

[Attachment 1](#)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TIME SCHEDULE ORDER NO. R5-2011-0045-01
(AS AMENDED BY ORDER NO. R5-2014-0160)

REQUIRING THE MODOC JOINT UNIFIED SCHOOL DISTRICT
GEOTHERMAL PROJECT
MODOC COUNTY

TO COMPLY WITH REQUIREMENTS PRESCRIBED IN ORDER NO. R5-2011-0044
(NPDES PERMIT NO. CA0082406)

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

1. On 10 June 2011, the Regional Water Board adopted Waste Discharge Requirements (WDR) Order No. R5-2011-0044, prescribing waste discharge requirements for the Modoc Joint Unified School District (hereafter Discharger) for its Geothermal Project (hereafter Facility), Modoc County.
2. WDR Order No. R5-2011-0044, contains Final Effluent Limitations IV.A.1.a., which reads, in part, as follows:
 - a. 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:

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Copper, Total Recoverable	µg/L	3.6	7.2	--	--
pH	<u>Standard units</u>			6.5	8.5

3. The effluent limitations specified in Order No. R5-2011-0044 for copper are based on implementation of the California Toxics Rule. The effluent limitations specified in Order No. R5-2011-0044 for pH are based on the Water Quality Control Plan, Fourth Edition, for the Sacramento River and San Joaquin River Basins (Basin Plan). The effluent limitations for copper and pH are new or more stringent limitations, which were not prescribed in previous WDR Order No. R5-2005-0014, adopted by the Regional Water Board on 27 January 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. On 4 April 2011, the Discharger submitted letter that included justification for a compliance schedule for the new Effluent Limitations for copper. In addition to source control measures (via continued demand-based usage), the Discharger proposes to connect the geothermal system to the City of Alturas’ sanitary sewer system. The City of Alturas requires more detailed flow data which will need to be collected over a heating season. The proposal includes one year of data collection, system design in the second year along with budgeting and connection at the beginning of the third school fiscal year.
6. On 18 September 2014, the Discharger submitted a request for additional time to comply with final copper effluent limitations. The 18 September 2014 letter also contained a request for a time schedule to come into compliance with the instantaneous maximum pH (maximum pH) effluent limitation. Justification was provided in the letter, which outlined measures taken by the Discharger in order to comply with TSO No. R5-2011-0045 that resulted in unanticipated delays to meet final effluent limits for copper. The Discharger has completed a review and cost estimate for linking the geothermal heating system to the City of Alturas’ sanitary sewer system. The Discharger was also approved for a \$3,155,759 award through the California Energy Commission’s Geothermal Grant and Loan Program. Additional time is required for the Discharger to determine and complete a final project that allows them to meet final effluent limits.
7. The Discharger plans to eliminate Facility discharge to surface water by injection of waste geothermal fluid into the parent aquifer or conveyance of waste geothermal fluid to the City of Alturas’ sanitary sewer system. Proposed changes to the discharge location would result in rescission of the Discharger’s existing National Pollutant Discharge Elimination System (NPDES) permit. The Discharger plans to submit documentation to begin the California Environmental Quality Act’s (CEQA) environmental review process for injection of geothermal waste fluid back into the parent aquifer.
- 6-8. Federal regulations, 40 CFR §122.44 (d)(1)(i), require 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.
- 7-9. In accordance with CWC section 13385(j)(3), the Regional Water Board finds that, based upon results of effluent monitoring, the Discharger is not able to consistently comply with the new effluent limitations for copper and maximum pH. These limitations are new requirements that become applicable to the Order after the effective date of adoption of the waste discharge requirements, and after July 1, 2000, for which new or modified control measures are necessary in order to comply with the limitation, and the new or modified control measures cannot be designed, installed, and put into operation within 30

calendar days. The time schedule in this Order does not exceed five years from the effective date of the new effluent limitations.

- 8-10. Immediate compliance with the new effluent limitations for copper and maximum pH is not possible or practical. The Clean Water Act and the California Water Code authorize time schedules for achieving compliance.
- 9-11. This Order provides time schedules for the Discharger to develop, submit, and implement methods of compliance, including connecting the geothermal system to the municipal sanitary sewer, developing and implementing pollution prevention activities, or constructing necessary treatment facilities to meet these new effluent limitations.
- 10-12. CWC section 13385(h) and (i) require the Regional Water Board to impose mandatory minimum penalties upon dischargers that violate certain effluent limitations. CWC section 13385(j) exempts certain violations from the mandatory minimum penalties. CWC section 13385(j)(3) exempts the discharge from mandatory minimum penalties *“where 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, if all the [specified] requirements are met... For the purposes of this subdivision, the time schedule may not exceed five years in length....”*
- 11-13. Compliance with this Order exempts the Discharger from mandatory penalties for violations of effluent limitations for copper and maximum pH, in accordance with CWC section 13385(j)(3). CWC section 13385(j)(3) requires the Discharger to prepare and implement a pollution prevention plan pursuant to section 13263.3 of the California Water Code. Therefore, a pollution prevention plan will be necessary for copper and pH in order to effectively reduce the effluent concentrations by source control measures.
- 12-14. Since the time schedules for completion of action necessary to bring the waste discharge into compliance exceed one year, this Order includes interim requirements and dates for their achievement. The time schedule does not exceed 5 years.

