

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2005-0058

NPDES NO. CA0082201

WASTE DISCHARGE REQUIREMENTS
FOR
KAWEAH RIVER ROCK CO.
SAND AND GRAVEL PLANT
TULARE COUNTY

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

1. Kaweah River Rock Co. (hereafter Discharger) submitted a Report of Waste Discharge (ROWD), dated 22 April 2003, to renew its permit under the National Pollutant Discharge Elimination System (NPDES). Supplemental information to complete filing of the application was submitted on 8 May 2003.
2. The discharge was governed by Waste Discharge Requirements specified in Order No. 98-202, adopted by the Regional Board on 23 October 1998.
3. The Discharger owns and operates a sand and gravel mining and processing plant. The plant is in the western half of Section 4, and the eastern half of Section 5, T18S, R27E, MDB&M. Discharges are to the St. Johns River, a water of the United States, and a distributary of the Kaweah River (at a point below Lake Kaweah), at the point, Latitude 36° 23' 56" and Longitude 119° 03' 50". Source water for the plant is from groundwater. The plant and discharge are within the Tulare Lake Basin, specifically within the Kaweah Delta Hydrologic Area (No. 558.10), as depicted on interagency hydrologic maps prepared by the California Department of Water Resources (DWR) in 1986.
4. The Discharger's effluent consists of groundwater that infiltrates into the sand and gravel quarry, and storm water. Groundwater and storm water are collected in a settling pond (Pond No. 1) prior to discharge to the St. Johns River via Discharge 001, as shown on Attachment A, a part of this Order. Discharge from the facility is intermittent, occurring only when the pump from Pond No. 1 is activated.
5. A portion of the pumped groundwater is diverted to a groundwater recharge system west of the facility and 600 feet north of the river. The groundwater recharge system is a drainage basin that consists of underground perforated pipes within a layer of gravel. The perforated pipes allow water to drain into the surrounding gravel layer and percolate into the local groundwater aquifer.

6. Wash water that is generated from processing is discharged to a second settling pond (Pond No. 2) and recycled. Pond No. 2 is about 600 feet from the eastern boundary of the plant. (Wash water does not discharge to the St. Johns River.)
7. The Discharger's ROWD describes the discharge as follows for 1999 through 2002:

Average Flow: 0.72 million gallons per day (mgd). Maximum Flow: 1.74 mgd:

<u>Constituent</u>	<u>Units</u>	<u>Long Term Average</u>	<u>Maximum Monthly Average</u>
Total Suspended Solids	mg/L	2.5	12
pH	Standard units	7.6	7.8
Conductivity @ 25°C (EC)	µmhos/cm	460	529

8. Monthly monitoring data submitted by the Discharger for January 1999 through December 2003 indicates the discharge has the following characteristics:

<u>Constituent</u>	<u>Average Weekly</u>			<u>Daily</u>
	<u>Average</u>	<u>Max</u>	<u>Min</u>	<u>Max</u>
EC (µmhos/cm)	489.5	770	48	770
TSS ¹ (mg/L)	8.5	29	4	29
Settleable Solids ² (mL/L)	--	--	--	9
pH (Std units)	--	8.1	6.7	8.1
Oil and Grease ³ (mg/L)	--	--	--	ND

¹ Average for TSS is based on detected values only. 161 out of 236 (68%) of sample results were non-detect.

² Only 1 detect out of 236 samples, 99.6% of sample results were reported as ND. Based on one detect of 9 mL/L.

³ The Discharger is required to monitor oil and grease annually; however, only one sampling data point for oil and grease was available, taken October 2000.

9. Monthly receiving water monitoring data submitted by the Discharger for January 1999 to December 2003 indicates that St. Johns River, in the vicinity of the facility, has the following characteristics:

<u>Constituent</u>	<u>R1</u>				<u>R2</u>			
	<u>n</u>	<u>Average</u>	<u>Max</u>	<u>Min</u>	<u>n</u>	<u>Average</u>	<u>Max</u>	<u>Min</u>
EC (µmhos/cm)	287	109.5	141.25	72.7	338	183.2	250.3	142.6
pH (std units)	151	--	8.2	6.8	233	--	8.2	7.0
<u>Turbidity (NTU)</u>	151	2.9	106 ¹	0	238	2.6	95 ¹	0

¹ Heavy rain event in November 2002

10. The permitted maximum effluent flow rate will be reduced from 2.25 mgd specified in Order No. 98-202 to 1.99 mgd at the request of the Discharger. Between 1999 and 2002, the maximum flow reported was 1.74 mgd due largely to heavy rains, as indicated below:

<u>Year</u>	<u>Minimum Flow Reported</u> (mgd)	<u>Maximum Flow Report</u> (mgd)	<u>Average Annual Flow</u> (mgd)
1999	0.21	1.45	0.75
2000	0.12	1.74	0.82
2001	0.15	1.45	0.69
2002	0.16	1.38	0.62

11. Domestic waste generated onsite is discharged to a septic tank/leach field system regulated by Tulare County.
12. Depth to the first encountered groundwater (unconfined) in the area ranges from 10 to 20 feet below ground surface (bgs). Groundwater flows to the west and southwest; and it is of high quality with a variable EC around 350 µmhos/cm.
13. Shallow soils in the area consist of young and old alluvial deposits. The young alluvium consists of fluvial gravelly sand, silty sand, silt, and clay deposited to a depth of 30 to 40 feet bgs. The old alluvium underlies the young alluvium and consists of fine to very coarse gravel, sand, silt, and clay.
14. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition* (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives (WQOs), and contains implementation programs and policies to achieve WQOs for all waters of the Basin. This Order implements the Basin Plan.
15. U.S. Environmental Protection Agency (USEPA) adopted the *National Toxics Rule* (NTR) on 5 February 1993 and the *California Toxics Rule* (CTR) on 18 May 2000. These Rules contain water quality standards applicable to this discharge. The State Water Resources Control Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (known as the State Implementation Plan (SIP)), which contains guidance on implementation of the NTR and the CTR.

RECEIVING WATER BENEFICIAL USES

16. The Basin Plan at page II-2.00 states: “The existing and probable beneficial uses which currently apply to surface waters of the basins are presented in Figure II-1 and Table II-1. The beneficial uses of any specifically identified water body generally apply to its tributary

streams.” The Basin Plan does not specifically list beneficial uses for the St. Johns River; however, it is a Valley Floor Water.

The Basin Plan designates the beneficial uses of Valley Floor Waters (Hydrologic Area 558.10) as:

- agricultural supply (AGR);
- industrial service supply (IND);
- industrial process supply (PRO);
- water contact recreation (REC-1);
- non-contact water recreation (REC-2);
- warm freshwater habitat (WARM);
- wildlife habitat (WILD);
- support of rare, threatened, or endangered species (RARE); and
- groundwater recharge (GWR).

EFFLUENT LIMITATIONS AND REASONABLE POTENTIAL ANALYSES

17. 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.
18. 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 submitted most of the required monitoring data, but did not submit any data for acrolein, acrylonitrile, 2-chloroethylvinyl ether, benzidine, 1,2-diphenylhydrazine, hexachlorocyclopentadiene, and n-nitrosodimethylamine. This Order requires the Discharger to provide the missing data.
19. Federal regulations require effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause, or contribute to an in-stream excursion above a narrative or numerical water quality standard. Based on information submitted as part of the application and as directed by monitoring and reporting programs the Regional Board finds that the discharge does have a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard for EC. A summary of the monitoring data used to make this determination is included in the Information Sheet and Attachment B. Effluent limitations for EC are included in this Order.
20. **EC, Chloride and Boron:** Water from St. Johns River is used for crop irrigation. The Basin Plan states that EC for the Kaweah River reach below Lake Kaweah must not exceed 175

µmhos/cm during the irrigation season. The St. Johns River is a distributary of the Kaweah River below Lake Kaweah, and therefore part of the Kaweah River reach. The irrigation season in the Tulare Lake Basin area typically extends 9 to 10 months or between the months of late March through November of each year.

21. The Discharger's monitoring data submitted under Order No. 98-202 shows that for EC, the maximum effluent concentration was 770 µmhos/cm and the average discharge concentration was 488.3 µmhos/cm. The monitoring data show that the wastewater discharge may have caused significant increases in the Saint Johns River EC, as follows:

<u>Year</u>	<u>Month</u>	<u>Upstream EC</u>	<u>Downstream EC</u>	<u>Effluent EC</u>
2003	January	86	232	575
	February	86	153	560
	March	164	272	448
	April	No flow	No flow	580
	May	60	111	573
	July	53	89	545
	August	75	157	525
	September	95	135	518
	October	No flow	No flow	478
	November	No flow	No flow	525
	December	89	228	533
	2002	January	161	236
February		136	240	613
March		157	301	528
April		103	231	493
May		71	139	520
June		52	103	530
July		48	149	513
August		72	222	523
September		No flow	No flow	488
October		No flow	No flow	483
November		90	220	605
December		89	261	533

22. Page IV-9, Discharges to Navigable Waters, of the Basin Plan requires, at a minimum, discharges to surface waters to comply with the following effluent limits:
- Maximum EC not to exceed the quality of the source water plus 500 µmhos/cm or 1,000 µmhos/cm, whichever is more stringent, and
 - Discharges shall not exceed an EC of 1,000 µmhos/cm, a chloride content of 175 mg/l or a boron content of 1.0 mg/l.

23. Self-monitoring data presented in Finding 21 indicates that on several occasions the discharges may have caused excursions of the Basin Plan EC objective of 175 $\mu\text{mhos/cm}$ during the irrigation season. To ensure compliance with the Basin Plan objective, this Order includes a receiving water limitation of 175 $\mu\text{mhos/cm}$ for EC applicable during the irrigation season (described in the Basin Plan as typically April 1 through November 30 of each year) based on AGR. However, the downstream monitoring data was reportedly collected from the slipstream of the discharge and not representative of its impact on the St. Johns River. Thus, the downstream sampling point should be reevaluated. To comply with Section IV of the Basin Plan, this Order establishes a maximum EC effluent limitation of 1,000 $\mu\text{mhos/cm}$.
24. This Order requires the Discharger to monitor its effluent to characterize chloride and boron to evaluate whether effluent limits are necessary. If the data indicates that chloride or boron are present in concentrations that have the reasonable potential to cause an excursion above a water quality objective, this Order will be reopened to include effluent limitations for these constituents.
25. **pH** – The Basin Plan includes numeric water quality objectives that the pH “...*not be depressed below 6.5, raised above 8.3, or changed at any time more than 0.3 units from normal ambient pH.*” St. Johns River is subject to periods of little to no flow, at which times there is no assimilative capacity. Therefore, this Order requires the effluent pH to be within 6.5 to 8.3 units.
26. Order No. 98-202 specifies effluent limitations for total suspended solids, settleable solids, and oil and grease that reflect technology-based limits developed using best professional judgment. Results of water quality monitoring indicate detected concentrations of these constituents in the discharge do not result in reasonable potential for the discharge to exceed water quality criteria or objectives. Therefore, technology based limitations are protective of the water quality objectives contained in the Basin Plan. This Order carries over these effluent limitations established by the previous Order.
27. The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Resources Control Board Resolution 68-16. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. The impact on existing water quality will be insignificant.
28. The Basin Plan states that; “The numerical and narrative water quality objectives define the least stringent standards that the Regional Board will apply to regional waters in order to protect the beneficial uses.” This Order contains Receiving Water Limitations based on the Basin Plan numerical and narrative water quality objectives for Biostimulatory Substances, Chemical Constituents, Color, Dissolved Oxygen, Floating Material, Oil and Grease, pH, Pesticides, Radioactivity, Salinity, Sediment, Settleable Material, Suspended Material, Tastes and Odors, Temperature, Toxicity and Turbidity.

