum flow requirement of 35 cubic feet per second (cfs) that must be maintained in the Kings River over the Fresno Weir after flows are diverted to the Fresno Canal, Consolidated Canal, or China Slough. This results in minimum effluent to Kings River dilution ratio of about 1:8.

There may be some assimilative capacity within the receiving water (Kings River from Friant-Kern to Peoples Weir) for certain pollutants in the Facility's discharge (e.g., EC, pH, aluminum, and turbidity). This Order allows for some dilution for non-toxic substances, such as EC and pH.

The Discharger's permit application does not include the information needed by the Regional Water Board to determine the appropriateness of a mixing zone for toxic pollutants (e.g., aluminum), including the calculations for deriving the appropriate receiving water and effluent flows, and/or the results of a mixing zone study. This Order allows the Discharger to conduct a mixing zone study to evaluate any available assimilative capacity of the receiving water for aluminum. If requested, the Regional Water Board will review such studies and if warranted, may reopen this permit to make appropriate changes.

3. Determining the Need for WQBELs

a. Based on information submitted as part of the NPDES permit application, and as directed by monitoring and reporting programs, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard for aluminum, EC, and manganese. Water quality-based effluent limitations (WQBELs) for these constituents are included in this Order. A summary of the reasonable potential analysis (RPA) is provided in Table F-7, and a detailed discussion of the RPA for each constituent is provided below.

b. The RPA was conducted 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."* Therefore, in this Order the RPA procedures from the SIP used to evaluate reasonable potential for both CTR and non-CTR constituents.

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

d. **Aluminum.** The USEPA National Recommended Ambient Water Quality Criteria for protection of freshwater aquatic life for aluminum include four-day average (chronic) and one-hour average (acute) criteria of 87 µg/L and 750 µg/L, respectively, for waters with a pH of 6.5 to 9.0. The receiving stream has been measured to have a low hardness of 31 mg/L as $CaCO_3$ based on one sample.

   Based on two samples collected between April 2002 and October 2002, the MEC for aluminum was 120 µg/L, while the maximum observed upstream receiving water aluminum concentration was 30 µg/L. Therefore, aluminum in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a level necessary to violate the Basin Plan's narrative toxicity objective. This Order contains final Average Monthly Effluent Limitations (AMEL) and Maximum Daily Effluent Limitations (MDEL) for aluminum of 70 µg/L and 120 µg/L, respectively, based on USEPA's National Ambient Water Quality Criteria for the protection of freshwater aquatic life (See Attachment F, Table F-8 for WQBEL calculations).

   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.

   Based on the sample results in the effluent, it appears that the Discharger may be in immediate non-compliance upon issuance of this Order. New or modified control measures may be necessary in order to comply with the effluent limitations, and the new or modified control measures cannot be designed, installed and put into operation within 30 calendar days. The Basin Plan includes a provision that authorizes the use of compliance schedules in NPDES permits for water quality objectives adopted after 17 August 1995 (See Basin Plan at page IV-22). The water quality-based effluent limitations for aluminum are based on a new interpretation of the narrative standard for protection of receiving water

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

beneficial uses. Therefore, a schedule for compliance with the aluminum effluent limitations is established in the Order.

An interim performance-based maximum daily effluent limitation of 373 μg/L has been established in this Order. The interim limitation was determined as described in Section IV.E.3 of this Fact Sheet, and is in effect through **<five years following the adoption of this Order>.** As part of the compliance schedule, this Order requires the Discharger to submit a corrective action plan and implementation schedule to ensure compliance with the final aluminum effluent limitations. In addition, this Order requires the Discharger to submit an engineering treatment feasibility study and a pollution prevention plan developed in accordance with Water Code section 13263.3(d).

e. **Electrical Conductivity.** WDRs Order No. 5-00-007 established a receiving water limit requirement that the effluent not cause the receiving water (Kings River) to exceed 200 µmhos/cm. Review of the Discharger's self-monitoring reports from March 2000 through June 2006 shows an average effluent EC of 175 µmhos/cm, with a range from 26 µmhos/cm to 220 µmhos/cm for 76 samples. The background receiving water (Kings River) EC averaged 61 µmhos/cm in 76 sampling events collected by the Discharger from March 2000 through June 2006. These data show that the receiving water has some assimilative capacity for EC. On no occasion did the increase in receiving water EC caused by the discharge result in an exceedance of the Basin Plan EC objective of 200 µmhos/cm. To protect the beneficial uses of the Kings River, this Order includes an effluent limitation of 250 µmhos/cm based Staff's professional judgment.

