

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2005-0156

NPDES NO. CA0079545

WASTE DISCHARGE REQUIREMENTS  
FOR  
SOUTHERN CALIFORNIA EDISON COMPANY  
BIG CREEK POWERHOUSE NO. 1  
DOMESTIC WASTEWATER TREATMENT PLANT

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

**BACKGROUND**

1. The Southern California Edison Company, a California corporation, owns and operates a wastewater collection, treatment, and disposal system (WWTP or plant) that provides sewerage service to the Big Creek Powerhouse No. 1 and the support community of Big Creek. Southern California Edison Company is hereafter referred to as Discharger.
2. This Order regulates the discharge of treated domestic wastewater to Big Creek, a water of the United States. The discharge is governed by Waste Discharge Requirements (WDRs) Order No. 95-236, adopted by the Regional Board on 27 October 1995. Order No. 95-236 was administratively extended by a letter dated 31 August 2000. The Discharger submitted a Report of Waste Discharge (RWD), dated 6 June 2000, and applied for a permit renewal to continue discharge of pollutants under the National Pollutant Discharge Elimination System (NPDES). Supplemental information to complete filing of the application was submitted on 9 August 2000.
3. The Discharger's effluent consists of tertiary treated domestic wastewater. The discharge is to Big Creek, as shown on Attachment A, a part of this Order. The WWTP consists of primary, secondary, and tertiary units. The tertiary treatment process provides flocculation, filtration and ultraviolet (UV) light disinfection. The Discharger adds alum and soda ash to the secondary treatment units to remove phosphorous, enhance flocculation, and control pH. A concrete-lined overflow pond is adjacent to the WWTP for storage of flow in the event of a plant failure. The chlorination/dechlorination system was replaced with a UV light system. Sludge is digested anaerobically and further processed and disposed of by a contractor that transports it to the Wasco Wastewater Treatment Facility.
4. The RWD describes the tertiary treated discharge as follows:  
Design Flow: 0.023 million gallons per day (mgd)  
Daily Average Flow: 0.015 mgd  
Daily Maximum Flow: 0.0379 mgd

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 SOUTHERN CALIFORNIA EDISON COMPANY  
 BIG CREEK POWERHOUSE NO. 1, DOMESTIC WWTP  
 FRESNO COUNTY

<u>Constituent</u>	<u>Units</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
Temperature (summer)	°C	20	--
Temperature (winter)	°C	10	--
BOD <sub>5</sub> <sup>1</sup>	mg/L	--	38
BOD <sub>5</sub> <sup>1</sup>	lbs/day	--	12
TSS	mg/L	1.68	34
TSS	lbs/day	--	10
Ammonia	mg/L	--	0.11

<sup>1</sup> 5-day, 20°C biochemical oxygen demand

5. Monthly self-monitoring data from January 2001 to November 2003 are summarized below.

<u>Constituent</u>	<u>Long-Term<sup>1</sup> Average</u>	<u>Daily Maximum</u>
<b>Influent</b>		
BOD (mg/L)	171	500
Suspended Solids (mg/L)	114	610
<b>Effluent</b>		
BOD (mg/L)	ND	ND
Suspended Solids (mg/L) <sup>2</sup>	8	590
Settleable Solids (ml/L)	ND	ND
Phosphorus (mg/L)	ND	ND
pH (std units)	--	11
Total Coliform (MPN/100mL)	--	900
Ammonia (mg/L)	9.2	20
Conductivity (EC @25°C) <sup>3</sup>	44	65

<sup>1</sup> Non-detect values were not used in the calculation of averages.

<sup>2</sup> Sample collected on 28 November 2001 indicated a concentration of TSS of 590 mg/L due to an operational upset. This was not considered in calculating the average values for TSS since this was the only one sample out of 153 samples evaluated.

<sup>3</sup> Conductivity data points collected during the period of June 2003 to November 2003 were used in this analysis.

Based on the monitoring data provided by the Discharger, effluent limitations exceedances occurred on thirteen occasions during this three-year monitoring period. These were: one monthly flow limit violation; two weekly and one monthly total suspended solids limit violations; one daily, three weekly, and one monthly total coliform limit violations; one daily and one monthly settleable solids violations; and one daily and one monthly phosphorous limit violations.

6. Self-Monitoring data for the receiving water stations from March 2001 to July 2003 are summarized below for station R-1 (upstream from the point of discharge) and R-2 (downstream from the point of discharge).

Constituents	R-1			R-2		
	Average	Max	Min	Average	Max	Min
pH (std units)	--	8.6	7.1	--	8.5	7.2
Temperature (°C)	11	18	3	15	24	4
Turbidity (NTU)	0.49	1.1	0.11	0.61	1.3	0.28
Cl <sub>2</sub> Residual (mg/L)	0.03	0.05	0.02	0.02	0.03	0.01

#### RECEIVING WATER BENEFICIAL USES

7. The Regional Board adopted a *Water Quality Control Plan, Fourth Edition, for the Sacramento and San Joaquin River Basins* (hereafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve water quality objectives for all waters of the Basin. These WDRs implement the Basin Plan.
8. The discharge to Big Creek occurs at a point SW ¼ of Section 28, T8S, R25E, MDB&M. Treated domestic wastewater is discharged to Big Creek, a water of the United States and a tributary to the San Joaquin River at Discharge Point 001 defined by the point(s), latitude 37° 12' 00" N and longitude 119° 14' 45" W. The site lies within the San Joaquin River Sources to Millerton Lake Hydrologic Area (540.12).
9. The Basin Plan designates the following beneficial uses for the San Joaquin River, Sources to Millerton Lake, which includes Big Creek:
- municipal and domestic supply (MUN);
  - agricultural supply (AGR);
  - hydropower generation (POW);
  - water contact recreation and canoeing and rafting (REC-1);
  - other non-contact water recreation (REC-2);
  - cold freshwater habitat (COLD);  
warm freshwater habitat (WARM); and
  - wildlife habitat (WILD).
10. The designated beneficial uses of the underlying groundwater, as identified in the Basin Plan, are MUN, industrial service supply, industrial process supply, and AGR.