GROUNDWATER LIMITATIONS

29. The beneficial uses of the underlying groundwater, as identified in the Basin Plan for the Kaweah Basin Detailed Analysis Unit (DAU) 242 are: Municipal (MUN), AGR, IND, PRO, REC-1, and REC-2.
30. The groundwater recharge system and unlined settling ponds both discharge to underlying groundwater.
31. Water quality objectives for groundwater include narrative objectives for chemical constituents and toxicity. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, or animals. The chemical constituent objective states groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use.
32. For groundwaters designated as MUN, the Basin Plan establishes numerical objectives for bacteria and for chemical constituents related to drinking water quality. Numerical water quality objectives related to drinking water quality include maximum contaminant levels (MCLs) in Title 22, CCR (i.e., Section 64431 (Inorganic Chemicals); Section 64431 (Fluoride); Section 64443 (Radioactivity); Section 64444 (Organic Chemicals); and Section 64449 (Secondary MCLs - Consumer Acceptance Limits)).
33. There is discharge to underlying groundwater from the groundwater recharge operations and unlined settling ponds. Iron and manganese are present in most soils in relatively insoluble forms. Under reducing (anaerobic) conditions these constituents are converted to soluble forms that can readily migrate to groundwater in water percolating beneath ponds or through disposal site soils. This can result in iron and manganese groundwater concentrations that exceed applicable MCLs. A Regional Board investigation conducted in the early 1990s confirmed that conditions conducive to the conversion of insoluble iron and manganese to more soluble forms can occur in gravel mining recycle and wash water ponds. Anecdotal data from sites where organic wastes are land applied indicate that arsenic in the soil column is also converted under reducing conditions to more soluble forms and leached to groundwater at levels exceeding MCLs.

Monitoring of the groundwater must be conducted to determine if the discharge has caused an increase in constituent concentrations, when compared to background. The monitoring must, at a minimum, require a complete assessment of groundwater impacts including the vertical and lateral extent of any degradation, an assessment of all wastewater-related constituents which may have migrated to groundwater, an analysis of whether additional or different methods of treatment or control of the discharge are necessary to provide best practicable treatment or control to comply with Resolution No. 68-16. If monitoring indicates that the discharge has incrementally increased constituent concentrations in groundwater above background, this permit may be reopened and modified.

STORM WATER

34. Storm water from the facility is combined with infiltrated groundwater and discharged to the St. Johns River through Outfall 001, subject to the requirements of this Order. Additional storm water requirements are not necessary as long as all storm water is collected and discharged through Outfall 001. If storm water is discharged from the facility in any other manner, the Discharger will need to obtain coverage under the California Industrial Storm Water General Permit, NPDES No. CAS000001.

GENERAL FINDINGS

35. Section 13267 of the California Water Code states, in part, “(a) A regional board, in establishing...waste discharge requirements... may investigate the quality of any waters of the state within its region” and “(b) (1) In conducting an investigation..., the regional board may require that any person who... discharges... waste...that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. The attached Monitoring and Reporting Program is issued pursuant to California Water Code Sections 13267 and 13383. The groundwater monitoring and reporting program required by this Order and the attached Monitoring and Reporting Program are necessary to determine compliance with these waste discharge requirements. The Discharger is responsible for the discharges of waste at the facility subject to this Order.
36. The information in the attached Information Sheet was considered in developing the Findings of this Order. The Information Sheet, Monitoring and Reporting Program No. R5-2005-0058, and Attachments A, B are a part of this Order.
37. The U.S. Environmental Protection Agency (USEPA) and the Regional Board have classified this discharge as a minor discharge.
38. The action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, *et seq.*) in accordance with Section 13389 of the California Water Code (CWC).
39. The Discharger and interested agencies and persons were notified of the intent to prescribe waste discharge requirements for this discharge and provided with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
40. In a public meeting, all comments pertaining to the discharge were heard and considered.
41. This Order shall serve as an NPDES permit pursuant to Section 402 of the CWA, and amendments thereto, and shall take effect upon the date of hearing, provided USEPA has no objections. If USEPA objects to the NPDES permit aspects of this Order, discharge to the St.

Johns River shall be prohibited until the objection is resolved. The objection shall not void other aspects of this Order.

IT IS HEREBY ORDERED that Order No. 98-202 is rescinded and pursuant to CWC Sections 13263, 13267, 13337, and 13383, Kaweah River Rock Company, their agents, successors and assigns, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

[Note: Other prohibitions, conditions, definitions, and some methods of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements (National Pollutant Discharge Elimination System)" dated March 1991.]

A. Discharge Prohibitions:

1. Discharge of wastewater at a location or in a manner different from that described in the Findings is prohibited.
2. The by-pass or overflow of wastes is prohibited, except as allowed by Standard Provision A.13. [See attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements (NPDES)"].
3. The discharge of wash water to surface waters is prohibited.

B. Effluent Limitations:

1. Effluent shall not exceed the following limits:

<u>Constituent</u>	<u>Units</u>	<u>Average Monthly Limit</u>	<u>Maximum Daily Limit</u>
Total Suspended Solids	mg/L	25	45
Settleable Solids	mL/L	0.1	0.5
Oil and grease	mg/L	--	35
EC	µmhos/cm	--	1,000

2. The discharge shall not have a pH less than 6.5 standard units nor greater than 8.3 standard units.
3. The daily maximum discharge flow shall not exceed 1.99 mgd.
4. Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

Minimum for any one bioassay ----- 70%
 Median for any three or more consecutive bioassays ---- 90%

C. Receiving Water Limitations

Receiving Water Limitations are based upon water quality objectives contained in the Basin Plan. As such, they are a required part of this permit. The discharge shall not cause the following in the receiving water:

1. Un-ionized ammonia to be present in amounts that adversely affect beneficial uses or that exceed 0.025 mg/L (as N).
2. Biostimulatory substances to be present in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
3. The fecal coliform concentration in any 30-day period to exceed a geometric mean of 200 MPN/100 mL or cause more than 10 percent of total samples to exceed 400 MPN/100 mL.
4. Discoloration that causes nuisance or adversely affects beneficial uses.
5. Concentrations of dissolved oxygen to fall below 5.0 mg/L. The monthly median dissolved oxygen concentrations in the main water mass (at centroid of flow) of streams to fall below 85 percent of saturation concentration, and the 95 percentile concentration to fall below 75 percent of saturation concentration.
6. Floating material, including but not limited to solids, liquids, foams, and scum, in concentrations that create a nuisance or adversely affect beneficial uses.
7. 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.
8. The pH of water to fall below 6.5, exceed 8.3, or changed at any time more than 0.3 units from normal ambient pH.
9. Pesticides to be present in concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses.
10. Radionuclides to be present in concentrations that are deleterious to human, plant, animal, or aquatic life nor which result in accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
11. The conductivity during the irrigation season to exceed 175 μ mhos/cm.
12. Suspended sediment load and the suspended sediment discharge rate to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

13. Settleable material in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.
14. Suspended material in concentrations that cause nuisance or adversely affect beneficial uses.
15. 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.
16. The ambient temperature to increase more than 5°F.
17. Toxic substances to be present in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.
18. Changes in turbidity that cause nuisance or adversely affect beneficial uses. The turbidity to increase as follows:
 - a. More than 1 Nephelometric Turbidity Unit (NTU) where natural turbidity is between 0 and 5 NTU.
 - b. More than 20 percent where natural turbidity is between 5 and 50 NTU.
 - c. More than 10 NTUs where natural turbidity is between 50 and 100 NTU.
 - d. More than 10 percent where natural turbidity is greater than 100 NTU.
19. Violation of any applicable water quality standard for receiving waters adopted by the Regional Board or the State Water Resources Control Board pursuant to the Clean Water Act and regulations adopted thereunder.

D. Groundwater Limitations

Release of waste constituents from any storage, treatment, or disposal component shall not, in combination with other sources of the waste constituents, cause groundwater within influence of the facility and discharge area(s) to contain waste constituents in concentrations in excess of background quality.

E. Provisions

1. Facility ponds shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
2. The Discharger shall comply with Monitoring and Reporting Program No. R5-2005-0058, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.

When requested by USEPA, the Discharger shall complete and submit Discharge Monitoring Reports to USEPA. The submittal date shall be no later than the submittal date specified in the Monitoring and Reporting Program for Discharger Self Monitoring Reports.

3. The Discharger shall comply with all the items of the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements (NPDES)," dated March 1991, which are part of this Order.
4. The Discharger shall conduct the chronic toxicity testing specified in the Monitoring and Reporting Program. If the testing indicates that the discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the water quality objective for toxicity, the Discharger shall initiate a Toxicity Identification Evaluation (TIE) to identify the causes of toxicity. Upon completion of the TIE, the Discharger shall submit a workplan to conduct a Toxicity Reduction Evaluation (TRE) and, after Regional Board evaluation, conduct the TRE. This Order will be reopened and a chronic toxicity limitation included and/or a limitation for the specific toxicant identified in the TRE included. Additionally, if a chronic toxicity water quality objective is adopted by the State Water Resources Control Board, this Order may be reopened and a limitation based on that objective included.
5. **Hydrogeologic Investigation.** The Discharger shall submit a technical report in the form of a work plan and implementation schedule to conduct a hydrogeologic investigation to determine the potential impacts of the Discharger's historical operations upon underlying groundwater. The work plan shall provide a summary of data sources and methodologies that will be employed to determine: (a) the local direction of groundwater flow; (b) groundwater quality upgradient, downgradient and beneath the site; and (c) the magnitude and significance any adverse impacts by the operation on underlying groundwater. Constituents of concern for study shall include, but not be limited to, EC, total dissolved solids, arsenic, iron, and manganese. All proposed sampling frequencies and sample collection, preservation, and quality control and quality assurance measures shall also be described.

Existing wells proposed for inclusion in data collection activities shall be of known construction. New wells proposed for study shall comply with appropriate standards 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 Tulare County pursuant to CWC Section 13801.

The Discharger shall comply with the following compliance schedule in implementing the work required by this Provision:

<u>Task</u>	<u>Description</u>	<u>Compliance Date</u>
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- | | | |
|-----------|--|---|
| a. | Submit a technical report in the form of a work plan and proposed implementation schedule. | 1 August 2005 |
| b. | Implement approved work plan and implementation schedule. | 30 days following written approval by the Executive Officer of the work plan and implementation schedule of Task a. |
| c. | Submit status report. | Six months following initiation of Task b. |
| d. | Submit a final technical report for Executive Officer approval describing investigation results. | 12 months following completion of Task b. |

Technical reports submitted pursuant to this Provision shall be subject to the requirements of Provision E.6 and are subject to Executive Officer approval.

6. 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, California Code of Regulations (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.
7. By **1 August 2005**, the Discharger shall sample twice and submit the results for effluent and receiving water for acrolein, acrylonitrile, 2-chloroethylvinyl ether, benzidine, 1,2-diphenylhydrazine, hexachlorocyclopentadiene, and n-nitrosodimethylamine. Reporting shall conform with SIP Reporting Requirements, Section 2.4 *et seq.* In particular, the reported Minimum Levels (ML) shall be at least as low as the lowest ML for each priority pollutant specified in Appendix 4 of the SIP.

