

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TIME SCHEDULE ORDER R5-2012-0049

REQUIRING
SOUTHERN CALIFORNIA EDISON COMPANY
BIG CREEK POWERHOUSE NO. 1
DOMESTIC WASTEWATER TREATMENT PLANT
FRESNO COUNTY

TO COMPLY WITH REQUIREMENTS PRESCRIBED IN ORDER R5-2012-0048
(NPDES PERMIT NO. CA0079545)

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

1. On 8 June 2012, the Central Valley Water Board adopted Waste Discharge Requirements (WDR) Order R5-2012- 0048, prescribing waste discharge requirements for the Southern California Edison Company (hereafter Discharger), Big Creek Powerhouse No. 1 Domestic Wastewater Treatment Plant (hereafter Facility), Fresno County.
2. WDR Order R5-2012-0048 contains Final Effluent Limitations IV.A.1., which reads, in part, as follows:

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 001, with compliance measured at Monitoring Location EFF-001 as described in the Monitoring and Reporting Program:

- a. The effluent limitations in Table 6:

Table 6. Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Copper, Total Recoverable	µg/L	0.55	--	1.0	--	--
Lead, Total Recoverable	µg/L	0.053	--	0.11	--	--
Zinc, Total Recoverable	µg/L	6.4	--	11	--	--
Nitrite Plus Nitrate (as N)	mg/L	10.	--	--	--	--

3. The effluent limitations specified in WDR Order R5-2012-0048 for copper, lead, and zinc are based on implementation of the California Toxics Rule. The effluent limitation for nitrite plus nitrate (as N) is established for the protection of human health. The effluent limitations for copper, lead, nitrite plus nitrate (as N), and zinc are new effluent limitations, which were not prescribed in previous WDR Order No. R5-2005-0156, adopted by the Central Valley Water Board on 21 October 2005.

4. California Water Code (CWC) section 13300 states:

Whenever a regional board finds that a discharge of waste is taking place or threatening to take place that violates or will violate requirements prescribed by the regional board, or the state board, or that the waste collection, treatment, or disposal facilities of a discharger are approaching capacity, the board may require the discharger to submit for approval of the board, with such modifications as it may deem necessary, a detailed time schedule of specific actions the discharger shall take in order to correct or prevent a violation of requirements.

5. Title 40 of the Code of Federal Regulations, Section 122.44(d)(1)(i) requires that NPDES permit effluent limitations must control all pollutants which are or may be discharged at a level which will cause or have the reasonable potential to cause or contribute to an in-stream excursion above any State water quality standard, including any narrative criteria for water quality. Beneficial uses, together with their corresponding water quality objectives or promulgated water quality criteria, can be defined per federal regulations as water quality standards.

6. CWC subsections 13385(h) and (i) require the Central Valley Water Board to impose mandatory minimum penalties upon dischargers that violate certain effluent limitations. CWC section 13385(j)(3) provides protection from mandatory minimum penalties for violations of an effluent limitation when:

...the waste discharge is in compliance with either a cease and desist order issued pursuant to Section 13301 or a time schedule order issued pursuant to Section 13300 or 13308, if all of the following requirements are met:

(A) The ... time schedule order is issued on or after July 1, 2000, and specifies the actions that the discharger is required to take in order to correct the violations that would otherwise be subject to subdivisions (h) and (i).

(B) The regional board finds that, for one of the following reasons, the discharger is not able to consistently comply with one or more of the effluent limitations established in the waste discharge requirements applicable to the waste discharge:

(i) The effluent limitation is a new, more stringent, or modified regulatory requirement that has become applicable to the waste discharge after the effective date of the waste discharge requirements and after July 1, 2000, new or modified control measures are necessary in order to comply with the effluent limitation, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

...

(C) (i) The regional board establishes a time schedule for bringing the waste discharge into compliance with the effluent limitation that is as short as possible, taking into account the technological, operational, and economic factors that affect the design, development, and implementation of the control measures that are necessary to comply with the effluent limitation. Except as provided in clause (ii), for the purposes of this subdivision, the time schedule shall not exceed five years in length.

...

(iii) If the time schedule exceeds one year from the effective date of the order, the schedule shall include interim requirements and the dates for their achievement. The interim requirements shall include both of the following:

(I) Effluent limitations for the pollutant or pollutants of concern.

(II) Actions and milestones leading to compliance with the effluent limitation.

(D) The discharger has prepared and is implementing in a timely and proper manner, or is required by the regional board to prepare and implement, a pollution prevention plan pursuant to Section 13263.3.