f. **Manganese, Total Recoverable.** WDRs Order No. 5-00-007 established effluent limits for manganese requiring that effluent concentrations not exceed the background quality of the receiving water (Kings River) or 50 µg/L, whichever is greater. Analysis of the Discharger's receiving water manganese data from March 2000 to June 2006 indicates that the receiving water concentrations range from 10 µg/L to 160 µg/L with an average concentration of approximately 20 µg/L. The upstream receiving water exceeded the Secondary MCL four times during the monitoring period. The MEC for manganese was detected in an effluent sample collected 25 November 2003 at a concentration of 140 µg/L.

This Order continues the effluent limit for manganese, but requires the Discharger to complete a study to characterize the natural upstream/receiving water background surface water quality for manganese to determine whether additional controls are necessary to ensure consistent compliance with the discharge effluent limit and applicable water quality objectives.

Table F-7. Statistics for Effluent Constituents with Detectable Results[1, 2]

Constituent	Maximum Effluent Concentration	Mean[3]	Coefficient of Variance	Number of Samples
Antimony, Total Recoverable	0.1	0.052	0.6	2
Arsenic, Total Recoverable	1	0.9	0.6	2
Chromium (III), Total Recoverable	0.7	0.55	0.6	2
Copper, Total Recoverable	0.9	0.8	0.6	2
Electrical Conductivity	220	175	0.14	76
Lead, Total Recoverable	0.097	0.092	0.6	2
Mercury, Total Recoverable	0.0004	0.00035	0.6	2
Nickel, Total Recoverable	0.8	0.75	0.6	2
Zinc, Total Recoverable	0.4	0.275	0.6	2
Cyanide, Total Recoverable	0.6	0.45	0.6	2
Aluminum, Acid Soluble	120	95	0.6	2
Barium, Total Recoverable	16	15	0.6	2
Manganese, Total Recoverable	140	21	0.88	75
TPH-d	220[5]	30	0.6	76

1 Effluent data from March 2000 – June 2006
2 Unless otherwise stated, all constituent concentrations in µg/L
3 Mean calculated by taking ½ the detection limit (if applicable)
4 Standard Deviation calculated by taking half the detection limit (if applicable)
5 Detected while the groundwater extraction and treatment system was still in operation.

4. WQBEL Calculations

a. Effluent limitations for aluminum 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.

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

For the human health, agriculture, or other long-term criterion/objectives, a dilution credit can be applied. The ECA is calculated as follows:

$$ECA_{HH} = HH + D(HH - B)$$

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
ECA_{HH}	=	effluent concentration allowance for human health, agriculture, or other long-term criterion/objective
CMC	=	criteria maximum concentration (one-hour average)
CCC	=	criteria continuous concentration (four-day average, unless otherwise noted)
HH	=	human health, agriculture, or other long-term criterion/objective
D	=	dilution credit
B	=	maximum receiving water concentration

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).

Human health ECAs are set equal to the AMEL and a statistical multiplier is used to calculate the MDEL.

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

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

$$MDEL_{HH} = \left(\frac{mult_{MDEL}}{mult_{AMEL}}\right) AMEL_{HH}$$

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 for aluminium were calculated, as follows in Table F-8:

Table F-8. WQBEL Calculations for Aluminium

	Acute	Chronic
Criteria (µg/L) [1]	750	87
Dilution Credit	No Dilution	No Dilution
ECA	750	87
ECA Multiplier	0.321	0.527
LTA	204.75	45.85
AMEL Multiplier (95th%)	[2]	1.3
AMEL (µg/L)	[2]	**71**
MDEL Multiplier (99th%)	[2]	--
MDEL (µg/L)	[2]	**142**

[1] USEPA Ambient Water Quality Criteria
[2] Limitations based on chronic LTA (Chronic LTA < Acute LTA)

Summary of Water Quality-Based Effluent Limitations
Discharge Point 001

Table F-9. Summary of Water Quality-based Effluent Limitations

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Aluminum, Acid Soluble	µg/L	70	140
	lbs/day	1.7	3.5
Electrical Conductivity	µmhos/cm	250	--

In addition to the above, this Order contains an effluent limitation for manganese that states, “The manganese in the discharge shall not exceed the natural background quality of the receiving water (Kings River), or 0.05 mg/l, whichever is greater.”