If, after review of the results, it is determined that the discharge has reasonable potential to cause or contribute to an exceedance of a water quality objective this Order will be reopened and effluent limitations added for the subject constituents.

8. 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.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Regional Board and a statement. The statement shall comply with the signatory paragraph of Standard Provision D.6 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

9. The Board may modify or reopen this Order prior to its expiration date in any of the following circumstances:
 - a. If present or future investigations demonstrate that the discharge governed by this Order has a reasonable potential to cause or contribute to adverse impacts on water quality and/or beneficial uses of the receiving waters;
 - b. New or revised water quality objectives (WQOs) come into effect for the receiving water. In such cases, effluent limitations in this permit will be modified as necessary to reflect updated WQOs. Adoption of effluent limitations contained in this Order is not intended to restrict in any way future modifications based on legally adopted WQOs or as otherwise permitted under federal regulations governing NPDES permit modifications;
 - c. If translator or other water quality studies provide a basis for determining that a permit condition(s) should be modified. The Discharger may request permit modification on this basis. The Discharger shall include in any such request an antidegradation and anti-backsliding analysis.
10. Prior to making any change in the discharge point, place of use, or purpose of use of the wastewater, the Discharger shall obtain approval of, or clearance from the State Water Resources Control Board (Division of Water Rights).
11. The permit provisions of this Order expire on **27 April 2010**. The Discharger must file a Report of Waste Discharge in accordance with Title 23, CCR, and a complete USEPA application form no later than 180 days in advance of the expiration for renewal of the NPDES permit if it wishes to continue discharge to the St. Johns River. Non-NPDES aspects of this Order implemented in accord with CWC sections 13263 and 13267 do not expire. Failure to file for renewal shall not rescind authorization to discharge to land in accordance with terms and conditions specified herein.

WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2005-0058
KAWEAH RIVER ROCK CO.
SAND AND GRAVEL PLANT
TULARE COUNTY

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I, THOMAS R. PINKOS, Acting Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 29 April 2005.

THOMAS R. PINKOS, Executive Officer

BLH: 4/29/05

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2005-0058

NPDES NO. CA0082201

MONITORING AND REPORTING PROGRAM
FOR
KAWEAH RIVER ROCK CO.
SAND AND GRAVEL PLANT
TULARE COUNTY

Specific sample station locations shall be established with concurrence of the Regional Board's staff, and the Discharger shall attach a copy of the Regional Board staff's written concurrence and a description of the stations to this Monitoring and Reporting Program. All analyses shall be performed in accordance with the latest edition of *Guidelines Establishing Test Procedures for Analysis of Pollutants*, promulgated by USEPA (40 CFR 136) or other procedures approved by the Regional Board. Method Detection Limits (MDL) and Minimum Levels (ML) shall be reported for each constituent in all monitoring reports. All monitoring and reporting shall conform with SIP Reporting Requirements, Section 2.4 *et seq.* In particular, the reported MLs shall be at least as low as the lowest ML for each priority pollutant specified in Appendix 4 of the SIP. In reporting data, the Discharger shall indicate whether any analysis was performed using a method not in conformance with USEPA's Guidelines.

EFFLUENT MONITORING

Effluent samples shall be collected at Discharge Point 001 downstream from the last connection through which wastes can be admitted to respective disposal sites. Effluent samples shall be representative of the volume and quality of the discharge. Time of collection of samples shall be recorded. Effluent monitoring shall include at least the following:

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
Flow	mgd	Metered	Daily
EC at 25°C	µmhos/cm	Grab	Twice/week
Settleable Solids	mL/L	Grab	Weekly
Total Suspended Solids	mg/L	Grab	Weekly
Chloride	mg/L	Grab	Monthly ⁵

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
Boron	mg/L	Grab	Monthly ⁵
pH	standard units	Grab	Monthly ⁵
Hardness	mg/L	Grab	Once ⁶
Iron ³	mg/L	Grab	Monthly ⁵
Manganese ³	mg/L	Grab	Monthly ⁵
Oil and Grease ¹	mg/L	Grab	Annually
Acute Toxicity ⁴	%Survival	24-hr composite ²	Once per permit term

¹ USEPA Test Method 1664A.

² Composite samples shall be flow proportional composite samples.

³ Dissolved concentrations.

⁴ The acute bioassays samples shall be analyzed using methods in EPA-821-R-02-012, Fifth Edition, or later amendment with Board staff approval. Temperature and pH shall be recorded at the time of bioassay sample collection. Test species shall be fathead minnows (*Pimephales promelas*).

⁵ Monthly sampling may be reduced to quarterly sampling after 12 consecutive monthly samples upon written concurrence of the Executive Officer.

⁶ Concurrent with priority pollutant sampling.

If the discharge is intermittent rather than continuous, the Discharger shall monitor and record data for all of the constituents listed above on the first day of each intermittent discharge and thereafter the frequencies in the schedule shall apply. In no event shall the Discharger be required to monitor and record data more often than twice the frequencies listed in the schedule.

If results of monitoring a pollutant appear to violate effluent limitations, the frequency of sampling must be increased to daily until compliance is verified.

RECEIVING WATER MONITORING

All receiving water samples shall be grab samples. Receiving water samples shall be taken when there is a discharge to the St. Johns River and when there is water in the river. Receiving water monitoring shall include at least the following:

Station	Description
R-1	100 feet upstream from the point of discharge.
R-2	At a location below discharge point selected with concurrence of Regional Board staff.

<u>Constituents</u>	<u>Units</u>	<u>Station</u>	<u>Sampling Frequency</u>
Flow	mgd	R-1	Weekly ¹
EC at 25°C	µmhos/cm	R-1, R-2	Weekly
pH	standard units	R-1, R-2	Weekly
Turbidity	NTU	R-1, R-2	Weekly
Hardness	mg/L	R-1, R-2	Monthly

¹ McKays Point gauging station, St. Johns River. Record daily during irrigation season.

In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by R-1 and R-2. Attention shall be given to the presence or absence of:

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

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

CALIFORNIA TOXICS RULE MONITORING

A. Priority Pollutants

The State Water Resources Control Board (SWRCB) adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (known as the State Implementation Policy or SIP). The SIP states that the Regional Boards will require periodic monitoring for pollutants for which criteria or objectives apply and for which no effluent limitations have been established. Accordingly, the Regional Board is requiring, as part of this Monitoring and Reporting Program, that the Discharger conduct **effluent monitoring and receiving water monitoring** of priority pollutants **on or before 28 July 2009**. The list of priority pollutants and required minimum levels (ML) (or criterion quantitation limitations) is included as Attachment C. The Discharger must analyze **pH and hardness** at the same time as priority pollutants.

All analyses shall be performed at a laboratory certified by the California Department of Health Services. The laboratory is required to submit the Minimum Level (ML) and the Method Detection Limit (MDL) with the reported results for each constituent. The MDL should be as close as practicable to the USEPA MDL determined by the procedure found in 40 CFR Part 136. The results of analytical determinations for the presence of chemical constituents in a sample shall use the following reporting protocols:

- a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory.
- b. Sample results less than the reported ML, 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.
- c. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration." Numerical estimates of data quality may be by percent accuracy (+ or – a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.
- d. Sample results that are less than the laboratory's MDL shall be reported as "Not Detected" or ND.

B. Dioxin

The Discharger shall test effluent and receiving water for each of the 17 TCDD congeners listed in Table 4, *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP). The Discharger shall report the analytical results of the effluent monitoring for each congener, including the minimum quantifiable level (ML) and the minimum detection level (MDL), and the measured or estimated concentration. The Discharger shall multiply each measured or estimated congener concentration by its respective toxicity equivalence factor (TEF) value and report the product of these values. The Discharger must monitor for the presence of the 17 congeners on or before **28 July 2009**. Results of sampling shall be submitted on or before **26 October 2009**. Reporting shall conform with SIP Reporting Requirements Section 2.4 *et seq.*

THREE SPECIES CHRONIC TOXICITY MONITORING

Chronic toxicity monitoring shall be conducted to determine whether the effluent is contributing toxicity to the receiving water. The testing shall be conducted as specified in EPA-821-R-02-013, *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, October 2002. Composite samples of the effluent shall be collected prior to discharge to St. Johns River. Twenty-four hour composite samples shall be representative of the volume and quality of the discharge. Time of collection samples shall be recorded. Dilution waters shall be collected upstream of the discharge to the St. Johns River. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay and reported with the test results. Both the reference toxicant and effluent test must meet all

test acceptability criteria as specified in the chronic toxicity manual. If the test acceptability criteria are not achieved, then the Discharger must re-sample and re-test within 14 days. Chronic toxicity monitoring shall include the following:

Species: *Pimephales promelas*, *Ceriodaphnia dubia* and *Selenastrum capricornutum*
 Frequency: By **28 July 2009**

	<u>Dilutions (%)</u>					<u>Controls</u>	
	<u>100</u>	<u>50</u>	<u>25</u>	<u>12.5</u>	<u>6.25</u>	<u>St. Johns River</u>	<u>Lab Water</u>
% Effluent	100	50	25	12.5	6.25	0	0
% Dilution Water ¹	0	50	75	87.5	93.75	100	0
% Lab Water ²	0	0	0	0	0	0	100

¹ Dilution water shall be receiving water taken upstream from the discharge point. The dilution series may be altered upon approval of Regional Board staff.

² Lab water shall meet EPA protocol requirements

REPORTING

Monitoring results shall be submitted to the Regional Board by the **1st day of the second month** following sample collection. Quarterly monitoring results shall be submitted by the **1st day of the second month** following the end of each calendar quarter (i.e., by 1 February, 1 May, 1 August, and 1 November) following each calendar quarter. Annual monitoring results shall be submitted by **1 February** of each year.

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 should be determined and recorded.

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.

By **1 February of each year**, the Discharger shall submit a written report to the Executive Officer containing the following:

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

- b. A statement certifying when monitoring instruments and devices for purposes of assuring compliance with this Order were last calibrated, including identification of who performed the calibration.

The Discharger may also be requested to submit an annual report to the Regional 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 facility's 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.

All reports submitted in response to this Order shall comply with the signatory requirements of Standard Provision D.6.

The Discharger shall implement the above monitoring program on the first day of the month following effective date of this Order.

THOMAS R. PINKOS, Executive Officer

29 April 2005

(Date)

BLH: 4/29/05

INFORMATION SHEET

ORDER NO. R5-2005-0058
NPDES NO. CA0082201
KAWEAH RIVER ROCK CO.
SAND AND GRAVEL PLANT
TULARE COUNTY

BACKGROUND INFORMATION

Kaweah River Rock Co. (hereafter Discharger) owns and operates a sand and gravel mining and processing plant along the St. Johns River two miles southeast of Woodlake. Infiltrated groundwater at the bottom of the sand and gravel quarry is intercepted by ditches and then gravity flows to a settling pond (Pond No. 1). Storm water also flows to Pond No. 1.

Water from Pond No. 1 is discharged to the St. Johns River, a Valley Floor Water and water of the United States. Wash water from the processing is discharged to a settling pond (Pond No. 2) and recycled. Pond No. 2 is about 600 feet from the eastern boundary of the plant. No wash water is discharged into the St. Johns River.

The St. Johns River is a distributary of the Kaweah River and it receives water from Lake Kaweah. The St. Johns River flows to the west for about 24 miles before it drains into East Branch Cross Creek about one mile west of Road 80. Based on data from the Kaweah Delta Water Conservation District, from 1980 through 2004, monthly flows of the St. Johns River average 8,502, cubic feet per second with a range of 700-21,000 cubic feet per second.