### EFFLUENT LIMITATIONS AND REASONABLE POTENTIAL ANALYSIS

11. 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 Federal Clean Water Act (CWA) and amendments thereto that are applicable to the discharge are contained herein.
12. The CWA mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to State or federal law (33 U.S.C. § 1311(b)(1)(C); 40 CFR 122.44(d)(1)). NPDES permits must incorporate discharge limitations necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as numerical criteria specifying maximum amounts of particular pollutants. Pursuant to 40 CFR 122.44(d)(1)(i), NPDES permits must contain limitations that control all pollutants that “are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality.” 40 CFR 122.44(d)(1)(vi), further provides that “[w]here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limitations.”
13. The Basin Plan contains narrative objectives 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” and “Waters shall not contain chemical constituents in concentrations that 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 that adversely affect beneficial uses. As described above, when a reasonable potential exists for exceeding a narrative objective, federal regulations mandate numeric effluent limitations and the Basin Plan establishes a procedure for translating the narrative objectives into numeric effluent limitations.
14. The United States 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 (State 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.
15. The Discharger was issued an Order on 27 February 2001, pursuant to California Water Code (CWC) Section 13267, requiring effluent and receiving water monitoring meeting the requirements of the SIP. These data were required to assist the Regional Board in conducting reasonable potential analyses (RPAs).
16. On 8 January 2004 the Discharger submitted effluent and receiving water data for priority pollutants to the Regional Board for a sample taken on 4 May 2001. On 17 February 2004 the Discharger submitted effluent and receiving water data for priority pollutants for a sample taken

on 19 January 2004. The RPA for CTR constituents was based on these effluent and receiving water monitoring data. Based on the RPA methodology in the SIP, no CTR constituent was found to have reasonable potential to cause or contribute to an excursion above water quality objectives or water quality criteria in the receiving water. No effluent limitation is currently required for any CTR constituent.

### EFFLUENT LIMITATIONS FOR NON-CTR CONSTITUENTS

17. WDRs Order No. 95-236 established technology-based effluent limitations for BOD, total suspended solids, settleable solids, oil and grease, pH, and total coliform. In order to ensure continued attainment of beneficial uses, this Order carries over these effluent limitations established by the previous Order.
18. Chemical coagulation, flocculation, and filtration remove phosphorus, a nutrient. Excessive quantities of phosphorus in combination with nitrogen, also a nutrient, could cause undesirable algal growth in the receiving waters. According to algal growth potential studies, removal of phosphorus to a concentration at or below 0.5 mg/L deprives algae of an essential nutrient and prevents algal growth. This Order carries over the effluent limitations for total phosphorus of 0.5 mg/L and 0.5 lbs/day for monthly average, and 1.5 mg/L and 0.3 lbs/day for daily maximum from WDRs Order No. 95-236.
19. **Ammonia.** Effluent monitoring data submitted by the Discharger indicates that there may be reasonable potential for discharges from the Big Creek WWTP to cause or contribute to in-stream excursions above applicable water quality standards for ammonia. Due to insufficient data this Order is not establishing water quality-based effluent limitations for ammonia at this time, but instead is requiring additional monitoring to allow a more definitive determination of reasonable potential. If monitoring data indicates that the discharge has reasonable potential to cause or contribute to in-stream excursion above applicable water quality standards, this Order will be reopened to include effluent limitations for ammonia.
20. **Chlorine Residual.** Previous Order No. 95-236 established chlorine residual effluent limitations to regulate the discharge of chlorine from wastewater disinfection processes. The Discharger replaced the chlorine disinfection system with an ultraviolet light disinfection system and no longer stores or uses chlorine at the WWTP. Because chlorine is no longer used at the WWTP the previous Order's chlorine residual limitations are not included in this Order. This discontinuation of chlorine residual effluent limitations is allowed under an exception to federal antibacksliding provisions, codified in 40 CFR 122.44, for facilities where material and substantial alterations or additions have been made which justify the relaxation.
21. **Percent Removal of BOD and TSS.** Previous Order No. 95-236 established 85% removal requirements for BOD and TSS. This Order requires that the WWTP meet 90% removal requirements for BOD and TSS. Ninety-percent removal requirements for BOD and TSS are technology based requirements for tertiary treatments systems based on best professional judgment (BPJ), and are consistent with requirements established for other tertiary treatment systems.

### **RECEIVING WATER LIMITATIONS**

22. Receiving water limitations in this Order are based on the water quality objectives in the Basin Plan and are established to protect the designated beneficial uses of the receiving waters.
23. State Board Resolution No. 68-16 (hereafter Resolution 68-16) requires the Regional 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 Board's policies (e.g., quality that exceeds water quality objectives). Resolution 68-16 requires that the discharge be regulated to meet best practicable treatment or control to assure that pollution or nuisance will not occur and the highest water quality consistent with the maximum benefit to the people of the State be maintained. The WWTP represents BPTC.
24. Resolution No. 68-16, the Antidegradation Policy, does not allow degradation of water to a quality less than that prescribed in Water Quality Control Plans (Basin Plans). 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 Bacteria, 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**

25. The Basin Plan requires the application of the most stringent objective necessary to ensure that groundwaters do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances in concentrations that adversely affect designated beneficial uses. In addition, Resolution 68-16 requires the Regional Board, in regulating discharge of waste, to maintain high quality waters of the State. Due to its extensive treatment and quality, the discharge is not expected to degrade groundwater quality. This permit does not allow the discharge to degrade groundwater.

### **COLLECTION SYSTEM**

26. The Discharger is expected to take all necessary steps to adequately maintain and operate its sanitary sewer collection system.