5. Whole Effluent Toxicity (WET)

To determine 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 states that "…*effluent limits based upon acute biotoxicity tests of effluents will be prescribed where appropriate*…". Effluent limitations for acute toxicity have been included in this Order. This order requires quarterly acute toxicity monitoring for demonstration with compliance with the effluent limits.

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-6) 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 during the 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 Toxicity Reduction Evaluation (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.

Title 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 by multiplying the concentration limitation by the Facility's estimate of actual flow of 2.9 mgd and the appropriate unit conversion factor. Table F-10 summarizes the final limitations established in this Order.

Summary of Final Effluent Limitations
Discharge Point 001

Table F-10. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	30-day Median	Max. Daily	Inst. Minimum	Inst. Maximum	
Flow	mgd	2.9	--	--	--	--	BPJ
Total Suspended Solids	mg/L	--	20	30	--	--	Previous Order Antibacksliding, BPJ
	lbs/day	--	480	730	--	--	
Aluminum, Acid Soluble	µg/L	70	--	140	--	--	Basin Plan, USEPA
	lbs/day	1.7	--	3.5	--	--	
pH	standard unit	--	--	--	6.0	9.0	Previous Order
Electrical Conductivity	µmhos/cm	250	--	--	--	--	Basin Plan/ BPJ

This Order continues the effluent limitation for manganese from the previous order, which states, "The manganese in the discharge shall not exceed the natural background quality of the receiving water (Kings River), or 0.05 mg/l, whichever is greater."

2. **Averaging Periods for Effluent Limitations. – Not Applicable**

3. **Satisfaction of Anti-Backsliding Requirements.**

All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order. However, this Order does not continue TPH-d and flow limitations for the groundwater treatment system discharge specifically because that discharge no longer exists. The removal of effluent limitations for non-existent discharges is consistent with the exceptions for anti-backsliding contained in 40 CFR 122.44(l) where there have been substantial alterations or additions to the Facility.

4. **Satisfaction of Antidegradation Policy.**

a. **Surface Water.** The Order continues discharges previously authorized by the Regional Water Board. It does not authorize any expansion in discharge flow rates or pollutant loading. It does, in some cases, apply effluent limitations more restrictive than in WDRs Order No. 5-00-007. 40 CFR 131.12 establishes a federal antidegradation policy that applies to the discharge subject to this Order. In addition, State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Water in California,* requires the Regional Water Board in regulating discharge of waste to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the

Regional Water Board's policies (e.g., quality that exceeds water quality objectives). Resolution 68-16 requires that, in event of degradation, the discharge be subject to treatment with best practicable treatment or control (BPTC), that pollution or nuisance not occur, and that the highest water quality consistent with the maximum benefit to the people of the State be maintained. This Order implements Resolution 68-16 consistent with the federal policy, as this Order requires the Discharger to comply with BPT standards consistent with 40 CFR 122.44 and requires more stringent standards necessary to meet State water quality limitations.

The discharge to surface water is considered minor, and a lower threat to surface water quality. The quality of the discharge to surface water is essentially the quality of the groundwater being extracted during the Facility's operations. The quality of the groundwater is at times, heavily influenced by the quality of the Kings River. The discharge may contain suspended solids from the operation, as well as minimal increases in concentrations of salts due to evaporative losses in the ponds. Therefore, the discharge at a minimum meets BPT standards and is considered BPTC with respect to the surface water discharge.

b. **Groundwater.** The Discharger utilizes unlined settling and storage ponds. Wastewater resulting from gravel mining with recycling waste, wash water and settling ponds can provide conditions conducive to the conversion of insoluble iron and manganese to more soluble forms that can discharge to groundwater. Percolation from the unlined pond may result in an increase in the concentration of these constituents in groundwater. If this process is occurring at this site, the increase in the concentration of these constituents in groundwater must be consistent with Resolution 68-16. This Order requires the Discharger to monitor groundwater within the area of the ponds to determine whether groundwater is being degraded by the discharge. If groundwater degradation is occurring, any increase in waste constituent concentrations in groundwater must be shown to be minimized by BPTC, less than water quality objectives, and of maximum interest to the people of the State. Certainly there is public interest in ensuring a consistent supply of building materials to meet housing and transportation needs in the area.

