

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TIME SCHEDULE ORDER R5-2011-0904

REQUIRING THE STALLION SPRINGS COMMUNITY SERVICES DISTRICT
WASTEWATER TREATMENT FACILITY
KERN COUNTY

TO COMPLY WITH REQUIREMENTS PRESCRIBED IN ORDER R5-2008-0091
(NPDES PERMIT NO. CA0080489)

The Executive Officer of the California Regional Water Quality Control Board, Central Valley Region, (hereinafter Central Valley Water Board) finds that:

1. On 12 June 2008, the Central Valley Water Board adopted Waste Discharge Requirements Order R5-2008-0091, NPDES Permit No. CA0080489, prescribing waste discharge requirements for the Stallion Springs Community Services District's (hereinafter Discharger) Wastewater Treatment Facility (hereafter Facility), Kern County.
2. Order R5-2008-0091 contains Final Effluent Limitations IV.A.1.a, which read, in part, as follows:

Parameter	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Maximum Daily
Copper, Total Recoverable	µg/L	10.3	--	20.6

3. Order R5-2008-0091, Provision VI.C.7.a, contains a compliance schedule for meeting the final effluent limitations for copper with compliance required by 18 May 2010.
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. 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, are 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 final copper effluent limitations contained in Order R5-2008-0091.

The final effluent limitations contained in Order R5-2008-0091 for copper are a new requirement that became applicable to the discharge on 18 May 2010, and new or modified control measures need to be implemented to comply with the new copper

effluent limitations, and these new or modified control measures cannot be completed and put into operation within 30 calendar days. This Order requires the Discharger to prepare and implement a pollution prevention plan pursuant to CWC section 13263.3 for copper.

7. Order R5-2008-0091, Provision VI.C.7.a, requires the Discharger submit a corrective action plan and an engineering treatment feasibility study examining the feasibility, costs, and benefits of different treatment options that may be required to remove copper.
8. In a letter dated 18 May 2010, the Discharger requested additional time beyond the final compliance date to comply with the final effluent limitations for copper. The request did not contain the justification necessary to support a time schedule order that provides protection from mandatory minimum penalties. A Notice of Violation dated 4 November 2010 requested the Discharger to provide an infeasibility report and the delinquent corrective action plan and engineering treatment feasibility study described in Finding 7 above.
9. On 3 January 2011, the Discharger submitted a technical report prepared by Kennedy/Jenks Consultants, Inc. entitled *Report on Wastewater Effluent Copper Reduction for Stallion Springs Community Services District* (Copper Reduction Report) in response to the 4 November 2010 Notice of Violation. The Copper Reduction Report includes documentation of the measures the Discharger has taken to assess the copper concentrations in its source water and influent. The Copper Reduction Report also describes ongoing pilot testing for the removal of copper and future testing that will be conducted, if necessary. The ongoing testing consists of iron coprecipitation which includes injecting chemicals at the influent of the secondary clarifier. The Discharger has already conducted iron coprecipitation testing by injecting ferric chloride at the influent pump sump, but the testing did not significantly reduce effluent copper concentrations. The Discharger stated it may conduct further testing of iron coprecipitation by increasing the pH, which will take an additional month to complete. During a 18 March 2011 telephone conversation with Central Valley Water Board staff, the Chief Plant Operator indicated that the Discharger discontinued the use of ferric chloride and started testing with a metal precipitant/coagulant manufactured by Jenfitch, LLC.
10. If iron coprecipitation does not significantly reduce effluent copper concentrations, the Discharger proposes to optimize the activated sludge process by reducing the mixed liquor suspended solids to reduce the sludge retention time and/or to reduce the pH of the mixed liquor to see if it will encourage the proliferation and dominance of more effective copper adsorbing organisms. The Discharger reported that plant optimization is expected to take three to six months to complete testing. If the plant optimization option fails to produce the intended results, the Discharger proposes to convert its existing additional secondary clarifier, which is currently not in use, into a wetlands

treatment system. The Discharger states that this alternative may take an additional two to three years to achieve compliance with the final effluent limitations for copper.

11. This Order requires the Discharger to comply with the final effluent limitations for copper when the Discharger finishes its planned coprecipitation and/or plant optimization testing. The Copper Reduction Report indicates that coprecipitation and plant optimization are the most feasible treatment processes to implement and are processes that have successfully reduced copper concentrations at other treatment facilities. However, if the testing at this Facility does not achieve the desired results and the Discharger needs more time to comply, this Order may be amended at the Executive Officer's or the Central Valley Water Board's discretion to extend the compliance date. Any consideration of extending the compliance date will be contingent upon the Discharger demonstrating that diligent efforts have been made to achieve compliance with the final effluent limitations for copper. Furthermore, any proposed changes to the time schedule will be noticed, and the public will be provided an opportunity to comment.