### GENERAL FINDINGS

27. The discharge authorized herein and the treatment and storage facilities associated with the discharge of sewage, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27, California Code of Regulations (CCR), section 20005 *et seq.* (hereafter Title 27). The exemption, pursuant to Title 27 CCR section 20090(a), is based on the following:
- a. The waste consists primarily of domestic sewage and treated effluent; the waste discharge requirements are consistent with water quality objectives; and
  - b. The treatment and storage facilities described herein are associated with a sewage treatment plant.
  - c. The impact on existing water quality will be insignificant.
28. CWC Section 13267 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 specified in [Section 13267] subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region 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. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.
29. CWC Section 13383 states:
- (a) The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13377 or by subdivisions (b) and (c) of this section, for any person who discharges pollutants....
  - (b) The state board or the regional boards may require any person subject to this section to establish and maintain monitoring equipment or methods, including, where appropriate, biological monitoring methods, sample effluent as prescribed, and provide other information as may be reasonably required.
  - (c) The state board or a regional board may inspect the facilities of any person subject to this section pursuant to the procedure set forth in subdivision (c) of Section 13267.
30. Federal regulations at 40 CFR 122.48 require all NPDES permits to specify:
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- (b) Required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including, when appropriate, continuous monitoring.
  - (c) Applicable reporting requirements based upon the impact of the regulated activity as specified in §122.44 ...

31. Monitoring and Reporting Program No. R5-2005-0156 is necessary to determine compliance with this Order.
32. The action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA) (Public Resources Code §21000, et seq in accordance with Section 13389 of the California Water Code.
33. The Discharger is not required to obtain coverage under a NPDES general industrial storm water permit because all runoff is contained onsite. The Discharger has submitted a letter of non-applicability.
34. The USEPA and the Regional Board have classified this discharge as a minor discharge.
35. The Discharger and interested agencies and persons were notified of the intent to prescribe waste discharge requirements for this discharge and provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
36. In a public meeting, all comments pertaining to the discharge were heard and considered.
37. 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.
38. All the above and the supplemental information and details in the attached Information Sheet and Attachments A and B, which are incorporated herein, were considered in establishing the conditions of discharge of this Order.

**IT IS HEREBY ORDERED**, pursuant to sections 13263, 13267, 13383, and 13376 of the CWC, that Order No. 95-236 is rescinded and Southern California Edison Company, its agents, successors and assigns, in order to meet the provisions contained in Division 7 of the California Water Code 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 February 2004.*

**A. Discharge Prohibitions:**

1. Discharge of wastes or pollutants 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. Wastes and other residual solids removed from liquid wastes or used to treat liquid wastes, except as approved by the Executive Officer, shall be recycled or disposed of in a manner

that is consistent with Division 3, Title 27; Chapter 15, Division 3, Title 23; and Division 4.5, Title 22 of the CCR and approved by the Executive Officer.

**B. Effluent Limitations:**

1. Effluent discharged from Discharge Point 001 shall not exceed the following limitations:

<u>Constituents</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Monthly Median</u>	<u>Daily Maximum</u>
BOD <sub>5</sub> <sup>1</sup>	mg/L	10 <sup>2</sup>	15 <sup>2</sup>	---	30 <sup>2</sup>
	lb/day <sup>3</sup>	1.9	2.9	---	5.8
Total Suspended Solids	mg/L	10 <sup>2</sup>	15 <sup>2</sup>	---	30 <sup>2</sup>
	lb/day <sup>3</sup>	1.9	2.9		5.8
Total Coliform Organisms	MPN/100mL	---	---	2.2	23
Settleable Solids	mL/L	0.1	---	---	0.2
Total Phosphorous	mg/L	0.5	---	---	1.5
	lb/day <sup>3</sup>	0.1	---	---	0.3

<sup>1</sup> 5-day, 20°C biochemical oxygen demand (BOD)

<sup>2</sup> To be ascertained by a 24-hour composite

<sup>3</sup> Based upon a design treatment capacity of 0.023 mgd.

2. The arithmetic mean of 20°C BOD (5-day) and total suspended solids in effluent samples collected over a monthly period shall not exceed 10 percent of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period (90 percent removal).
3. The discharge shall not have a pH less than 6.0 nor greater than 9.0.
4. The monthly average discharge flow shall not exceed 0.023 million gallons per day.
5. 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%

**Sludge Disposal:**

Sludge in this document means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screening material generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the WWTP. Biosolids refers to sludge that has been treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and State regulations as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities.

1. Sludge and solid waste shall be removed from screens, sumps, ponds, clarifiers, etc. as needed to ensure optimal plant operation.
2. Treatment and storage of sludge generated by the WWTP shall be confined to the WWTP property and conducted in a manner that precludes infiltration of waste constituents into soils in a mass or concentration that will violate Groundwater Limitations.
3. Any storage of residual sludge, solid waste, and biosolids on property of the WWTP shall be temporary and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate Groundwater Limitations.
4. Residual sludge, biosolids, and solid waste shall be disposed of in a manner approved by the Executive Officer (EO) and consistent with Title 27. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, WWTP, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements issued by a regional water quality control board will satisfy this specification
5. Use of biosolids as a soil amendment shall comply with valid waste discharge requirements issued by a regional water quality control board. In most cases, this will mean General Biosolids Order (State Board Water Quality Order No. 2004-12-DWQ, General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities). For a biosolids use project to be covered by the General Biosolids Order, the City must file a complete Notice of Intent and receive a Notice of Applicability for each project.
6. Use and disposal of biosolids shall comply with the self-implementing federal regulations of Title 40, Code of Federal Regulations, Part 503, which are subject to enforcement by the USEPA, not the Regional Board. If during the life of this Order the State accepts primacy for implementation of 40 CFR 503, the Regional Board may also initiate enforcement where appropriate.