Depth to the first encountered groundwater (unconfined) in the area ranges from 10 to 20 feet below ground surface; groundwater flows to the west-southwest.

BENEFICIAL USES OF THE RECEIVING WATER

The Basin Plan designates the beneficial uses of Valley Floor Waters, such as St. Johns River (Hydrologic Area 558.10) as:

- agricultural supply (AGR);
- industrial service supply (IND);
- industrial process supply (PRO);
- water contact recreation (REC-1);
- non-contact water recreation (REC-2);
- warm freshwater habitat (including spawning) (WARM);
- wildlife habitat (WILD);
- support of rare, threatened, or endangered species (RARE); and
- groundwater recharge (GWR).

The beneficial uses of the underlying groundwater, as identified in the Basin Plan for the Kaweah Basin DAU 242 are: MUN, AGR, IND, PRO, REC-1, and REC-2.

REASONABLE POTENTIAL ANALYSIS FOR CTR CONSTITUENTS

On 18 August 2001 the Discharger submitted effluent and receiving water data for priority pollutants to the Regional Board for a sample taken on 22 May 2001. On 17 June 2002 the Discharger submitted effluent and receiving water data for priority pollutants for a sample taken on 16 April 2002.

The Reasonable Potential Analysis (RPA) for CTR constituents was based on the data from samples collected on 22 May 2001 and 16 April 2002. Based on the RPA methodology in the SIP and USEPA's *Technical Support Document for Water Quality Based Toxics Control*, no constituents have been found to have reasonable potential to cause or contribute to an excursion above water quality objectives or water quality criteria in the receiving water. Many of the constituents were not detected in the effluent and many do not have applicable numeric water quality criteria or objectives to be compared against the Maximum Effluent Concentration (MEC).

The results of the RPA are summarized in Table 1 below with detected constituents in bold.

TABLE 1 – CTR RPA SUMMARY

CTR Parameter Number	Priority Pollutants	Maximum Effluent Concentration or Minimum Method Detection Limit (µg/L)	Maximum Background Concentration or Minimum Detection Limit MDL (µg/L)	Lowest (most stringent) Criterion (µg/L)	RPA Result^(1,2)
1	Antimony	2	2	610	No
2	Arsenic	5	2	150.00	No
3	Beryllium	1	1	No Criteria	Uo
4	Cadmium	1	1	0.10	No
5a	Chromium (III) (or total Cr)	5	1	70.83	No
5b	Chromium (VI)	0.2	0.2	11.43	No
6	Copper	5	5	3.05	No
7	Lead	5	5	0.60	No
8	Mercury	0.0064	0.0096	0.051	No
9	Nickel	10	10	17.23	No
10	Selenium	2	2	5.00	No
11	Silver	10	10	0.43	No
12	Thallium	1	1	6.30	No
13	Zinc	50	50	39.51	No

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CTR Parameter Number	Priority Pollutants	Maximum Effluent Concentration or Minimum Method Detection Limit	Maximum Background Concentration or Minimum Detection Limit MDL	Lowest (most stringent) Criterion	RPA Result^(1,2)
14	Cyanide	0.01	0.01	5.20	No
15	Asbestos	5.22	0.2	No Criteria	Uo
16	2,3,7,8-TCDD (Dioxin)	0.0000017	0.0000016	0.000000014	No
17	Acrolein	No data	No data	21	Ud
18	Acrylonitrile	No data	No data	0.66	Ud
19	Benzene	5	5	71.00	No
20	Bromoform	5	5	360.00	No
21	Carbon Tetrachloride	5	5	4.40	No
22	Chlorobenzene	5	5	50	No
23	Chlordibromomethane	5	5	34.00	No
24	Chloroethane	5	5	No Criteria	Uo
25	2-Chloroethylvinyl Ether	No data	No data	No Criteria	Ud
26	Chloroform	5	5	1240	No
27	Dichlorobromomethane	5	5	46.00	No
28	1,1-Dichloroethane	5	5	No Criteria	Uo
29	1,2-Dichloroethane	5	5	99.00	No
30	1,1-Dichloroethylene	5	5	3.20	No
31	1,2-Dichloropropane	5	5	39.00	No
32	1,3-Dichloropropylene	5	5	244	No
33	Ethylbenzene	5	5	29,000.00	No
34	Methyl Bromide	5	5	4000.00	No
35	Methyl Chloride	5	5	No Criteria	Uo
36	Methylene Chloride	25	25	1,600.00	No
37	1,1,2,2-Tetrachloroethane	5	5	11.00	No
38	Tetrachloroethylene	5	5	8.85	No
39	Toluene	5	5	200,000.00	No
40	1,2-Trans-Dichloroethylene	5	5	140,000.00	No
41	1,1,1-Trichloroethane	5	5	No Criteria	Uo
42	1,1,2-Trichloroethane	5	5	42.00	No
43	Trichloroethylene	5	5	81.00	No
44	Vinyl Chloride	5	5	525.00	No
45	Chlorophenol	5	5	400.00	No
46	2,4-Dichlorophenol	5	5	790.00	No
47	2,4-Dimethylphenol	5	5	2,300.00	No
48	2-Methyl-4,6-Dinitrophenol	25	25	765.00	No
49	2,4-Dinitrophenol	50	50	14,000.00	No
50	2-Nitrophenol	5	5	No Criteria	Uo
51	4-Nitrophenol	25	25	No Criteria	Uo
52	3-Methyl-4-Chlorophenol	10	10	No Criteria	Uo
53	Pentachlorophenol	25	25	5.47	No

INFORMATION SHEET ORDER NO. R5-2005-0058
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 SAND AND GRAVEL PLANT
 TULARE COUNTY

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CTR Parameter Number	Priority Pollutants	Maximum Effluent Concentration or Minimum Method Detection Limit	Maximum Background Concentration or Minimum Detection Limit MDL	Lowest (most stringent) Criterion	RPA Result^(1,2)
54	Phenol	10	10	4600000.00	No
55	2,4,6-Trichlorophenol	5	5	6.50	No
56	Acenaphthene	5	5	520	No
57	Acenaphthylene	5	5	No Criteria	Uo
58	Anthracene	5	5	110000.00	No
59	Benzidine	No data	No data	0.00054	Ud
60	Benzo(a)Anthracene	5	5	0.05	No
61	Benzo(a)Pyrene	5	5	0.05	No
62	Benzo(b)Fluoranthene	5	5	0.05	No
63	Benzo(ghi)Perylene	5	5	No Criteria	Uo
64	Benzo(k)Fluoranthene	5	5	0.05	No
65	Bis(2-Chloroethoxy)Methane	5	5	No Criteria	Uo
66	Bis(2-Chloroethyl)Ether	25	25	1.40	No
67	Bis(2-Chloroisopropyl)Ether	50	50	170000.00	No
68	Bis(2-Ethylhexyl)Phthalate	5	5	5.90	No
69	4-Bromophenyl Phenyl Ether	5	5	No Criteria	Uo
70	Butylbenzyl Phthalate	5	5	5200.00	No
71	2-Chloronaphthalene	5	5	4300.00	No
72	4-Chlorophenyl Phenyl Ether	5	5	No Criteria	Uo
73	Chrysene	5	5	0.05	No
74	Dibenzo(a,h)Anthracene	5	5	0.05	No
75	1,2-Dichlorobenzene	5	5	763	No
76	1,3-Dichlorobenzene	5	5	763	No
77	1,4-Dichlorobenzene	5	5	763	No
78	3,3'-Dichlorobenzidine	10	10	0.08	No
79	Diethyl Phthalate	5	5	120000.00	No
80	Dimethyl Phthalate	5	5	2900000.00	No
81	Di-n-Butyl Phthalate	5	5	12000.00	No
82	2,4-Dinitrotoluene	20	20	9.10	No
83	2,6-Dinitrotoluene	20	20	No Criteria	Uo
84	Di-n-Octyl Phthalate	5	5	No Criteria	Uo
85	1,2-Diphenylhydrazine	No data	No data	0.54	Ud
86	Fluoranthene	5	5	370.00	No
87	Fluorene	5	5	14000.00	No
88	Hexachlorobenzene	5	5	0.00077	No
89	Hexachlorobutadiene	5	5	50.00	No
90	Hexachlorocyclopentadiene	No data	No data	17000.00	Ud
91	Hexachloroethane	5	5	8.90	No
92	Indeno(1,2,3-cd) Pyrene	5	5	0.05	No
93	Isophorone	5	5	600.00	No

CTR Parameter Number	Priority Pollutants	Maximum Effluent Concentration or Minimum Method Detection Limit	Maximum Background Concentration or Minimum Detection Limit MDL	Lowest (most stringent) Criterion	RPA Result^(1,2)
94	naphthalene	5	5	620	No
95	Nitrobenzene	25	25	1900.00	No
96	N-Nitrosodimethylamine	No data	No data	8.10	Ud
97	N-Nitrosodi-n-Propylamine	25	25	1.40	No
98	N-Nitrosodiphenylamine	5	5	16.00	No
99	Phenanthrene	10	10	No Criteria	Uo
100	Pyrene	5	5	11000.00	No
101	1,2,4-Trichlorobenzene	5	5	50	No
102	Aldrin	5	5	0.00014	No
103	alpha-BHC	0.1	0.1	0.01	No
104	beta-BHC	0.1	0.1	0.05	No
105	gamma-BHC	0.1	0.1	0.06	No
106	delta-BHC	0.1	0.1	No Criteria	Uo
107	Chlordane	2	2	0.00059	No
108	4,4-DDT	0.1	0.1	0.00059	No
109	4,4-DDE	0.1	0.1	0.00059	No
110	4,4-DDD	0.1	0.1	0.00084	No
111	Dieldrin	0.1	0.1	0.00014	No
112	alpha-Endosulfan	0.1	0.1	0.06	No
113	beta-Endosulfan	0.1	0.1	0.06	No
114	Endosulfan Sulfate	0.1	0.1	240.00	No
115	Endrin	0.1	0.1	0.04	No
116	Endrin Aldehyde	0.1	0.1	0.81	No
117	Heptachlor	0.1	0.1	0.00021	No
118	Heptachlor Epoxide	0.1	0.1	0.00011	No
119-125	PCBs sum ⁽³⁾	0.2	0.2	0.00017	No
126	Toxaphene	2	2	0.0002	No

- 1) RP =Yes, if either MEC or Background > WQO/WQC. [Water Quality Objectives or Water Quality Criteria]
 RP = No, if (1) both MEC and background < WQO/WQC or (2) no background and all effluent data non-detect, or no background and MEC<WQO/WQC.
- 2) RP = Ud (undetermined due to lack of effluent monitoring data).
 RP = Uo (undetermined if no objective or criterion promulgated).
- 3) PCBs sum refers to sum of PCB 1016, 1221, 1232, 1242, 1248, 1254, and 1260.

EFFLUENT LIMITATIONS

The effluent limitations established under the previous Order continue to be appropriate for this Discharger, except as stated below.

Flow: The maximum permitted flow was reduced from 2.25 mgd to 1.99 mgd at the request of the Discharger.

pH: The Basin Plan includes numeric water quality objectives that the pH “...*not be depressed below 6.5, raised above 8.3, or changed at any time more than 0.3 units from normal ambient pH.*” St. Johns River is subject to periods of little to no flow, at which times there is no assimilative capacity. Therefore, this Order requires that effluent pH be within the limits of 6.5 to 8.3 units.