This Order requires the Discharger to install groundwater monitoring wells. If these wells indicate groundwater degradation, it also requires evaluation of consistency of that degradation with Resolution 68-16. In the interim, the Regional Water Board is not authorizing degradation. Upon completion of the study, the groundwater limitations will be evaluated for reasonableness. If appropriate, this Order will be re-opened and numeric groundwater limitations incorporated at that time.

E. Interim Effluent Limitations

1. **Constituent(s).** 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 treatment plant performance or existing permit limitations, whichever is more stringent. The State Water Board has held that the SIP may be used as guidance for non-CTR constituents. Therefore, the SIP requirement for interim effluent limitations has been applied to both CTR and non-CTR constituents in this Order.

When there are less than ten sampling data points available, the *Technical Support Document for Water Quality- Based Toxics Control* ((EPA/505/2-90-001), TSD) recommends a coefficient of variation of 0.6 be utilized as representative of wastewater effluent sampling. The TSD recognizes that a minimum of ten data points is necessary to conduct a valid statistical analysis. The multipliers contained in Table 5-2 of the TSD are used to determine a maximum daily limitation based on a long-term average objective. In this case, the long-term average objective is to maintain, at a minimum, the current plant performance level. Therefore, when there are less than ten sampling points for a constituent, interim limitations are based on 3.11 times the maximum observed effluent concentration to obtain the daily maximum interim limitation (TSD, Table 5-2).

The Regional Water Board finds that the Discharger can undertake source control and treatment plant measures to maintain compliance with the interim limitations included in this Order. Interim limitations are established when compliance with effluent limitations cannot be achieved by the existing discharge. Discharge of constituents in concentrations in excess of the final effluent limitations, but in compliance with the interim effluent limitations, can significantly degrade water quality and adversely affect the beneficial uses of the receiving stream on a long-term basis. The interim limitations, however, establish an enforceable ceiling concentration until compliance with the effluent limitation can be achieved.

Table F-11. Interim Effluent Limitation Calculation Summary

Parameter	MEC	Mean	Std. Dev.	# of Samples	Interim Limitation
Aluminum (µg/L)	120	--	--	2	373

F. Land Discharge Specifications – Not Applicable

G. Reclamation Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Basin Plan water quality objectives to protect the beneficial uses of surface water and groundwater include numeric objectives and narrative objectives, including objectives for chemical constituents, toxicity, and tastes and odors. The toxicity objective requires that surface water and groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective requires that surface water and groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use or that exceed the maximum contaminant levels (MCLs) in Title 22, CCR. The tastes and

odors objective states that surface water and groundwater shall not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances in concentrations that adversely affect domestic drinking water supply, agricultural supply, or any other beneficial use. Rational for surface water and groundwater receiving water limitations follow:

A. Surface Water

a. **Biostimulatory Substances**. The Basin Plan includes a water quality objective that "*[W]ater shall not contain biostimulatory substances that promote aquatic growths to the extent such gowths cause nuisance or adversely affect beneficial uses."* Receiving Water Limitations for biostimulatory substances are included in this Order and are based on the Basin Plan objective.

b. **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 and are based on the Basin Plan objective.

c. **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 and are based on the Basin Plan objective.

d. **Dissolved Oxygen.** For discharges to Kings River at Reach IV (Friant-Kern to Peoples Weir), the Basin Plan includes a water quality objective of maintaining a minimum of 5.0 mg/L of dissolved oxygen. Numeric Receiving Water Limitations for dissolved oxygen are included in this Order and are based on the Basin Plan objective.