### **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. Bacteria: The fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 ml.
2. Dissolved Oxygen: Concentrations of dissolved oxygen to fall below 7.0 mg/L. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass, or the 95<sup>th</sup> percentile concentration to fall below 75 percent of saturation.

3. Oil and Grease: Oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the water surface or on objects in the water, or otherwise adversely affect beneficial uses.
4. Color: Discoloration that causes nuisance or adversely affects beneficial uses.
5. pH: The ambient pH to be depressed below 6.5, nor raised above 8.5, nor changes in normal ambient pH levels to be exceeded by more than 0.5 units.
6. Temperature: The natural receiving water temperature to increase more than 5°F.
7. Settleable Material: Substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.
8. Radioactivity: Radionuclides to be present in concentrations that are harmful to human, plant, animal or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life.
9. 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.
10. Toxicity: Toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances.
11. Biostimulatory Substances: Biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.
12. Floating Material: Floating material in amounts that cause nuisance or adversely affect beneficial uses.
13. Sediment: Suspended sediment load and suspended sediment discharge rate altered in such a manner to cause nuisance or adversely affect beneficial uses.
14. Suspended Material: Suspended material concentrations that cause nuisance or adversely affect beneficial uses.

15. Taste and Order: 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. Turbidity: Changes in turbidity that cause nuisance or adversely affect beneficial uses. Turbidity attributable to controllable water quality factors to exceed the following:
  - a. More than 1 Nephelometric Turbidity Units (NTUs) 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 NTUs where natural turbidity is between 50 and 100 NTUs.
  - d. More than 10 percent where natural turbidity is greater than 100 NTUs.
17. Pesticides:
  - a. Pesticides in individual or combined concentrations that adversely affect beneficial uses.
  - b. Pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses.
  - c. Total identifiable persistent chlorinated hydrocarbon pesticides in concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the Executive Officer.
  - d. Concentrations exceeding those allowable by applicable antidegradation policies (see State Water Resources Control Board Resolution No. 68-16 and 40 CFR Section 131.12.)
  - e. Concentrations exceeding the lowest levels technically and economically achievable.
  - f. Concentrations exceeding the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.
  - g. Concentrations of thiobencarb in excess of 1.0 mg/L.

**D. Groundwater Limitations**

The discharge shall not cause the underlying groundwater to contain waste constituents in concentrations exceeding natural background quality.

**E. Provisions:**

1. The Discharger shall comply with Monitoring and Reporting Program No. R5-2005-0156, 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.
2. The Discharger shall comply with all the items of the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements (NPDES)", dated February 2004, which are part of this Order.
3. 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 work plan 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.
4. The Discharger shall not allow pollutant-free wastewater to be discharged into the collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.
5. The Discharger shall implement best practicable treatment and control, including proper operation and maintenance, to comply with this Order.
6. The Discharger shall report to the Regional Board any toxic chemical release data it reports to the state emergency response commission within 15 days of reporting the data to the commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986."
7. The plant shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency
8. 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.

9. 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.

10. 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.
11. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Instances of noncompliance shall be reported in accordance with Standard Provisions, B.1. Violations may result in enforcement action, including Regional Board or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of this Order.
12. 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).

WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2005-0156  
SOUTHERN CALIFORNIA EDISON COMPANY  
BIG CREEK POWERHOUSE NO. 1, DOMESTIC WWTP  
FRESNO COUNTY

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13. This Order expires on **21 October 2010** and the Discharger must file a Report of Waste Discharge in accordance with Title 23, CCR, not later than 180 days in advance of such date to apply for renewal of waste discharge requirements if it wishes to continue the discharge.

I, THOMAS R. PINKOS, 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 21 October 2005.

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THOMAS R. PINKOS, Executive Officer

LK/AWL/JE/fmc:10/21/05

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2005-0156

NPDES NO. CA0079545

MONITORING AND REPORTING PROGRAM  
FOR  
SOUTHERN CALIFORNIA EDISON COMPANY  
BIG CREEK POWERHOUSE NO. 1  
DOMESTIC WASTEWATER TREATMENT PLANT

This Monitoring and Reporting Program (MRP) is issued pursuant to California Water Code Sections 13383 and 13267. The Discharger shall not deviate from this Program unless and until the Regional Board or Executive Officer issues a revised MRP. Specific sample station locations shall be established under direction of the Regional Board's staff, and a description of the stations shall be attached to the Discharger's copy of the Order. Sampling locations may be changed only with the written concurrence of Regional Board staff. A description of the proposed changes and Regional Board staff's written concurrence shall be attached to the Discharger's copy of this MRP.

**INFLUENT MONITORING**

Samples shall be collected at **Influent Point 001**. Samples shall be collected at approximately the same time as effluent samples and shall be representative of the influent for the period sampled. Influent monitoring shall include at least the following:

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
20°C BOD <sub>5</sub>	mg/L, lbs/day	16-hour composite <sup>1</sup>	Weekly
Suspended Solids	mg/L, lbs/day	16-hour composite <sup>1</sup>	Weekly

<sup>1</sup> Composite samples must be flow-proportioned and may consist of flow-proportioned grab samples.

**EFFLUENT MONITORING**

Effluent samples shall be collected at **Discharge Point 001**, downstream from the last connection through which wastes can be discharged. 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
Settleable Solids	mL/L	Grab	Weekly
pH	standard units	Grab	3/Week <sup>3</sup>
20°C BOD <sub>5</sub>	mg/L, lbs/day	16-hour composite <sup>1</sup>	Weekly
Suspended Solids	mg/L, lbs/day	16-hour composite <sup>1</sup>	Weekly
Total Coliform Organisms	MPN/100 mL	Grab	3/Week <sup>3</sup>
Ammonia <sup>2</sup>	mg/L	Grab	2/Month
Total Phosphorous	mg/L	Grab	2/Month
EC	µmhos/cm	Grab	2/Month

<sup>1</sup> Composite samples shall be flow proportional composite samples.