Conductivity: Monitoring data from 1999 to 2003 indicates an increase in EC concentrations ($\mu\text{mhos/cm}$) between the upstream and downstream monitoring stations within St. Johns River. On several occasions the increase was in exceedance of the Basin Plan EC objective of 175 $\mu\text{mhos/cm}$ during the irrigation season. Receiving water data collected by the Discharger at R2 may be within the slipstream of the discharge and therefore may not be indicative of the discharge’s impact on the St. Johns River. This Order allows the Discharger to relocate R2 to provide representative samples with the written concurrence of Regional Board staff. This Order also establishes a receiving water limitation of 175 $\mu\text{mhos/cm}$ during the irrigation season.

This Order establishes an effluent limitation of 1,000 $\mu\text{mhos/cm}$ for EC based on the Basin Plan objective for surface water discharges. The effluent limitation has been established as a monthly average.

Chloride and Boron: This Order requires effluent monitoring for chloride and boron to determine whether effluent limits more stringent than the maximums in the Basin Plan are necessary for these constituents.

RECEIVING WATER LIMITATIONS

The Basin Plan establishes water quality objectives that apply to all surface waters in the Basin. This Order includes Receiving Water Limitations for: bacteria, biostimulatory substances, chemical constituents, color, floating material, oil and grease, pH, pesticides, radioactivity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, turbidity, chloride, electrical conductivity, and dissolved oxygen based on the applicable narrative and numeric water quality objectives contained in Basin Plan.

GROUNDWATER LIMITATIONS

In accordance with the Antidegradation Policy, this Order does not allow the discharge to cause background levels of pollutants to increase. This Order requires that the Discharger complete a groundwater study to determine background levels for pollutants of concern and whether ongoing discharges have impacted groundwater.

MONITORING AND REPORTING REQUIREMENTS

The monitoring and reporting requirements established under the previous Order continue to be appropriate for the Discharger and are carried over in this Order. The Monitoring and Reporting Program under this revised Order adds requirements for monitoring flow of the receiving water when samples are taken, groundwater monitoring, priority pollutant monitoring, and acute and chronic toxicity monitoring.

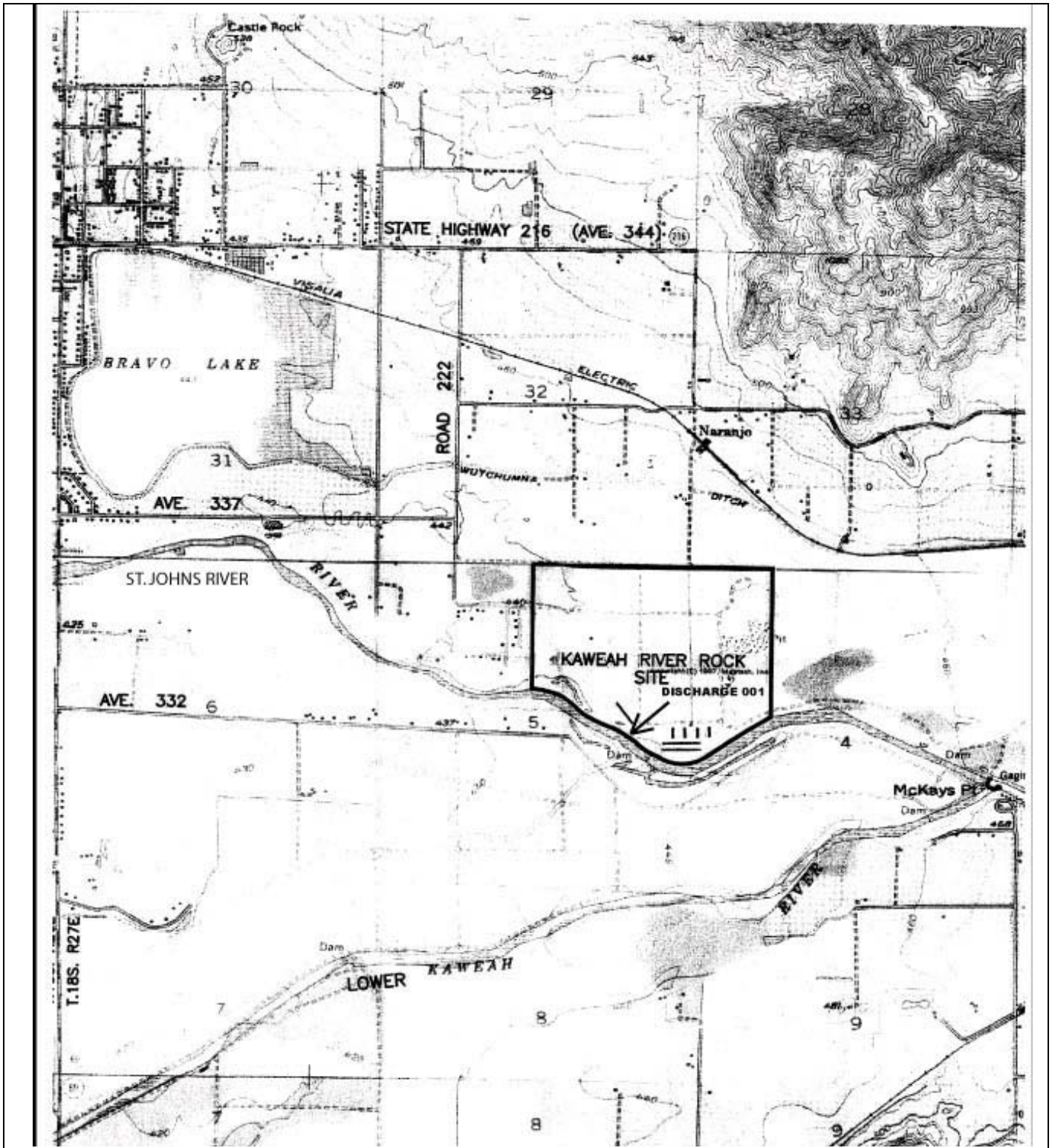
- The requirement to record the flow (in million gallons per day) monthly when receiving water samples are collected at the upstream and downstream receiving water sample stations, has been added to this Order.
- Quarterly groundwater monitoring requirements have been added to this Order.
- As required by the State Implementation Policy (SIP) this Order requires periodic effluent and receiving water monitoring for priority pollutants/dioxins one time no more than 365 days and no less than 180 days prior to expiration of this Order.
- Acute and chronic toxicity monitoring is required once during the duration of this Order to determine whether the effluent is contributing toxicity to the receiving water.

ANTIDegradation AND CEQA CONSIDERATIONS

The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Resources Control Board Resolution 68-16. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. The impact on existing water quality will be insignificant.

The action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, *et seq.*) in accordance with Section 13389 of the California Water Code.

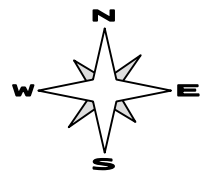
BLH: 4/29/05



Drawing Reference:

U.S.G.S TOPOGRAPHIC MAPS
7.5 MINUTE QUADRANGLE

ATTACHMENT A
ORDER NO. R5-2005-0058
SITE LOCATION MAP
KAWEAH RIVER ROCK COMPANY
SAND AND GRAVEL PLANT
TULARE COUNTY
Section 4 and 5, T18S, R27E, MDB&M



NOT TO
SCALE

CTR #	Constituent	CAS Number	Basis	Criterion Concentration (ug/L or noted) (1)	Criterion Quantitation Limit (ug/L or noted)	Suggested Test Methods
VOLATILE ORGANICS						
28	1,1-Dichloroethane	75343	Primary MCL	5	0.5	EPA 8260B
30	1,1-Dichloroethene	75354	National Toxics Rule	0.057	0.5	EPA 8260B
41	1,1,1-Trichloroethane	71556	Primary MCL	200	0.5	EPA 8260B
42	1,1,2-Trichloroethane	79005	National Toxics Rule	0.6	0.5	EPA 8260B
37	1,1,2,2-Tetrachloroethane	79345	National Toxics Rule	0.17	0.5	EPA 8260B
75	1,2-Dichlorobenzene	95501	Taste & Odor	10	0.5	EPA 8260B
29	1,2-Dichloroethane	107062	National Toxics Rule	0.38	0.5	EPA 8260B
	cis-1,2-Dichloroethene	156592	Primary MCL	6	0.5	EPA 8260B
31	1,2-Dichloropropane	78875	Calif. Toxics Rule	0.52	0.5	EPA 8260B
101	1,2,4-Trichlorobenzene	120821	Public Health Goal	5	0.5	EPA 8260B
76	1,3-Dichlorobenzene	541731	Taste & Odor	10	0.5	EPA 8260B
32	1,3-Dichloropropene	542756	Primary MCL	0.5	0.5	EPA 8260B
77	1,4-Dichlorobenzene	106467	Primary MCL	5	0.5	EPA 8260B
17	Acrolein	107028	Aquatic Toxicity	21	5	EPA 8260B
18	Acrylonitrile	107131	National Toxics Rule	0.059	2	EPA 8260B
19	Benzene	71432	Primary MCL	1	0.5	EPA 8260B
20	Bromoform	75252	Calif. Toxics Rule	4.3	0.5	EPA 8260B
34	Bromomethane	74839	Calif. Toxics Rule	48	1	EPA 8260B
21	Carbon tetrachloride	56235	National Toxics Rule	0.25	0.5	EPA 8260B
22	Chlorobenzene (mono chlorobenzene)	108907	Taste & Odor	50	0.5	EPA 8260B
24	Chloroethane	75003	Taste & Odor	16	0.5	EPA 8260B
25	2- Chloroethyl vinyl ether	110758	Aquatic Toxicity	122 (3)	1	EPA 8260B
26	Chloroform	67663	OEHHA Cancer Risk	1.1	0.5	EPA 8260B
35	Chloromethane	74873	USEPA Health Advisory	3	0.5	EPA 8260B
23	Dibromochloromethane	124481	Calif. Toxics Rule	0.41	0.5	EPA 8260B
27	Dichlorobromomethane	75274	Calif. Toxics Rule	0.56	0.5	EPA 8260B
36	Dichloromethane	75092	Calif. Toxics Rule	4.7	0.5	EPA 8260B
33	Ethylbenzene	100414	Taste & Odor	29	0.5	EPA 8260B
88	Hexachlorobenzene	118741	Calif. Toxics Rule	0.00075	1	EPA 8260B
89	Hexachlorobutadiene	87683	National Toxics Rule	0.44	1	EPA 8260B
91	Hexachloroethane	67721	National Toxics Rule	1.9	1	EPA 8260B
94	Naphthalene	91203	USEPA IRIS	14	10	EPA 8260B
38	Tetrachloroethene	127184	National Toxics Rule	0.8	0.5	EPA 8260B
39	Toluene	108883	Taste & Odor	42	0.5	EPA 8260B
40	trans-1,2-Dichloroethylene	156605	Primary MCL	10	0.5	EPA 8260B
43	Trichloroethene	79016	National Toxics Rule	2.7	0.5	EPA 8260B
44	Vinyl chloride	75014	Primary MCL	0.5	0.5	EPA 8260B
	Methyl-tert-butyl ether (MTBE)	1634044	Secondary MCL	5	0.5	EPA 8260B
	Trichlorofluoromethane	75694	Primary MCL	150	5	EPA 8260B
	1,1,2-Trichloro-1,2,2-Trifluoroethane	76131	Primary MCL	1200	10	EPA 8260B
	Styrene	100425	Taste & Odor	11	0.5	EPA 8260B
	Xylenes	1330207	Taste & Odor	17	0.5	EPA 8260B