   For surface water bodies outside of the Delta, the Basin Plan includes the water quality objective that "…*the monthly median of the mean daily dissolved oxygen (DO) concentration shall not fall below 85 percent of saturation in the main water mass, and the 95 percentile concentration shall not fall below 75 percent of saturation.*" This objective was included as a receiving water limitation in this Order.

e. **Floating Material**. The Basin Plan includes a water quality objective that *"[W]aters shall not contain floating material, including but not limited to solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses."* Receiving Water Limitations for floating material are included in this Order and are based on the Basin Plan objective.

f. **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 and are based on the Basin Plan objective.

g. **pH.** The Basin Plan includes water quality objective that *"[T]he pH of water shall not be depressed below 6.5, raised above 8.3, or changed at any time more than 0.3 units from normal ambient pH."* This Order includes receiving water limitations for both pH range and pH change.

The Basin Plan allows an appropriate averaging period for pH change in the receiving stream. Since there is no technical information available that indicates that aquatic organisms are adversely affected by shifts in pH within the 6.5 to 8.3 range, an averaging period is considered appropriate and a monthly averaging period for determining compliance with the 0.3 receiving water pH limitation is included in this Order.

This Order establishes a minimum and maximum effluent limit greater than the receiving water limits. Review of the effluent and receiving water data indicate that the existing discharge does not violate the minimum and maximum effluent and receiving water limitations. The data does show, at times, the Discharger exceeds the permitted 0.3 pH change. This Order requires the Discharger to evaluate the existing discharge point to ensure that adequate mixing of the discharge and the Kings River is occurring prior to sampling.

h. **Pesticides**. The Basin Plan includes a water quality objective for pesticides beginning on page III-3. Receiving Water Limitations for pesticides are included in this Order and are based on the Basin Plan objective.

i. **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 and are based on the Basin Plan objective.

j. Salinity. Table III-2 of the Basin Plan established an EC receiving water quality objective from Friant-Kern to Peoples Weir of 200 µmhos/cm. To protect the beneficial uses of the Kings River, this Order includes a Receiving Water Limitation for EC based on the Basin Plan objective.

k. **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 and are based on the Basin Plan objective.

l. **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 and are based on the Basin Plan objective.

m. **Suspended Material.** The Basin Plan includes a water quality objective that *"[W]aters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses."* Receiving Water Limitations for suspended material are included in this Order and are based on the Basin Plan objective.

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

o. **Temperature.** The Kings River has the beneficial uses WARM. The Basin Plan includes the objective that "[e]levated temperature wastes shall not cause the temperature of waters designated COLD or WARM to increase by more than 5ºF above natural receiving water temperature." This Order includes a receiving water limitation based on this objective.

p. **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.

q. **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. The unlined settling pond and supply pond discharge to underlying groundwater.

3. The discharge to groundwater consists of pumped groundwater that is used to wash aggregate extracted from the site. No chemicals are added to the process. The existing discharges to the ponds are not expected to degrade groundwater. The following groundwater limitation in this Order is based on the State Water Board Resolution No. 68-16: "Release of waste constituents from any storage, treatment, or disposal component associated with the Facility wastewater operations, in combination with other sources, shall not cause underlying groundwater to contain waste constituents in concentrations greater than natural background water quality." Nonetheless groundwater monitoring is included, as described below, to ensure that compliance is being achieved with this groundwater limitation and, if not, to initiate a process to ensure any degradation is consistent with Resolution 68-16.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. California 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 – Not Applicable

B. Effluent Monitoring

1. 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 stream and groundwater.

Table F-12. Summary of Effluent Monitoring

Parameter	Rationale
Flow	To determine compliance with effluent limitations set in this Order.
Total Suspended Solids	
Aluminum, Acid Soluble	
Manganese, Total Recoverable	
Electrical Conductivity @ 25 ºC	
pH	
Iron, Total Recoverable	To determine need for limitations
Sulfate	
Total Dissolved Solids	
Boron, Total Recoverable	
Chloride	
Petroleum Hydrocarbons as Diesel	

2. Section 1.3 of the SIP requires the Regional Water Board to require periodic monitoring for priority pollutants, at least once prior to the reissuance of a permit, for which criteria or objectives apply and for which no effluent limitations have been established. To comply with the SIP and to adequately characterize the discharge, this Order requires the Discharger to sample its effluent for priority pollutants at least twice following permit adoption.