<sup>2</sup> Temperature and pH shall be determined at the time the sample is taken for ammonia analysis. Un-ionized ammonia shall be calculated based on the results. Ammonia results shall be reported as ammonia and un-ionized ammonia.

<sup>3</sup> Samples shall be taken on non-consecutive days.

### RECEIVING WATER MONITORING

Receiving water samples shall be collected at the following sampling stations:

<b>Station</b>	<b>Description</b>
R-1	To be established with the concurrence of staff. R-1 shall be located in Big Creek and shall provide a sample representative of the water in the creek just prior to the point of discharge. R-1 shall not be more than 300 feet upstream from the point of discharge. A greater distance may be acceptable provided the Discharger submits proper justification that the prescribed distance is inaccessible.
R-2	Not to exceed 900 feet downstream from the point of discharge to Big Creek. A greater distance may be acceptable provided the Discharger submits proper justification that the prescribed distance is inaccessible.

All receiving water samples shall be grab samples. Receiving water monitoring shall include at least the following:

<u>Constituents</u>	<u>Units</u>	<u>Station<sup>1</sup></u>	<u>Sampling Frequency</u>
Dissolved Oxygen	mg/L	R-1, R-2	Quarterly
pH	standard units	R-1, R-2	Quarterly
Temperature	°F	R-1, R-2	Quarterly
Turbidity	NTU	R-1, R-2	Quarterly
Ammonia <sup>2</sup>	mg/L	R-1, R-2	Quarterly
EC	µmhos/cm	R-1, R-2	Quarterly
Total Coliform Organisms	MPN/100 mL	R-1, R-2	Quarterly

<sup>1</sup> All samples shall be grab samples.

<sup>2</sup> Temperature and pH shall be determined at the time the sample is taken for ammonia analysis. Un-ionized ammonia shall be calculated based on the results. Ammonia results shall be reported as ammonia and un-ionized ammonia.

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.

### 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 shall be collected at Discharge Point 001. Twenty-four hour composite samples shall be representative of the volume and quality of the discharge. Time of sample collection shall be recorded. 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 estimating manual listed above. 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: One time no more than 365 days and no less than 180 days prior to expiration of this Order

Dilution Series:

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

<sup>1</sup> Dilution water shall be receiving water taken upstream from the discharge point or in a location unaffected by the discharge. The dilution series may be altered upon approval of Regional Board staff.

<sup>2</sup> Lab water shall meet USEPA protocol requirements

### SLUDGE MONITORING

A composite sample of sludge shall be collected when sludge is removed for disposal, but no more frequently than annually, in accordance with EPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, and tested for the following metals:

Arsenic	Lead	Selenium
Cadmium	Mercury	Zinc
Chromium	Molybdenum	
Copper	Nickel	

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

By **1 February of each year**, the Discharger shall submit:

- a. Annual sludge production in dry tons and percent solids.
- b. A schematic diagram showing sludge handling facilities and a solids flow diagram.
- c. A description of disposal methods including the following information related to the disposal methods used at the disposal facility: (1) the location of the site, and (2) the application rate in lbs/acre/year (specify wet and dry).

### WATER SUPPLY MONITORING

A sampling station shall be established where a representative sample of the water supply can be obtained. Water supply monitoring shall include at least the following:

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
EC	µmhos/cm	Grab	Monthly

<sup>1</sup> If the source water is from more than one source, the EC shall be reported as a weighted average and include copies of supporting calculations.

### PRIORITY POLLUTANT MONITORING

The SIP requires Regional Boards to 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 one time no more than 365 days and no less than 180 days prior to expiration of this Order. The list of priority pollutants and required minimum levels (MLs) (or criterion quantitation limitations) is included as Attachment B. 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.

### REPORTING

Monitoring results shall be submitted to the Regional Board by the **1<sup>st</sup> day of the second month** following sample collection. Quarterly and annual monitoring results and reports shall be submitted by the **1<sup>st</sup> day of the second month** following each calendar quarter and year, respectively. Reports shall be submitted whether or not there was a discharge during the reporting period. Failure to submit a report in a timely manner will result in an assessment of a Minimum Mandatory Penalty pursuant to CWC Section 13385.

In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, applicable limits, and the concentrations or other analytical results 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, and removal efficiencies (%) for BOD and Suspended Solids, shall 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, certificate grades, and general responsibilities of all persons employed at the WWTP (Standard Provision A.5).
- 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 and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration (Standard Provision C.6).
- d. A statement certifying whether the current operation and maintenance manual, and contingency plan, reflect the plant as currently constructed and operated, and the dates when these documents were last revised and last reviewed for adequacy.

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

\_\_\_\_\_  
21 October 2005  
(Date)

## INFORMATION SHEET

ORDER NO. R5-2005-0156  
SOUTHERN CALIFORNIA EDISON COMPANY  
BIG CREEK POWERHOUSE NO. 1, DOMESTIC WWTP  
FRESNO COUNTY

### BACKGROUND INFORMATION

Southern California Edison Company (Discharger) operates a series of hydroelectric plants along the upper San Joaquin River system. One of these facilities (Big Creek Powerhouse No. 1) has a company town (Big Creek) that is served by a company-owned and operated sewage collection and treatment and disposal system (WWTP or plant). This Order provides for the renewal of requirements for the WWTP.

The WWTP consists of primary, secondary, and tertiary units. The tertiary treatment process provides flocculation, filtration and ultraviolet (UV) light disinfection. The Discharger adds alum and soda ash to the secondary treatment units to remove phosphorous, enhance flocculation, and control pH. A concrete-lined overflow pond is adjacent to the WWTP for storage of flow in the event of a WWTP failure. The chlorination/dechlorination system was replaced with a UV light system. Sludge is digested anaerobically and further processed and disposed of by a contractor that transports it to the Wasco Wastewater Treatment Facility.