CTR #	Constituent	CAS Number	Basis	Criterion Concentration (ug/L or noted) (1)	Criterion Quantitation Limit (ug/L or noted)	Suggested Test Methods
VOLATILE ORGANICS						
SEMI-VOLATILE ORGANICS						
60	1,2-Benzanthracene	56553	Calif. Toxics Rule	0.0044	5	EPA 8270C
85	1,2-Diphenylhydrazine	122667	National Toxics Rule	0.04	1	EPA 8270C
45	2-Chlorophenol	95578	Taste and Odor	0.1	2	EPA 8270C
46	2,4-Dichlorophenol	120832	Taste and Odor	0.3	1	EPA 8270C
47	2,4-Dimethylphenol	105679	Calif. Toxics Rule	540	2	EPA 8270C
49	2,4-Dinitrophenol	51285	National Toxics Rule	70	5	EPA 8270C
82	2,4-Dinitrotoluene	121142	National Toxics Rule	0.11	5	EPA 8270C
55	2,4,6-Trichlorophenol	88062	Taste and Odor	2	10	EPA 8270C
83	2,6-Dinitrotoluene	606202	USEPA IRIS	0.05	5	EPA 8270C
50	2-Nitrophenol	25154557	Aquatic Toxicity	150 (5)	10	EPA 8270C
71	2-Chloronaphthalene	91587	Aquatic Toxicity	1600 (6)	10	EPA 8270C
78	3,3'-Dichlorobenzidine	91941	National Toxics Rule	0.04	5	EPA 8270C
62	3,4-Benzofluoranthene	205992	Calif. Toxics Rule	0.0044	10	EPA 8270C
52	4-Chloro-3-methylphenol	59507	Aquatic Toxicity	30	5	EPA 8270C
48	4,6-Dinitro-2-methylphenol	534521	National Toxics Rule	13.4	10	EPA 8270C
51	4-Nitrophenol	100027	USEPA Health Advisory	60	5	EPA 8270C
69	4-Bromophenyl phenyl ether	101553	Aquatic Toxicity	122	10	EPA 8270C
72	4-Chlorophenyl phenyl ether	7005723	Aquatic Toxicity	122 (3)	5	EPA 8270C
56	Acenaphthene	83329	Taste and Odor	20	1	EPA 8270C
57	Acenaphthylene	208968	No Criteria Available		10	EPA 8270C
58	Anthracene	120127	Calif. Toxics Rule	9,600	10	EPA 8270C
59	Benzidine	92875	National Toxics Rule	0.00012	5	EPA 8270C
61	Benzo(a)pyrene (3,4-Benzopyrene)	50328	Calif. Toxics Rule	0.0044	0.1	EPA 8270C
63	Benzo(g,h,i)perylene	191242	No Criteria Available		5	EPA 8270C
64	Benzo(k)fluoranthene	207089	Calif. Toxics Rule	0.0044	2	EPA 8270C
65	Bis(2-chloroethoxy) methane	111911	No Criteria Available		5	EPA 8270C
66	Bis(2-chloroethyl) ether	111444	National Toxics Rule	0.031	1	EPA 8270C
67	Bis(2-chloroisopropyl) ether	39638329	Aquatic Toxicity	122 (3)	10	EPA 8270C
68	Bis(2-ethylhexyl) phthalate	117817	National Toxics Rule	1.8	3	EPA 8270C
70	Butyl benzyl phthalate	85687	Aquatic Toxicity	3 (7)	10	EPA 8270C
73	Chrysene	218019	Calif. Toxics Rule	0.0044	5	EPA 8270C
81	Di-n-butylphthalate	84742	Aquatic Toxicity	3 (7)	10	EPA 8270C
84	Di-n-octylphthalate	117840	Aquatic Toxicity	3 (7)	10	EPA 8270C
74	Dibenzo(a,h)-anthracene	53703	Calif. Toxics Rule	0.0044	0.1	EPA 8270C
79	Diethyl phthalate	84662	Aquatic Toxicity	3 (7)	2	EPA 8270C
80	Dimethyl phthalate	131113	Aquatic Toxicity	3 (7)	2	EPA 8270C
86	Fluoranthene	206440	Calif. Toxics Rule	300	10	EPA 8270C
87	Fluorene	86737	Calif. Toxics Rule	1300	10	EPA 8270C
90	Hexachlorocyclopentadiene	77474	Taste and Odor	1	1	EPA 8270C
92	Indeno(1,2,3-c,d)pyrene	193395	Calif. Toxics Rule	0.0044	0.05	EPA 8270C
93	Isophorone	78591	National Toxics Rule	8.4	1	EPA 8270C
98	N-Nitrosodiphenylamine	86306	National Toxics Rule	5	1	EPA 8270C
96	N-Nitrosodimethylamine	62759	National Toxics Rule	0.00069	5	EPA 8270C
97	N-Nitrosodi-n-propylamine	621647	Calif. Toxics Rule	0.005	5	EPA 8270C
95	Nitrobenzene	98953	National Toxics Rule	17	10	EPA 8270C
53	Pentachlorophenol	87865	Calif. Toxics Rule	0.28	0.2	EPA 8270C
99	Phenanthrene	85018	No Criteria Available		5	EPA 8270C

CTR #	Constituent	CAS Number	Basis	Criterion Concentration (ug/L or noted) (1)	Criterion Quantitation Limit (ug/L or noted)	Suggested Test Methods
VOLATILE ORGANICS						
54	Phenol	108952	Taste and Odor	5	1	EPA 8270C
100	Pyrene	129000	Calif. Toxics Rule	960	10	EPA 8270C
INORGANICS						
	Aluminum	7429905	Ambient Water Quality	87	50	EPA 6020/200.8
1	Antimony	7440360	Primary MCL	6	5	EPA 6020/200.8
2	Arsenic	7440382	Ambient Water Quality	0.018	1	EPA 1632
15	Asbestos	1332214	National Toxics Rule/ Primary MCL	7 MFL	0.2 MFL >10um	EPA/600/R-93/116(PCM)
	Barium	7440393	Basin Plan Objective	100	100	EPA 6020/200.8
3	Beryllium	7440417	Primary MCL	4	1	EPA 6020/200.8
4	Cadmium	7440439	Public Health Goal	0.07	0.25	EPA 1638/200.8
5a	Chromium (total)	7440473	Primary MCL	50	2	EPA 6020/200.8
5b	Chromium (VI)	18540299	Public Health Goal	0.2	5	EPA 7199/ 1636
6	Copper	7440508	National Toxics Rule	4.1 (2)	0.5	EPA 6020/200.8
14	Cyanide	57125	National Toxics Rule	5.2	5	EPA 9012A
	Fluoride	7782414	Public Health Goal	1000	100	EPA 300
	Iron	7439896	Secondary MCL	300	100	EPA 6020/200.8
7	Lead	7439921	Calif. Toxics Rule	0.92 (2)	0.5	EPA 1638
8	Mercury	7439976	TMDL Development		0.0005 (11)	EPA 1669/1631
	Manganese	7439965	Secondary MCL/ Basin Plan Objective	50	20	EPA 6020/200.8
9	Nickel	7440020	Calif. Toxics Rule	24 (2)	5	EPA 6020/200.8
10	Selenium	7782492	Calif. Toxics Rule	5 (8)	5	EPA 6020/200.8
11	Silver	7440224	Calif. Toxics Rule	0.71 (2)	1	EPA 6020/200.8
12	Thallium	7440280	National Toxics Rule	1.7	1	EPA 6020/200.8
	Tributyltin	688733	Ambient Water Quality	0.063	0.06	EV-024/025
13	Zinc	7440666	Calif. Toxics Rule/ Basin Plan Objective	54/ 16 (2)	10	EPA 6020/200.8
PESTICIDES - PCBs						
110	4,4'-DDD	72548	Calif. Toxics Rule	0.00083	0.02	EPA 8081A
109	4,4'-DDE	72559	Calif. Toxics Rule	0.00059	0.01	EPA 8081A
108	4,4'-DDT	50293	Calif. Toxics Rule	0.00059	0.01	EPA 8081A
112	alpha-Endosulfan	959988	National Toxics Rule	0.056 (9)	0.02	EPA 8081A
103	alpha-Hexachlorocyclohexane (BHC)	319846	Calif. Toxics Rule	0.0039	0.01	EPA 8081A
	Alachlor	15972608	Primary MCL	2	1	EPA 8081A
102	Aldrin	309002	Calif. Toxics Rule	0.00013	0.005	EPA 8081A
113	beta-Endosulfan	33213659	Calif. Toxics Rule	0.056 (9)	0.01	EPA 8081A
104	beta-Hexachlorocyclohexane	319857	Calif. Toxics Rule	0.014	0.005	EPA 8081A
107	Chlordane	57749	Calif. Toxics Rule	0.00057	0.1	EPA 8081A
106	delta-Hexachlorocyclohexane	319868	No Criteria Available		0.005	EPA 8081A
111	Dieldrin	60571	Calif. Toxics Rule	0.00014	0.01	EPA 8081A
114	Endosulfan sulfate	1031078	Ambient Water Quality	0.056	0.05	EPA 8081A
115	Endrin	72208	Calif. Toxics Rule	0.036	0.01	EPA 8081A
116	Endrin Aldehyde	7421934	Calif. Toxics Rule	0.76	0.01	EPA 8081A
117	Heptachlor	76448	Calif. Toxics Rule	0.00021	0.01	EPA 8081A

CTR #	Constituent	CAS Number	Basis	Criterion Concentration (ug/L or noted) (1)	Criterion Quantitation Limit (ug/L or noted)	Suggested Test Methods
VOLATILE ORGANICS						
118	Heptachlor Epoxide	1024573	Calif. Toxics Rule	0.0001	0.01	EPA 8081A
105	Lindane (gamma-Hexachlorocyclohexane)	58899	Calif. Toxics Rule	0.019	0.019	EPA 8081A
119	PCB-1016	12674112	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
120	PCB-1221	11104282	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
121	PCB-1232	11141165	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
122	PCB-1242	53469219	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
123	PCB-1248	12672296	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
124	PCB-1254	11097691	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
125	PCB-1260	11096825	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
126	Toxaphene	8001352	Calif. Toxics Rule	0.0002	0.5	EPA 8081A
	Atrazine	1912249	Public Health Goal	0.15	1	EPA 8141A
	Bentazon	25057890	Primary MCL	18	2	EPA 643/ 515.2
	Carbofuran	1563662	CDFG Hazard Assess.	0.5	5	EPA 8318
	2,4-D	94757	Primary MCL	70	10	EPA 8151A
	Dalapon	75990	Ambient Water Quality	110	10	EPA 8151A
	1,2-Dibromo-3-chloropropane (DBCP)	96128	Public Health Goal	0.0017	0.01	EPA 8260B
	Di(2-ethylhexyl)adipate	103231	USEPA IRIS	30	5	EPA 8270C
	Dinoseb	88857	Primary MCL	7	2	EPA 8151A
	Diquat	85007	Ambient Water Quality	0.5	4	EPA 8340/ 549.1/HPLC
	Endothal	145733	Primary MCL	100	45	EPA 548.1
	Ethylene Dibromide	106934	OEHHA Cancer Risk	0.0097	0.02	EPA 8260B/ 504
	Glyphosate	1071836	Primary MCL	700	25	HPLC/ EPA 547
	Methoxychlor	72435	Public Health Goal	30	10	EPA 8081A
	Molinate (Ordram)	2212671	CDFG Hazard Assess.	13	2	EPA 634
	Oxamyl	23135220	Public Health Goal	50	20	EPA 8318/ 632
	Picloram	1918021	Primary MCL	500	1	EPA 8151A
	Simazine (Princep)	122349	USEPA IRIS	3.4	4	EPA 8141A
	Thiobencarb	28249776	Basin Plan Objective/ Secondary MCL	1	1	HPLC/ EPA 639
16	2,3,7,8-TCDD (Dioxin)	1746016	Calif. Toxics Rule	1.30E-08	5.00E-06	EPA 8290 (HRGC) MS
	2,4,5-TP (Silvex)	93765	Ambient Water Quality	10	1	EPA 8151A
	Diazinon	333415	CDFG Hazard Assess.	0.05	0.25	EPA 8141A/ GCMS
	Chlorpyrifos	2921882	CDFG Hazard Assess.	0.014	1	EPA 8141A/ GCMS