C. Whole Effluent Toxicity Testing Requirements

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

2. **Chronic Toxicity.** Once prior to the expiration of this order chronic whole effluent toxicity testing is required to demonstrate compliance with the Basin Plan's narrative toxicity objective.

D. Receiving Water Monitoring

1. Surface Water

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

Table F-13. Summary of Surface Water Monitoring

Parameter	Rationale
TSS	To determine compliance with receiving water limitations set in this Order.
Aluminum, Acid Soluble	
Manganese, Total Recoverable	
Electrical Conductivity @ 25 ºC	
TPH-d	

Parameter	Rationale
Dissolved Oxygen	
pH	
Temperature	
Turbidity	

2. Groundwater

a. Monitoring of the groundwater must be conducted to determine whether the discharge has maintained natural quality or caused some degradation. The monitoring will confirm the situation and, if some degradation has occurred, lead to an analysis of whether additional or different methods of treatment or control of the discharge are necessary for the problem waste constituent to comply with Resolution No. 68-16. Economic analysis is only one of many factors considered in determining best practicable treatment or control. If monitoring indicates that the discharge has incrementally increased constituent concentrations in groundwater above background, this permit may be reopened and modified to include numeric groundwater limitations.

b. This Order requires the Discharger to initiate groundwater monitoring and includes a regular schedule of groundwater monitoring in the attached Monitoring and Reporting Program. The groundwater monitoring reports are necessary to evaluate impacts to waters of the State and protect beneficial uses consistent with water quality plans and policies, including Resolution 68-16.

E. Other Monitoring Requirements

1. Source Water

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.

Sections 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. **Pollution Prevention.** This Order requires the Discharger prepare pollution prevention plans following Water Code section 13263.3(d)(3) for <constituent(s)>. This reopener provision allows the Regional Water Board to reopen this Order for addition and/or modification of effluent limitations and requirements for these constituents based on a review of the pollution prevention plans.

b. **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.

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 Quarterly 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 > 1 TUc (where TUc = 100/NOEC) is applied in the provision, because this Order does not allow any dilution for the chronic condition. Therefore, a TRE is triggered when the effluent exhibits a pattern of toxicity at 100% 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 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.