Treated effluent is discharged to Big Creek, a tributary (approximately 5 miles downstream) of the San Joaquin River. Although the Discharger does not have any minimum release requirements from Big Creek Dam No. 4 (immediately upstream from the point of discharge) it has indicated that leakage through the dam is four cubic feet per second. At design capacity, this results in a dilution ratio of creek water to wastewater of 112:1. Monthly monitoring reports indicate that the upstream average conductivity at 25° C (EC) and turbidity of Big Creek are low. The EC of the San Joaquin River below Millerton Lake is less than 100 µmhos/cm.

During the winter of 1994/1995, the Discharger had infiltration and inflow (I/I) problems that led to two unauthorized discharges of partially treated wastewater to Big Creek. The Discharger implemented, under its own accord, a program to replace the collection system for the town of Big Creek. The Discharger began the upgrade during the fall of 1994 and completed the final phase in 2001. The Discharger also located and terminated a cross connection with a French drain that contributed significant amounts of I/I during the wet winter of 1994/1995.

### BENEFICIAL USES OF THE RECEIVING WATER

The designated beneficial uses of the San Joaquin River, Sources to Millerton Lake, including Big Creek are:

- municipal and domestic supply (MUN)
- agricultural supply (AGR)
- hydropower generation (POW)
- water contact recreation (REC-1)
- non-contact water recreation (REC-2)
- cold freshwater habitat (COLD)

- warm freshwater habitat (WARM)
- wildlife habitat (WILD)

The beneficial uses of the underlying groundwater, as identified in the Basin Plan, are MUN, industrial service supply, industrial process supply, and AGR.

### REASONABLE POTENTIAL ANALYSIS FOR CTR CONSTITUENTS

The Regional Board conducted a reasonable potential analysis (RPA) on the CTR constituent monitoring data submitted by the Discharger. Based on the RPA methodology in the SIP, 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. Therefore, no effluent limitations currently are required for CTR constituents in this Order.

The results of the RPA are summarized in the table below.

#### Summary of Reasonable Potential Analysis Results – CTR Constituents

CTR Parameter #	PRIORITY POLLUTANTS	Maximum Effluent Concentration or Minimum Method Detection Limit (ug/L)	Maximum Background Concentration or Minimum Detection Limit MDL (ug/L)	Lowest (most stringent) Criterion	RPA Result <sup>(1,2)</sup>
1	Antimony	2	2	6.00	No
2	Arsenic	2	12	50.00	No
3	Beryllium	1	1	4.00	No
4	Cadmium	1	1	0.05	No
5a	Chromium (III) (or total Cr)	0.2	0.2	33.95	No
5b	Chromium (VI)	1	1	11.43	No
6	Copper	5	5	1.41	No
7	Lead	5	5	0.19	No
8	Mercury	0.0002 2 Hits	0.0027	0.05	No
9	Nickel	10	10	8.06	No
10	Selenium	2	2	5.00	No
11	Silver	10	10	0.09	No
12	Thallium	1	1	1.70	No
13	Zinc	50	50	18.46	No
14	Cyanide	0.01	0.01	5.20	No
15	Asbestos	0.1	0.21	7000000.00	No
16	2,3,7,8-TCDD (Dioxin)	0.0000026	0.0000026	0.00000013	No
17	Acrolein	0	0	320.00	No
18	Acrylonitrile	0	0	0.06	No
19	Benzene	5	5	1.00	No
20	Bromoform	5	5	4.30	No

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 SOUTHERN CALIFORNIA EDISON COMPANY  
 BIG CREEK POWERHOUSE NO. 1, DOMESTIC WWTP  
 FRESNO COUNTY

CTR Parameter #	PRIORITY POLLUTANTS	Maximum Effluent Concentration or Minimum Method Detection Limit (ug/L)	Maximum Background Concentration or Minimum Detection Limit MDL (ug/L)	Lowest (most stringent) Criterion	RPA Result <sup>(1,2)</sup>
21	Carbon Tetrachloride	5	5	0.25	No
22	Chlorobenzene	5	5	680.00	No
23	Chlordibromomethane	5	5	0.41	No
24	Chloroethane	5	5	No Criteria	Uo
25	2-Chloroethylvinyl Ether	0	0	No Criteria	Uo
26	Chloroform	5	5	No Criteria	Uo
27	Dichlorobromomethane	5	5	0.56	No
28	1,1-Dichloroethane	5	5	5.00	No
29	1,2-Dichloroethane	5	5	0.38	No
30	1,1-Dichloroethylene	5	5	0.06	No
31	1,2-Dichloropropane	5	5	0.52	No
32	1,3-Dichloropropylene	5	5	10.00	No
33	Ethylbenzene	5	5	700.00	No
34	Methyl Bromide	5	5	48.00	No
35	Methyl Chloride	5	5	No Criteria	Uo
36	Methylene Chloride	25	25	4.70	No
37	1,1,2,2-Tetrachloroethane	5	5	0.17	No
38	Tetrachloroethylene	5	5	0.80	No
39	Toluene	5	5	150.00	No
40	1,2-Trans-Dichloroethylene	5	5	10.00	No
41	1,1,1-Trichloroethane	5	5	200.00	No
42	1,1,2-Trichloroethane	5	5	0.60	No
43	Trichloroethylene	5	5	2.70	No
44	Vinyl Chloride	5	5	0.50	No
45	Chlorophenol	5	5	120.00	No
46	2,4-Dichlorophenol	5	5	93.00	No
47	2,4-Dimethylphenol	5	5	540.00	No
48	2-Methyl-4,6-Dinitrophenol	25	25	13.40	No
49	2,4-Dinitrophenol	50	50	70.00	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	0.28	No
54	Phenol	10	10	21000.00	No
55	2,4,6-Trichlorophenol	5	5	2.10	No
56	Acenaphthene	5	5	1200.00	No
57	Acenaphthylene	5	5	No Criteria	Uo
58	Anthracene	5	5	9600.00	No
59	Benzidine	0	0	0.00	No
60	Benzo(a)Anthracene	5	5	0.00	No
61	Benzo(a)Pyrene	5	5	0.00	No