In accordance with CWC section 13385(j)(3), and based upon effluent monitoring results, the Discharger is unable to consistently comply with the new effluent limitations for copper, lead, nitrite plus nitrate (as N), and zinc. These effluent limitations are new requirements that became applicable to the discharge when WDR Order R5-2012-0049 became effective, and after 1 July 2000, and for which new or modified control measures are necessary in order to comply with the new effluent limitations, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

7. On 12 January 2012, the Discharger submitted an Infeasibility Report describing how it intends to comply with new effluent limitations for copper, lead, nitrite plus nitrate (as N), and zinc. The Infeasibility Report includes actions the Discharger will take or is undertaking, and schedules to comply with the final effluent limitations. For compliance with the final effluent limitation for nitrite plus nitrate (as N), the Discharger stated that due to a recent Facility shutdown, it requires time to build up its mixed liquor concentrations at the Facility and also provide additional training to plant operators on operation of the air supply system. For compliance with the copper and lead final effluent limitations, the Discharger stated that the California Department of Public Health (DPH) has approved the installation of a caustic soda injection system at the drinking water treatment plant to reduce pH levels in the drinking water. The Discharger determined that low pH in the drinking water was a major cause of corrosion, subsequently causing elevated levels of copper and lead. Once the caustic soda injection system is installed, DPH is requiring the Discharger to complete a corrosion control study within 18 months following installation to verify copper and lead levels have been reduced with corrosion control. The Discharger stated that it will also evaluate reduction in zinc levels in the drinking water as part of its corrosion control study.
8. Concurrent with the corrosion control study, the Discharger also proposed to conduct a Water-Effect Ratio (WER) Study for copper, lead, and zinc, and mixing zone and dilution studies, which will be completed in 12 months. If the studies do not result in the Discharger being able to comply with new effluent limitations for copper, lead, and zinc,

the Discharger proposed to develop an alternative method of compliance for treating these constituents. The Discharger proposed a schedule of six months following submittal of the corrosion control study to develop an alternative method of compliance for copper, lead, and zinc.

9. This Order provides time schedules for the Discharger to develop, submit, and implement methods of compliance, including developing and implementing pollution prevention activities, completing studies, and/or constructing necessary treatment facilities to meet new effluent limitations for copper, lead, nitrite plus nitrate (as N), and zinc.
10. Since the time schedule for completion of actions necessary to bring the waste discharge into compliance with the final effluent limitations for copper, lead, and zinc exceeds one year, this Order includes interim requirements and dates for their achievement. The time schedule does not exceed five years.
11. The compliance time schedule in this Order includes interim performance-based effluent limitations for copper, lead, nitrite plus nitrate (as N), and zinc. The interim effluent limitations consist of maximum daily effluent concentrations and average monthly effluent concentrations derived using sample data provided by the Discharger. In developing the performance-based interim effluent limitations, where there are 10 data points or more, sampling and laboratory variability is accounted for by establishing interim effluent limitations that are based on normally distributed data where 99.9 percent of the data points will lie within 3.3 standard deviations of the mean (*Basic Statistical Methods for Engineers and Scientists*, Kennedy and Neville, Harper and Row, 3rd Edition, January 1986). When at least 80 percent of the data points are reported as non-detect (ND) values, or if there are less than 10 data points available, interim effluent limitations are based on 3.11 times the maximum observed effluent concentration (MEC) to obtain the daily maximum and average monthly interim effluent limitations. Additionally, if either of these procedures produces interim effluent limitations less than the MEC, the MEC is sometimes established as the interim effluent limitation for both the maximum daily and the average monthly effluent limitations.

The following table summarizes the calculations of the interim performance-based effluent limitations for copper, lead, nitrite plus nitrate (as N), and zinc:

Interim Effluent Limitations Calculation Summary

Parameter	Units	MEC	Mean	Standard Deviation	Number of Samples	Interim MDEL	Interim AMEL
Copper, Total Recoverable	µg/L	18	11 ¹	4.3 ¹	32	25	25
Lead, Total Recoverable	µg/L	0.75	0.38 ¹	0.20 ¹	32	1.1	1.1
Zinc, Total Recoverable	µg/L	89	49 ¹	17 ¹	32	100	100

Parameter	Units	MEC	Mean	Standard Deviation	Number of Samples	Interim MDEL	Interim AMEL
Nitrite Plus Nitrate (as N)	mg/L	17 ² 0.15 ³	7.2 ² 0.071 ³	3.5 ² 0.032 ³	91 ⁴ 30 ⁵	--	19

¹ The mean and standard deviation were calculated using the robust Regression on Order Statistics technique.

² Concentration is Nitrate (as N)

³ Concentration is Nitrite (as N)

⁴ Number of samples for Nitrate (as N) and Nitrate (as NO₃) collected between January 2011 through April 2012.

⁵ Number of samples for Nitrite (as N) collected between January 2011 through August 2011.