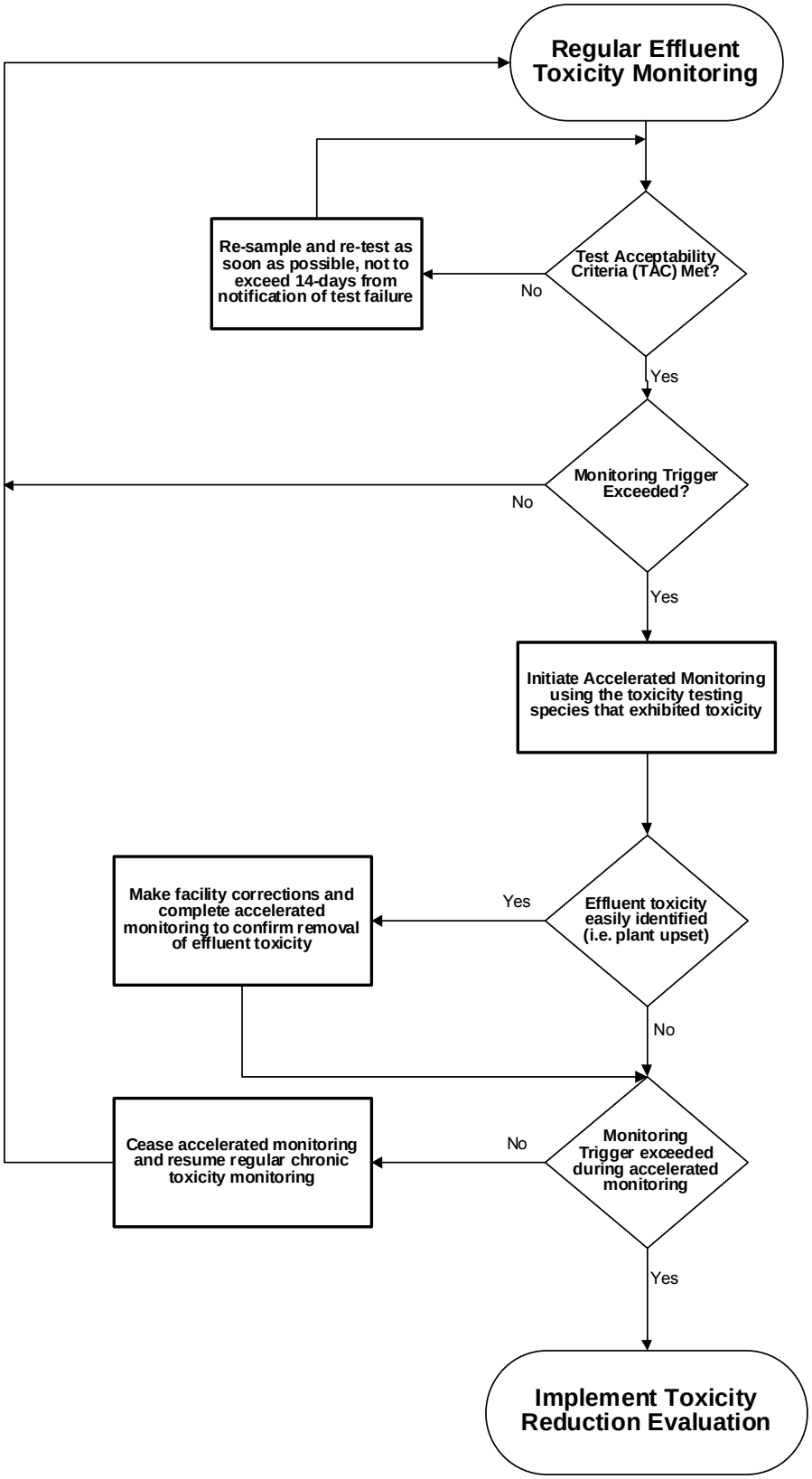
See the WET Accelerated Monitoring Flow Chart (Figure F-X), below, for further clarification of the accelerated monitoring requirements and for the decision points for determining the need for TRE initiation.

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



b. **Groundwater Monitoring (Special Provisions VI.C.2.d.).** To determine compliance with Groundwater Limitation V.B., the Discharger is required install a groundwater monitoring network, including the installation of at least one or more background monitoring wells and a sufficient number of designated monitoring wells downgradient of treatment, storage, and disposal units that may release waste constituents to groundwater. The Discharger must install groundwater monitoring wells, collect one year of monitoring data, and submit a report evaluating the underlying groundwater by in accordance with an approved time schedule. If the monitoring shows that any constituent concentrations are increased above background water quality, the Discharger shall submit a technical report describing the groundwater evaluation report results and critiquing each evaluated facility component with respect to BPTC and minimizing the discharge's impact on groundwater quality.

3. Best Management Practices and Pollution Prevention

a. **Pollution Prevention Plan (PPP) for Aluminum.** A PPP for aluminum is required in this Order per Water Code section 13263.3(d)(1)(D) as part of the interim effluent limitation for aluminum. The interim effluent limitations for aluminum limits the mass loading to current levels. The PPP shall be developed in conformance with Water Code section 13263.3(d)(3).

4. Compliance Schedules

a. **Regulatory Basis for Compliance Schedules.** 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 September 25, 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 Water Code section 13300 or a Cease and Desist Order pursuant to Water Code

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.

b. This Order establishes a compliance schedule for the new, final, water quality-based effluent limitations for aluminum and requires full compliance by **<Five years following Order adoption>**

5. Construction, Operation, and Maintenance Specifications

The Discharger utilizes ponds for the disposal of wastewater. Specifications have been included in this permit to assure that the ponds do not cause a nuisance.

6. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

7. Other Special Provisions

Other special provisions in this Order include specific requirements for a constituent study, a discharge point and receiving water monitoring study, change of discharge point, change of ownership, and requirements for professional reports.