CTR #	Constituent	CAS Number	Basis	Criterion Concentration (ug/L or noted) (1)	Criterion Quantitation Limit (ug/L or noted)	Suggested Test Methods
VOLATILE ORGANICS						
OTHER CONSTITUENTS						
	Ammonia (as N)	7664417	Ambient Water Quality	1500 (4)		EPA 350.1
	Chloride	16887006	Agricultural Use	106,000		EPA 300.0
	Flow			1 CFS		
	Hardness (as CaCO ₃)			5000		EPA 130.2
	Foaming Agents (MBAS)		Secondary MCL	500		SM5540C
	Nitrate (as N)	14797558	Primary MCL	10,000	2,000	EPA 300.0
	Nitrite (as N)	14797650	Primary MCL	1000	400	EPA 300.0
	pH		Basin Plan Objective	6.5-8.5	0.1	EPA 150.1
	Phosphorus, Total (as P)	7723140	USEPA IRIS	0.14		EPA 365.3
	Specific conductance (EC)		Agricultural Use	700 umhos/cm		EPA 120.1
	Sulfate		Secondary MCL	250,000	500	EPA 300.0
	Sulfide (as S)		Taste and Odor	0.029		EPA 376.2
	Sulfite (as SO ₃)		No Criteria Available			SM4500-SO3
	Temperature		Basin Plan Objective	°F		
	Total Dissolved Solids (TDS)		Agricultural Use	450,000		EPA 160.1

FOOTNOTES:

- (1) - The Criterion Concentrations serve only as a point of reference for the selection of the appropriate analytical
- (2) - Freshwater aquatic life criteria for metals are expressed as a function of total hardness (mg/L) in the water body. Values displayed correspond to a total hardness of 40 mg/L.
- (3) - For haloethers
- (4) - Freshwater aquatic life criteria for ammonia are expressed as a function of pH and temperature of the water body.
- (5) - For nitrophenols.
- (6) - For chlorinated naphthalenes.
- (7) - For phthalate esters.
- (8) - Basin Plan objective = 2 ug/L for Salt Slough and specific constructed channels in the Grassland watershed.
- (9) - Criteria for sum of alpha- and beta- forms.
- (10) - Criteria for sum of all PCBs.
- (11) - Mercury monitoring shall utilize "ultra-clean" sampling and analytical methods. These methods include: Method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels, US EPA; and Method 1631: Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence, US EPA

CTR MONITORING

KAWEAH RIVER ROCK COMPANY, INC.

CTR #	Constituent	CAS Number	Basis	Criterion Concentration (ug/L or noted) (1)	Criterion Quantitation Limit (ug/L or noted)	Suggested Test Methods
VOLATILE ORGANICS						
28	1,1-Dichloroethane	75343	Primary MCL	5	0.5	EPA 8260B
30	1,1-Dichloroethene	75354	National Toxics Rule	0.057	0.5	EPA 8260B
41	1,1,1-Trichloroethane	71556	Primary MCL	200	0.5	EPA 8260B
42	1,1,2-Trichloroethane	79005	National Toxics Rule	0.6	0.5	EPA 8260B
37	1,1,2,2-Tetrachloroethane	79345	National Toxics Rule	0.17	0.5	EPA 8260B
75	1,2-Dichlorobenzene	95501	Taste & Odor	10	0.5	EPA 8260B
29	1,2-Dichloroethane	107062	National Toxics Rule	0.38	0.5	EPA 8260B
	cis-1,2-Dichloroethene	156592	Primary MCL	6	0.5	EPA 8260B
31	1,2-Dichloropropane	78875	Calif. Toxics Rule	0.52	0.5	EPA 8260B
101	1,2,4-Trichlorobenzene	120821	Public Health Goal	5	0.5	EPA 8260B
76	1,3-Dichlorobenzene	541731	Taste & Odor	10	0.5	EPA 8260B
32	1,3-Dichloropropene	542756	Primary MCL	0.5	0.5	EPA 8260B
77	1,4-Dichlorobenzene	106467	Primary MCL	5	0.5	EPA 8260B
17	Acrolein	107028	Aquatic Toxicity	21	5	EPA 8260B
18	Acrylonitrile	107131	National Toxics Rule	0.059	2	EPA 8260B
19	Benzene	71432	Primary MCL	1	0.5	EPA 8260B
20	Bromoform	75252	Calif. Toxics Rule	4.3	0.5	EPA 8260B
34	Bromomethane	74839	Calif. Toxics Rule	48	1	EPA 8260B
21	Carbon tetrachloride	56235	National Toxics Rule	0.25	0.5	EPA 8260B
22	Chlorobenzene (mono chlorobenzene)	108907	Taste & Odor	50	0.5	EPA 8260B
24	Chloroethane	75003	Taste & Odor	16	0.5	EPA 8260B
25	2- Chloroethyl vinyl ether	110758	Aquatic Toxicity	122 (3)	1	EPA 8260B
26	Chloroform	67663	OEHHA Cancer Risk	1.1	0.5	EPA 8260B
35	Chloromethane	74873	USEPA Health Advisory	3	0.5	EPA 8260B
23	Dibromochloromethane	124481	Calif. Toxics Rule	0.41	0.5	EPA 8260B
27	Dichlorobromomethane	75274	Calif. Toxics Rule	0.56	0.5	EPA 8260B
36	Dichloromethane	75092	Calif. Toxics Rule	4.7	0.5	EPA 8260B
33	Ethylbenzene	100414	Taste & Odor	29	0.5	EPA 8260B
88	Hexachlorobenzene	118741	Calif. Toxics Rule	0.00075	1	EPA 8260B
89	Hexachlorobutadiene	87683	National Toxics Rule	0.44	1	EPA 8260B
91	Hexachloroethane	67721	National Toxics Rule	1.9	1	EPA 8260B
94	Naphthalene	91203	USEPA IRIS	14	10	EPA 8260B
38	Tetrachloroethene	127184	National Toxics Rule	0.8	0.5	EPA 8260B
39	Toluene	108883	Taste & Odor	42	0.5	EPA 8260B
40	trans-1,2-Dichloroethylene	156605	Primary MCL	10	0.5	EPA 8260B
43	Trichloroethene	79016	National Toxics Rule	2.7	0.5	EPA 8260B
44	Vinyl chloride	75014	Primary MCL	0.5	0.5	EPA 8260B
	Methyl-tert-butyl ether (MTBE)	1634044	Secondary MCL	5	0.5	EPA 8260B
	Trichlorofluoromethane	75694	Primary MCL	150	5	EPA 8260B
	1,1,2-Trichloro-1,2,2-Trifluoroethane	76131	Primary MCL	1200	10	EPA 8260B
	Styrene	100425	Taste & Odor	11	0.5	EPA 8260B
	Xylenes	1330207	Taste & Odor	17	0.5	EPA 8260B
SEMI-VOLATILE ORGANICS						
60	1,2-Benzanthracene	56553	Calif. Toxics Rule	0.0044	5	EPA 8270C
85	1,2-Diphenylhydrazine	122667	National Toxics Rule	0.04	1	EPA 8270C
45	2-Chlorophenol	95578	Taste and Odor	0.1	2	EPA 8270C
46	2,4-Dichlorophenol	120832	Taste and Odor	0.3	1	EPA 8270C
47	2,4-Dimethylphenol	105679	Calif. Toxics Rule	540	2	EPA 8270C
49	2,4-Dinitrophenol	51285	National Toxics Rule	70	5	EPA 8270C
82	2,4-Dinitrotoluene	121142	National Toxics Rule	0.11	5	EPA 8270C
55	2,4,6-Trichlorophenol	88062	Taste and Odor	2	10	EPA 8270C
83	2,6-Dinitrotoluene	606202	USEPA IRIS	0.05	5	EPA 8270C

CTR #	Constituent	CAS Number	Basis	Criterion Concentration (ug/L or noted) (1)	Criterion Quantitation Limit (ug/L or noted)	Suggested Test Methods
VOLATILE ORGANICS						
28	1,1-Dichloroethane	75343	Primary MCL	5	0.5	EPA 8260B
30	1,1-Dichloroethene	75354	National Toxics Rule	0.057	0.5	EPA 8260B
41	1,1,1-Trichloroethane	71556	Primary MCL	200	0.5	EPA 8260B
42	1,1,2-Trichloroethane	79005	National Toxics Rule	0.6	0.5	EPA 8260B
50	2-Nitrophenol	25154557	Aquatic Toxicity	150 (5)	10	EPA 8270C
71	2-Chloronaphthalene	91587	Aquatic Toxicity	1600 (6)	10	EPA 8270C
78	3,3'-Dichlorobenzidine	91941	National Toxics Rule	0.04	5	EPA 8270C
62	3,4-Benzofluoranthene	205992	Calif. Toxics Rule	0.0044	10	EPA 8270C
52	4-Chloro-3-methylphenol	59507	Aquatic Toxicity	30	5	EPA 8270C
48	4,6-Dinitro-2-methylphenol	534521	National Toxics Rule	13.4	10	EPA 8270C
51	4-Nitrophenol	100027	USEPA Health Advisory	60	5	EPA 8270C
69	4-Bromophenyl phenyl ether	101553	Aquatic Toxicity	122	10	EPA 8270C
72	4-Chlorophenyl phenyl ether	7005723	Aquatic Toxicity	122 (3)	5	EPA 8270C
56	Acenaphthene	83329	Taste and Odor	20	1	EPA 8270C
57	Acenaphthylene	208968	No Criteria Available		10	EPA 8270C
58	Anthracene	120127	Calif. Toxics Rule	9,600	10	EPA 8270C
59	Benzidine	92875	National Toxics Rule	0.00012	5	EPA 8270C
61	Benzo(a)pyrene (3,4-Benzopyrene)	50328	Calif. Toxics Rule	0.0044	0.1	EPA 8270C
63	Benzo(g,h,i)perylene	191242	No Criteria Available		5	EPA 8270C
64	Benzo(k)fluoranthene	207089	Calif. Toxics Rule	0.0044	2	EPA 8270C
65	Bis(2-chloroethoxy) methane	111911	No Criteria Available		5	EPA 8270C
66	Bis(2-chloroethyl) ether	111444	National Toxics Rule	0.031	1	EPA 8270C
67	Bis(2-chloroisopropyl) ether	39638329	Aquatic Toxicity	122 (3)	10	EPA 8270C
68	Bis(2-ethylhexyl) phthalate	117817	National Toxics Rule	1.8	3	EPA 8270C
70	Butyl benzyl phthalate	85687	Aquatic Toxicity	3 (7)	10	EPA 8270C
73	Chrysene	218019	Calif. Toxics Rule	0.0044	5	EPA 8270C
81	Di-n-butylphthalate	84742	Aquatic Toxicity	3 (7)	10	EPA 8270C
84	Di-n-octylphthalate	117840	Aquatic Toxicity	3 (7)	10	EPA 8270C
74	Dibenzo(a,h)-anthracene	53703	Calif. Toxics Rule	0.0044	0.1	EPA 8270C
79	Diethyl phthalate	84662	Aquatic Toxicity	3 (7)	2	EPA 8270C
80	Dimethyl phthalate	131113	Aquatic Toxicity	3 (7)	2	EPA 8270C
86	Fluoranthene	206440	Calif. Toxics Rule	300	10	EPA 8270C
87	Fluorene	86737	Calif. Toxics Rule	1300	10	EPA 8270C
90	Hexachlorocyclopentadiene	77474	Taste and Odor	1	1	EPA 8270C
92	Indeno(1,2,3-c,d)pyrene	193395	Calif. Toxics Rule	0.0044	0.05	EPA 8270C
93	Isophorone	78591	National Toxics Rule	8.4	1	EPA 8270C
98	N-Nitrosodiphenylamine	86306	National Toxics Rule	5	1	EPA 8270C
96	N-Nitrosodimethylamine	62759	National Toxics Rule	0.00069	5	EPA 8270C
97	N-Nitrosodi-n-propylamine	621647	Calif. Toxics Rule	0.005	5	EPA 8270C
95	Nitrobenzene	98953	National Toxics Rule	17	10	EPA 8270C
53	Pentachlorophenol	87865	Calif. Toxics Rule	0.28	0.2	EPA 8270C
99	Phenanthrene	85018	No Criteria Available		5	EPA 8270C
54	Phenol	108952	Taste and Odor	5	1	EPA 8270C
100	Pyrene	129000	Calif. Toxics Rule	960	10	EPA 8270C
INORGANICS						
	Aluminum	7429905	Ambient Water Quality	87	50	EPA 6020/200.8
1	Antimony	7440360	Primary MCL	6	5	EPA 6020/200.8
2	Arsenic	7440382	Ambient Water Quality	0.018	1	EPA 1632
15	Asbestos	1332214	National Toxics Rule/ Primary MCL	7 MFL	0.2 MFL >10um	EPA/600/R-93/116(PCM)
	Barium	7440393	Basin Plan Objective	100	100	EPA 6020/200.8
3	Beryllium	7440417	Primary MCL	4	1	EPA 6020/200.8
4	Cadmium	7440439	Public Health Goal	0.07	0.25	EPA 1638/200.8
5a	Chromium (total)	7440473	Primary MCL	50	2	EPA 6020/200.8