12. The Central Valley Water Board finds that the Discharger can, in addition to other treatment and control options, undertake source control to maintain compliance with the interim effluent limitations included in this Order. Interim effluent limitations are established when compliance with the final effluent limitations cannot be achieved by the existing discharge. Discharge of constituents in concentrations in excess of the final effluent limitations, but in compliance with the interim effluent limitations, can significantly degrade water quality and adversely affect the beneficial uses of the receiving stream on a long-term basis. The interim effluent limitations, however, establish an enforceable ceiling concentration until compliance with the final effluent limitations can be achieved.
13. On 8 June 2012, in Rancho Cordova, California, after due notice to the Discharger and all other affected persons, the Central Valley Water Board conducted a public hearing at which evidence was received to consider a Time Schedule Order under CWC section 13300 to establish a time schedule to achieve compliance with waste discharge requirements.
14. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code section 21000, et seq.), in accordance with CWC section 13389 and Title 14, California Code of Regulations, Section 15321(a)(2).
15. Any person adversely affected by this action of the Central Valley Water Board may petition the State Water Resources Control Board to review this action. The petition must be received by the State Water Resources Control Board, Office of the Chief Counsel, P.O. Box 100, Sacramento, CA 95812-0100, within 30 days of the date on which this action was taken. Copies of the law and regulations applicable to filing petitions will be provided on request.

IT IS HEREBY ORDERED, pursuant to sections 13300 and 13267 of the CWC, that:

1. The Discharger shall comply with the following time schedule to ensure compliance with the copper, lead, nitrite plus nitrate (as N), and zinc effluent limitations at Section IV.A.1.a. contained in WDR Order R5-2012-0048 as described in the above Findings:

<u>Task</u>	<u>Description</u>	<u>Date Due</u>
1	Submit and implement a Pollution Prevention plan (PPP) ¹ pursuant to CWC section 13263.3 for copper, lead, and zinc	Within 6 months after adoption of this Order
2	Submit a work plan and time schedule for completing a Water-Effect Ratio (WER) Study, dilution study, and mixing zone study for copper, lead, and zinc	23 July 2012
3	Submit results of WER study, dilution study, and mixing zone study for copper, lead, and zinc	7 June 2013
4	Submit results of corrosion control study	6 December 2013
5	Submit a work plan and implementation schedule that includes an alternative method of compliance ²	6 June 2014
6	Progress Reports ³	30 June, annually, until final compliance
7	Full compliance with nitrite plus nitrate (as N) final effluent limitation contained in WDR Order R5-2012-0048	8 March 2013
8	Full compliance with copper, lead, and zinc final effluent limitations contained in WDR Order R5-2012-0048	8 June 2017

¹ The PPP shall be prepared for copper, lead, and zinc, as appropriate, and shall meet the requirements specified in CWC section 13263.3.

² Only required if results of the WER, mixing zone, dilution and corrosion control studies: 1) show the Discharger is unable to consistently comply with the final effluent limitations for copper, lead, and zinc; or 2) do not support modified copper, lead, and zinc effluent limitations for which the Discharger can consistently comply with. If the implementation schedule includes a final compliance date beyond 8 June 2017, the Discharger shall demonstrate, pursuant to CWC section 13385(j)(3)(C)(ii)(II), that it is making diligent progress toward complying with the final effluent limitations and that the additional time is necessary to comply with the final effluent limitations.

³ The progress reports shall detail what steps have been implemented towards achieving compliance with waste discharge requirements, including studies, construction progress, evaluation of measures implemented, and recommendations for additional measures as necessary to achieve full compliance by the final date.

2. The following interim effluent limitations shall be effective immediately. The interim effluent limitations at Discharge Point No. 001 for copper, lead, nitrite plus nitrate (as N), and zinc shall be effective up through the dates specified in the table below, or when the Discharger is able to come into compliance, whichever is sooner.

Interim Effluent Limitations at Discharge Point No. 001

Parameter	Units	Maximum Daily Effluent Limitation	Average Monthly Effluent Limitation	Effective Through
Copper, Total Recoverable	µg/L	25	25	7 June 2017
Lead, Total Recoverable	µg/L	1.1	1.1	7 June 2017
Zinc, Total Recoverable	µg/L	100	100	7 June 2017
Nitrite Plus Nitrate (as N)	mg/L	--	19	7 March 2013

3. For the compliance schedules required by this Order, the Discharger shall submit to the Central Valley Water Board on or before each compliance report due date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, and shall include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the time schedule.
4. If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may apply to the Attorney General for judicial enforcement. If compliance with the final effluent limitations is not achieved by the Full Compliance date, the discharge would not be exempt from the mandatory minimum penalties for violation of certain effluent limitations, and would be subject to issuance of a Cease and Desist Order in accordance with CWC section 13301.

I, PAMELA C. CREEDON, 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 8 June 2012.

Original signed by:

 PAMELA C. CREEDON, Executive Officer