INFORMATION SHEET – ORDER NO. R5-2005-0156  
 SOUTHERN CALIFORNIA EDISON COMPANY  
 BIG CREEK POWERHOUSE NO. 1, DOMESTIC WWTP  
 FRESNO COUNTY

CTR Parameter #	PRIORITY POLLUTANTS	Maximum Effluent Concentration or Minimum Method Detection Limit (ug/L)	Maximum Background Concentration or Minimum Detection Limit MDL (ug/L)	Lowest (most stringent) Criterion	RPA Result <sup>(1,2)</sup>
62	Benzo(b)Fluoranthene	5	5	0.00	No
63	Benzo(ghi)Perylene	5	5	No Criteria	Uo
64	Benzo(k)Fluoranthene	5	5	0.00	No
65	Bis(2-Chloroethoxy)Methane	5	5	No Criteria	Uo
66	Bis(2-Chloroethyl)Ether	25	25	0.03	No
67	Bis(2-Chloroisopropyl)Ether	50	50	1400.00	No
68	Bis(2-Ethylhexyl)Phthalate	5	5	1.80	No
69	4-Bromophenyl Phenyl Ether	5	5	No Criteria	Uo
70	Butylbenzyl Phthalate	5	5	3000.00	No
71	2-Chloronaphthalene	5	5	1700.00	No
72	4-Chlorophenyl Phenyl Ether	5	5	No Criteria	Uo
73	Chrysene	5	5	0.00	No
74	Dibenzo(a,h)Anthracene	5	5	0.00	No
75	1,2-Dichlorobenzene	5	5	600.00	No
76	1,3-Dichlorobenzene	5	5	400.00	No
77	1,4-Dichlorobenzene	5	5	5.00	No
78	3,3'-Dichlorobenzidine	10	10	0.04	No
79	Diethyl Phthalate	5	5	23000.00	No
80	Dimethyl Phthalate	5	5	313000.00	No
81	Di-n-Butyl Phthalate	5	5	2700.00	No
82	2,4-Dinitrotoluene	20	20	0.11	No
83	2,6-Dinitrotoluene	20	20	No Criteria	Uo
84	Di-n-Octyl Phthalate	5	5	No Criteria	Uo
85	1,2-Diphenylhydrazine	0	0	0.04	No
86	Fluoranthene	5	5	300.00	No
87	Fluorene	5	5	1300.00	No
88	Hexachlorobenzene	5	5	0.00	No
89	Hexachlorobutadiene	5	5	0.44	No
90	Hexachlorocyclopentadiene	0	0	50.00	No
91	Hexachloroethane	5	5	1.90	No
92	Indeno(1,2,3-cd) Pyrene	5	5	0.00	No
93	Isophorone	5	5	8.40	No
94	naphthalene	5	5	No Criteria	Uo
95	Nitrobenzene	10	10	17.00	No
96	N-Nitrosodimethylamine	5	5	0.00	No
97	N-Nitrosodi-n-Propylamine	25	25	0.01	No
98	N-Nitrosodiphenylamine	5	5	5.00	No
99	Phenanthrene	10	10	No Criteria	Uo
100	Pyrene	5	5	960.00	No
101	1,2,4-Trichlorobenzene	5	5	70.00	No
102	Aldrin	5	5	0.00	No

CTR Parameter #	PRIORITY POLLUTANTS	Maximum Effluent Concentration or Minimum Method Detection Limit (ug/L)	Maximum Background Concentration or Minimum Detection Limit MDL (ug/L)	Lowest (most stringent) Criterion	RPA Result <sup>(1,2)</sup>
103	alpha-BHC	0.1	0.1	0.00	No
104	beta-BHC	0.1	0.1	0.01	No
105	gamma-BHC	0.1	0.1	0.02	No
106	delta-BHC	0.1	0.1	No Criteria	Uo
107	Chlordane	2	2	0.00	No
108	4,4-DDT	0.1	0.1	0.00	No
109	4,4-DDE	0.1	0.1	0.00	No
110	4,4-DDD	0.1	0.1	0.00	No
111	Dieldrin	0.1	0.1	0.00	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	110.00	No
115	Endrin	0.1	0.1	0.04	No
116	Endrin Aldehyde	0.1	0.1	0.76	No
117	Heptachlor	0.1	0.1	0.00	No
118	Heptachlor Epoxide	0.1	0.1	0.00	No
119-125	PCBs sum <sup>(3)</sup>	0.2	0.2	0.00	No
126	Toxaphene	2	2	0.00	No

- 1) RP =Yes, if either MEC or Background > WQO/WQC.  
 RP = No, if (1) both MEC and background < WQO/WQC or (2) no background and all effluent data non-detect, or no background and MEC<WQO/WQC.
- 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 Regional Board has determined that the effluent limitations established under previous Order No. 95-236 continue to be appropriate, except as stated below.

**Chlorine Residual.** Previous Order No. 95-236 established chlorine residual effluent limitations to regulate the discharge of chlorine from wastewater disinfection processes. The Discharger has replaced the chlorine disinfection system with an ultraviolet light disinfection system, and no longer stores or uses chlorine at the WWTP. Because chlorine is no longer used at the WWTP, the previous Order’s chlorine residual limitations are not included in this Order. This discontinuation of chlorine residual effluent limitations is allowed under an exception to federal Antibacksliding provisions, codified in 40 CFR 122.44(I), for facilities where material and substantial alterations or additions have been made which justify the relaxation.