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VOLATILE ORGANICS						
28	1,1-Dichloroethane	75343	Primary MCL	5	0.5	EPA 8260B
30	1,1-Dichloroethene	75354	National Toxics Rule	0.057	0.5	EPA 8260B
41	1,1,1-Trichloroethane	71556	Primary MCL	200	0.5	EPA 8260B
42	1,1,2-Trichloroethane	79005	National Toxics Rule	0.6	0.5	EPA 8260B
5b	Chromium (VI)	18540299	Public Health Goal	0.2	5	EPA 7199/1636
6	Copper	7440508	National Toxics Rule	4.1 (2)	0.5	EPA 6020/200.8
14	Cyanide	57125	National Toxics Rule	5.2	5	EPA 9012A
	Fluoride	7782414	Public Health Goal	1000	100	EPA 300
	Iron	7439896	Secondary MCL	300	100	EPA 6020/200.8
7	Lead	7439921	Calif. Toxics Rule	0.92 (2)	0.5	EPA 1638
8	Mercury	7439976	TMDL Development		0.0005 (11)	EPA 1669/1631
	Manganese	7439965	Secondary MCL/ Basin Plan Objective	50	20	EPA 6020/200.8
9	Nickel	7440020	Calif. Toxics Rule	24 (2)	5	EPA 6020/200.8
10	Selenium	7782492	Calif. Toxics Rule	5 (8)	5	EPA 6020/200.8
11	Silver	7440224	Calif. Toxics Rule	0.71 (2)	1	EPA 6020/200.8
12	Thallium	7440280	National Toxics Rule	1.7	1	EPA 6020/200.8
	Tributyltin	688733	Ambient Water Quality	0.063	0.06	EV-024/025
13	Zinc	7440666	Calif. Toxics Rule/ Basin Plan Objective	54/ 16 (2)	10	EPA 6020/200.8
PESTICIDES - PCBs						
110	4,4'-DDD	72548	Calif. Toxics Rule	0.00083	0.02	EPA 8081A
109	4,4'-DDE	72559	Calif. Toxics Rule	0.00059	0.01	EPA 8081A
108	4,4'-DDT	50293	Calif. Toxics Rule	0.00059	0.01	EPA 8081A
112	alpha-Endosulfan	959988	National Toxics Rule	0.056 (9)	0.02	EPA 8081A
103	alpha-Hexachlorocyclohexane (BHC)	319846	Calif. Toxics Rule	0.0039	0.01	EPA 8081A
	Alachlor	15972608	Primary MCL	2	1	EPA 8081A
102	Aldrin	309002	Calif. Toxics Rule	0.00013	0.005	EPA 8081A
113	beta-Endosulfan	33213659	Calif. Toxics Rule	0.056 (9)	0.01	EPA 8081A
104	beta-Hexachlorocyclohexane	319857	Calif. Toxics Rule	0.014	0.005	EPA 8081A
107	Chlordane	57749	Calif. Toxics Rule	0.00057	0.1	EPA 8081A
106	delta-Hexachlorocyclohexane	319868	No Criteria Available		0.005	EPA 8081A
111	Dieldrin	60571	Calif. Toxics Rule	0.00014	0.01	EPA 8081A
114	Endosulfan sulfate	1031078	Ambient Water Quality	0.056	0.05	EPA 8081A
115	Endrin	72208	Calif. Toxics Rule	0.036	0.01	EPA 8081A
116	Endrin Aldehyde	7421934	Calif. Toxics Rule	0.76	0.01	EPA 8081A
117	Heptachlor	76448	Calif. Toxics Rule	0.00021	0.01	EPA 8081A
118	Heptachlor Epoxide	1024573	Calif. Toxics Rule	0.0001	0.01	EPA 8081A
105	Lindane (gamma-Hexachlorocyclohexane)	58899	Calif. Toxics Rule	0.019	0.019	EPA 8081A
119	PCB-1016	12674112	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
120	PCB-1221	11104282	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
121	PCB-1232	11141165	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
122	PCB-1242	53469219	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
123	PCB-1248	12672296	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
124	PCB-1254	11097691	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
125	PCB-1260	11096825	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
126	Toxaphene	8001352	Calif. Toxics Rule	0.0002	0.5	EPA 8081A
	Atrazine	1912249	Public Health Goal	0.15	1	EPA 8141A
	Bentazon	25057890	Primary MCL	18	2	515.2
	Carbofuran	1563662	CDFG Hazard Assess.	0.5	5	EPA 8318
	2,4-D	94757	Primary MCL	70	10	EPA 8151A
	Dalapon	75990	Ambient Water Quality	110	10	EPA 8151A
	1,2-Dibromo-3-chloropropane (DBCP)	96128	Public Health Goal	0.0017	0.01	EPA 8260B
	Di(2-ethylhexyl)adipate	103231	USEPA IRIS	30	5	EPA 8270C

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30	1,1-Dichloroethene	75354	National Toxics Rule	0.057	0.5	EPA 8260B
41	1,1,1-Trichloroethane	71556	Primary MCL	200	0.5	EPA 8260B
42	1,1,2-Trichloroethane	79005	National Toxics Rule	0.6	0.5	EPA 8260B
	Dinoseb	88857	Primary MCL	7	2	EPA 8151A
	Diquat	85007	Ambient Water Quality	0.5	4	549.1/HPLC
	Endothal	145733	Primary MCL	100	45	EPA 548.1
	Ethylene Dibromide	106934	OEHHA Cancer Risk	0.0097	0.02	504
	Glyphosate	1071836	Primary MCL	700	25	EPA 547
	Methoxychlor	72435	Public Health Goal	30	10	EPA 8081A
	Molinate (Ordram)	2212671	CDFG Hazard Assess.	13	2	EPA 634
	Oxamyl	23135220	Public Health Goal	50	20	632
	Picloram	1918021	Primary MCL	500	1	EPA 8151A
	Simazine (Princep)	122349	USEPA IRIS	3.4	4	EPA 8141A
	Thiobencarb	28249776	Basin Plan Objective/ Secondary MCL	1	1	HPLC/ EPA 639
16	2,3,7,8-TCDD (Dioxin)	1746016	Calif. Toxics Rule	1.30E-08	5.00E-06	EPA 8290 (HRGC) MS
	2,4,5-TP (Silvex)	93765	Ambient Water Quality	10	1	EPA 8151A
	Diazinon	333415	CDFG Hazard Assess.	0.05	0.25	EPA 8141A/ GCMS
	Chlorpyrifos	2921882	CDFG Hazard Assess.	0.014	1	EPA 8141A/ GCMS
OTHER CONSTITUENTS						
	Ammonia (as N)	7664417	Ambient Water Quality	1500 (4)		EPA 350.1
	Chloride	16887006	Agricultural Use	106,000		EPA 300.0
	Flow			1 CFS		
	Hardness (as CaCO ₃)			5000		EPA 130.2
	Foaming Agents (MBAS)		Secondary MCL	500		SM5540C
	Nitrate (as N)	14797558	Primary MCL	10,000	2,000	EPA 300.0
	Nitrite (as N)	14797650	Primary MCL	1000	400	EPA 300.0
	pH		Basin Plan Objective	6.5-8.5	0.1	EPA 150.1
	Phosphorus, Total (as P)	7723140	USEPA IRIS	0.14		EPA 365.3
	Specific conductance (EC)		Agricultural Use	700 umhos/cm		EPA 120.1
	Sulfate		Secondary MCL	250,000	500	EPA 300.0
	Sulfide (as S)		Taste and Odor	0.029		EPA 376.2
	Sulfite (as SO ₃)		No Criteria Available			SM4500-SO3
	Temperature		Basin Plan Objective	°F		
	Total Dissolved Solids (TDS)		Agricultural Use	450,000		EPA 160.1

FOOTNOTES:

- (1) - The Criterion Concentrations serve only as a point of reference for the selection of the appropriate analytical method.
- (2) - Freshwater aquatic life criteria for metals are expressed as a function of total hardness (mg/L) in the water body.
- (3) - For haloethers
- (4) - Freshwater aquatic life criteria for ammonia are expressed as a function of pH and temperature of the water body.
- (5) - For nitrophenols.
- (6) - For chlorinated naphthalenes.
- (7) - For phthalate esters.
- (8) - Basin Plan objective = 2 ug/L for Salt Slough and specific constructed channels in the Grassland watershed.
- (9) - Criteria for sum of alpha- and beta- forms.
- (10) - Criteria for sum of all PCBs.
- (11) - Mercury monitoring shall utilize "ultra-clean" sampling and analytical methods. These methods include: Method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels, US EPA; and

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41	1,1,1-Trichloroethane	71556	Primary MCL	200	0.5	EPA 8260B
42	1,1,2-Trichloroethane	79005	National Toxics Rule	0.6	0.5	EPA 8260B

Method 1631: Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence, US EPA