VIII. PUBLIC PARTICIPATION

The Regional Water Board is considering the issuance of WDRs that will serve as an NPDES permit for the CalMat Company's Sanger Sand and Gravel Plant. As a step in the WDRs adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDRs 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 mailing to interested parties on _____ and posting by the Discharger at the site, the local post office, and county courthouse, on or before_____.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should 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 5:00 p.m. on **<<Date>>**

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: **25/26 January 2007**
Time: 8:30 a.m.
Location: Central Valley Regional Water Quality Control Board
11020 Sun Center Drive #200
Rancho Cordova, CA 95670-6114

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/centralvalley/ 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 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 8:00 a.m. and 5:00 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 Dale Harvey at (559) 445-6190

ATTACHMENT G - STANDARD MONITORING WELL PROVISIONS

Prior to installation of groundwater monitoring wells, the Discharger shall submit a work plan containing at least the information specified in this document. Wells may be installed after the Executive Officer's approval of the work plan. Upon installation of the monitoring wells, the Discharger shall submit a report of results, as described below. A registered geologist, certified engineering geologist, or civil engineer registered or certified by the State of California must sign all workplans and reports.

MONITORING WELL INSTALLATION WORKPLAN

A. General Information:
- Monitoring well locations and rationale
- Survey details
- Equipment decontamination procedures
- Health and safety plan
- Topographic map showing any existing monitoring wells, proposed wells, waste handling facilities, utilities, and other major physical and man-made features.

B. Drilling Details: describe drilling and logging methods

C. Monitoring Well Design:

Casing diameter	Type of well cap
Borehole diameter	Size of perforations and rationale
Depth of surface seal	Grain size of sand pack and rationale
Well construction materials	Thickness and position of bentonite seal and sand pack
Diagram of well construction	Depth of well, length and position of perforated interval

D. Well Development:
- Method of development to be used
- Method of determining when development is complete
- Method of development water disposal

E. Surveying Details: discuss how each well will be surveyed to a common reference point

F. Soil Sampling (if applicable):

Cuttings disposal method	Number of soil samples and rationale
Analyses to be run and methods	Location of soil samples and rationale
Sample collection and preservation method	QA/QC procedures
Intervals at which soil samples are to be collected	

G. Well Sampling:
- Minimum time after development before sampling (48 hours)
- Well purging method and amount of purge water
- Sample collection and preservation method
- QA/QC procedures

H. Water Level Measurement:

The reference point and ground surface elevations at each monitoring well shall be determined within 0.01 foot. Method and time of water level measurement shall be specified.

I. Proposed time schedule for work.

A. Monitoring Well Installation Report of Results

A. Well Construction:

Number and depth of wells drilled
Date(s) wells drilled
Description of drilling and construction
Approximate locations relative to WWTF and discharge area(s)
A well construction diagram for each well containing the following details:

Monitoring well number	Depth to top of bentonite seal[1]
Location	Thickness of bentonite seal
Date drilled	Thickness of concrete grout
Total depth drilled[1]	Boring diameter
Depth of open hole[1, 2]	Casing diameter
Footage of hole collapsed	Casing material
Length of slotted casing installed	Size of perforations
Depth of bottom of casing[1]	Well elevation at top of casing
Depth to top of sand pack[1]	Date of water level measurement
Number of bags of sand	Depth to which water was first found[1]
Thickness of sand pack	Depth to which water was found after perforating[1]

[1] From ground surface
[2] Same as total depth if no caving appears

B. Well Development:

Date(s) of development of each well
Method of development
Volume of water purged from well
How well development completion was determined
Method of effluent disposal
Field notes from well development should be included in report

C. Well Surveying: provide for each well

Reference elevation (feet above mean sea level to within 0.01 foot)
Ground surface elevation (feet above mean sea level to within 0.01 foot)
Horizontal geodetic location, where the point of beginning shall be described by the California State Plane Coordinate System, 1983 datum
Surveyor's notes

D. Water Sampling:

- Date(s) of sampling
- How well was purged
- How many well volumes purged
- Levels of temperature, EC, and pH at stabilization
- Sample collection, handling, and preservation methods
- Sample identification
- Analytical methods used
- Laboratory analytical data sheets
- Water level elevation(s)
- Groundwater contour map

E. Soil Sampling (if applicable):

- Date(s) of sampling
- Sample collection, handling, and preservation method
- Sample identification
- Analytical methods used
- Laboratory analytical data sheets