The compliance time schedule in this Order include interim performance-based effluent limitations for copper and maximum pH. The interim effluent limitations consist of a maximum daily effluent concentration derived using sample data provided by the Discharger. In developing the interim limitations, where there are 10 sampling data points or more, sampling and laboratory variability is accounted for by establishing interim limits that are based on normally distributed data where 99.9 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). Where actual sampling shows an exceedance of the proposed 3.3 standard deviation interim limit, the maximum detected concentration has been established as the interim limitation. In developing the interim limitations, when there are less than 10 sampling data points available, the USEPA Technical Support Document for Water Quality- based Toxics Control ((EPA/505/2-90-001), TSD) recommends a coefficient of variation of 0.6 be utilized as representative of wastewater effluent sampling. The TSD

recognizes that a minimum of 10 data points is necessary to conduct a valid statistical analysis. The multipliers contained in Table 5-2 of the TSD are used to determine a maximum daily limitation based on a long-term average objective. In this case, the long-term average objective is to maintain, at a minimum, the current plant performance level. Therefore, when there are less than 10 sampling points for a constituent, an interim limitation is based on 3.11 times the maximum observed effluent concentration to obtain the daily maximum interim limitation (TSD, Table 5-2).

The following table summarizes the calculations of the interim performance-based effluent limitations for copper and maximum pH:

Interim Effluent Limitation Calculation Summary

Parameter	Units	MEC	Mean	Standard Deviation	Number of Samples	Interim MDEL
Copper	µg/L	20	14.5	5.57	4	62
pH	<u>Standard units</u>	<u>9.0</u>	==	==	<u>16</u>	<u>9.5¹</u>

MDEL: Maximum Daily Effluent Limitation

¹ Interim instantaneous maximum limitation. Interim value based on past performance.

~~13.~~15. The Central Valley Water Board finds that the Discharger can maintain compliance with the interim limitation included in this Order. Interim 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 limitations, however, establish an enforceable ceiling concentration until compliance with the effluent limitation can be achieved. The Central Valley Water board finds that the time schedule contained herein is as short as possible, taking into account the technological, operational, and economic factors that affect the design, development, and implementation of control measures that are necessary to comply with the final effluent limitations.

~~14.~~16. On 10 June 2011, in Rancho Cordova, California, after due notice to the Discharger and all other affected persons, the Regional 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.

~~15.~~17. 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 15321 (a)(2), Title 14, of the California Code of Regulations.

~~16.~~18. Any person adversely affected by this action of the Regional 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 THAT:

1. The Discharger shall comply with the following time schedule to ensure compliance with ~~the copper~~ and maximum pH effluent limitations at in Section IV.A.1.a contained in WDR Order No. R5-2011-0044 as described in the above Findings:

Task	Date Due
Submit and implement Pollution Prevention Plan (PPP) ¹ pursuant to CWC section 13263.3 for copper.	Within 6 months of the effective date of this Order
Begin collecting data needed for design of connection of the geothermal system to the sanitary sewer.	Within 6 months after adoption of this Order or the startup of the system for the 2011/2012 heating season, whichever is sooner.
Complete data collection.	On or before 30 June 2012 .
Complete data evaluation report and preliminary sewer district connection approval.	On or before 31 January 2013 .
Complete the cost estimate and design of the sanitary sewer connection.	On or before 30 June 2013 .
Secure connection project funding.	On or before 30 June 2014 .
Complete sanitary sewer connection.	On or before 30 September 2014.
Progress Reports ²	30 30-1 June 2012 and, annually thereafter , after approval of workplan until final compliance
<u>Submit and implement Pollution Prevention Plan (PPP)¹ pursuant to CWC section 13263.3 for pH.</u>	<u>1 February 2015</u>
<u>Begin environmental review process (e.g., CEQA)</u>	<u>1 January 2015</u>
<u>Submit final design of compliance project</u>	<u>1 June 2015</u>
<u>Begin compliance project (e.g. construction)</u>	<u>1 January 2016</u>
Full compliance with copper <u>and pH</u> effluent limitations	30 September 2014 <u>10 June 2016</u>

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

² 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.

- The following interim effluent limitations shall be effective immediately. The interim effluent limitations at Discharge Point No. 001 for copper and maximum pH shall be effective up through ~~30 September 2014~~ **10 June 2016**, or when the Discharger is able to come into compliance, whichever is sooner.

Discharge Point No. 001

Effective immediately and until:	Parameter	Units	Maximum Daily Effluent Limitation
30 September 2014 <u>10 June 2016</u>	Copper	µg/L	62
<u>10 June 2016</u>	<u>pH</u>	<u>standard units</u>	<u>9.5</u>

3. For the compliance schedules required by this Order, the Discharger shall submit to the Regional 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 Regional 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 these 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 10 June 2011.

Original signed by

PAMELA C. CREEDON, Executive Officer