**Percent Removal of BOD and TSS.** Previous Order No. 95-236 established 85% removal requirements for BOD and TSS. This Order requires that the WWTP meet 90% removal requirements

for BOD and TSS. Ninety-percent removal requirements for BOD and TSS are technology based requirements for tertiary treatments systems based on best professional judgment (BPJ), and are consistent with requirements established for other tertiary treatment systems.

### **RECEIVING WATER LIMITATIONS**

The plant discharges to Big Creek, a tributary to the San Joaquin River. The Regional Board adopted a *Water Quality Control Plan, Fourth Edition, for the Sacramento and San Joaquin River Basins* (hereafter Basin Plan). 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 (lead, arsenic, barium, copper, cyanide, iron, manganese, silver and zinc), color, floating material, oil and grease, pH, pesticides, radioactivity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, turbidity, chloride, conductivity, and dissolved oxygen based on the applicable narrative and numeric water quality objectives contained in Basin Plan.

### **MONITORING AND REPORTING REQUIREMENTS**

In 1998 the Regional Board revised the Monitoring and Reporting Program (MRP) for Order No. 95-236 as follows:

- The requirement for reporting influent flow to the plant on a continuous basis was removed because the flow has been demonstrated to be consistent, and the Discharger does not have a continuous influent flow recording meter.
- The effluent monitoring requirement to measure chlorine residual three times per week was revised to require monitoring only when the Discharger is using chlorine. The receiving water monitoring requirement to measure chlorine residual was revised to apply only when the system is chlorinating.
- The effluent monitoring requirement to measure settleable solids daily was revised to require weekly monitoring. The Discharger demonstrated that effluent settleable solids values were nearly always non-detect.
- The effluent monitoring requirement to measure pH daily was revised to three times per week based on demonstrated consistency in pH testing results.
- The acute toxicity testing requirement was removed because the Discharger was able to demonstrate no toxicity in the discharge. The Discharger submitted data from four successive quarters.
- The receiving water monitoring requirements for flow and flow ratio reporting were removed based on data that showed that the receiving water flow will not change significantly in the future.

- The receiving water monitoring requirements to measure dissolved oxygen, pH, turbidity, temperature, electrical conductivity, and chlorine on a monthly basis were revised to quarterly. This revision was based on records that show that while the measured values of these constituents vary seasonally, the seasonal patterns are repeated each year.
- Toxicity testing requirements were removed from the previous revised MRP because the original MRP No. 95-236 stated “If acute toxicity monitoring results for four successive quarters demonstrate no toxicity in the discharge, the Discharger may terminate acute toxicity monitoring.” The Discharger conducted toxicity monitoring as required and demonstrated that there is little potential for in-stream toxicity resulting from the discharge of effluent to Big Creek.

The above revised requirements have been maintained in this Order with the following exceptions:

- Weekly effluent monitoring for total phosphorous was reduced to twice per month. The previous Order stated that “When the Discharger demonstrates monthly average total phosphorous results 0.2 mg/L below the limit of 0.5 mg/L for six consecutive months, then the frequency of monitoring for total phosphorous can be reduced to two times per month.” Data from 2001, 2002, and 2003 showed that all samples for phosphorous were 0 or ND except one monthly average which was 2.5 mg/L in March 2002. Therefore, the sampling frequency for phosphorous has been reduced.
- Total coliform and ammonia receiving water monitoring requirements are established in this Order to determine whether the discharge is causing or contributing to an in-stream exceedance of applicable water quality objectives.
- Effluent and receiving water monitoring requirements for chlorine residual are not included in the MRP because the WWTP no longer stores or uses chlorine onsite.
- Effluent chronic toxicity testing requirements are included in this Order to comply with Section 4 of the SIP. The Discharger will be required to monitor the effluent for chronic toxicity once during the term of this Permit.
- Priority pollutant monitoring requirements are included in this Order to comply with Section 1.3 of the SIP. The Discharger will be required to monitor the effluent for priority pollutants once during the term of this Permit.

JE:fmc: 10/21/05

ATTACHMENT B  
ORDER No. R5-2005-0156  
SOUTHERN CALIFORNIA EDISON COMPANY  
BIG CREEK POWERHOUSE NO. 1, DOMESTIC WWTP  
FRESNO COUNTY

CTR #	Constituent	CAS Number	Basis	Criterion Concentration (ug/L or noted) (1)	Criterion Quantitation Limit (ug/L or noted)	Suggested Test Methods
<b>VOLATILE ORGANICS</b>						
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

ATTACHMENT B  
ORDER No. R5-2005-0156  
SOUTHERN CALIFORNIA EDISON COMPANY  
BIG CREEK POWERHOUSE NO. 1, DOMESTIC WWTP  
FRESNO COUNTY

CTR #	Constituent	CAS Number	Basis	Criterion Concentration (ug/L or noted) (1)	Criterion Quantitation Limit (ug/L or noted)	Suggested Test Methods
<b>SEMI-VOLATILE ORGANICS</b>						
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
54	Phenol	108952	Taste and Odor	5	1	EPA 8270C
100	Pyrene	129000	Calif. Toxics Rule	960	10	EPA 8270C
<b>INORGANICS</b>						
	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
<b>PESTICIDES - PCBs</b>						
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

ORDER No. R5-2005-0156

SOUTHERN CALIFORNIA EDISON COMPANY

BIG CREEK POWERHOUSE NO. 1, DOMESTIC WWTP

FRESNO COUNTY

CTR #	Constituent	CAS Number	Basis	Criterion Concentration (ug/L or noted) (1)	Criterion Quantitation Limit (ug/L or noted)	Suggested Test Methods
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
<b>OTHER CONSTITUENTS</b>						
	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 <sub>3</sub> )			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 <sub>3</sub> )		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. They do not indicate a regulatory decision that the cited concentration is either necessary or sufficient for full protection of beneficial uses. Available technology may require that effluent limits be set lower than these values.
- (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. Values displayed correspond to pH 8.0 and temperature of 22 C.
- (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