12. The compliance time schedule in this Order includes interim performance-based effluent limitations for copper. The interim effluent limitations consist of a maximum daily effluent concentration and an average monthly effluent concentration derived using sample data provided by the Discharger during the term of Order R5-2008-0091 (approximately 2.5 years). Monthly average concentrations were determined for each month that copper samples were collected. In developing the performance-based interim effluent limitations, where there are ten 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 or calculated as non-detect (ND) values, or if there are less than ten data points available, interim effluent limitations are based on 3.11 times the maximum observed effluent concentration (MEC) to obtain the daily maximum interim effluent limitation or 3.11 times the MEC (when one or less samples are collected per month) to obtain the average monthly interim effluent limitation. Additionally, if either of these procedures produces interim effluent limitations less than the MEC or the maximum monthly average concentration, the MEC or the maximum monthly average concentration are sometimes established as the interim effluent limitation. The following tables summarize the calculation of the interim performance-based effluent limitations for copper:

Maximum Daily Interim Effluent Limitation

Parameter	Units	MEC	Mean	Std. Dev. (SD)	# of Data Points	% ND	Formula Used	Calculated Limit
Copper	µg/L	29	16	9.4	10	0	3.3xSD + Mean	47

Average Monthly Interim Effluent Limitation

Parameter	Units	Maximum Average Monthly Concentration	Mean of Monthly Averages	Std. Dev. (SD)	# of Data Points (Monthly Averages)	% ND (as Monthly Averages)	Formula Used	Calculated Limit
Copper	µg/L	29	16	9.4	10	0	3.3×SD + Mean	47

13. This Order provides a time schedule that is as short as possible for the Discharger to implement methods of compliance, including developing and implementing pollution prevention activities and constructing necessary treatment facilities to meet the final effluent limitations.
14. Since the time schedule for completion of actions necessary to bring the waste discharge into compliance exceeds one year, this Order includes interim requirements and dates for their achievement. The time schedule does not exceed five years from the date the final copper effluent limitations became applicable to the discharge.
15. 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.
16. The Executive Officer has provided a 30-day comment period and addressed all pertinent comments.
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 13389 and Title 14, California Code of Regulations, Section 15321(a)(2).

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 final effluent limitations for copper contained at section IV.A.1.a in Order R5-2008-0091 as described in the above Findings:

<u>Task</u>	<u>Description</u>	<u>Date Due</u>
1	Submit and begin implementing a Pollution Prevention Plan (PPP) pursuant to CWC section 13263.3 for copper. ¹	20 September 2011
2	Progress Report ²	1 November 2011

<u>Task</u>	<u>Description</u>	<u>Date Due</u>
3	Complete coprecipitation, plant optimization, and/or any other appropriate activities described in the Copper Reduction Report and any revisions to the Copper Reduction Report that have been approved by the Executive Officer.	30 December 2011
4	Submit a technical report ³ that includes results of pilot testing described in the Copper Reduction Report and any revisions to the Copper Reduction Report that have been approved by the Executive Officer	30 December 2011
5	Full compliance with the final effluent limitations for copper	1 January 2012

¹ The PPP shall be prepared and implemented for copper and shall meet the requirements specified in CWC section 13263.3. The PPP shall describe pollution prevention activities the Discharger will implement in the short-term and the long-term to reduce effluent concentrations for copper.

² The progress report 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 Discharger shall also notify the Central Valley Water Board whether or not it expects to comply by the final compliance date.

³ The technical report shall be prepared by, or under the responsible charge of, a person registered to practice civil engineering in California pursuant to California Business and Professions Code, section 6735. The technical report shall 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(s) responsible for the work.

2. The following interim effluent limitations at Discharge Point 001 shall be effective from **20 June 2011 to 31 December 2011**, or when the Discharger is able to come into compliance, whichever is sooner.

Effective 20 June 2011 and until:	Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation
31 December 2011	Copper, Total Recoverable	µg/L	47	47

3. For the compliance schedule required by this Order, the Discharger shall submit to the Central Valley Water Board on or before the 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.

Issuance of this Order does not preclude the Central Valley Water Board from taking additional enforcement actions against the Discharger. If compliance is not achieved by the full compliance date, the discharge will be subject to mandatory minimum penalties for violations of the final copper effluent limitations.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Resources Control Board to review the action in accordance with CWC section 13320 and Title 23, California Code of Regulations, Sections 2050 and following. The State Water Resources Control Board must receive the petition by 5:00 p.m., 30 days after the date that this Order becomes final, except that if the thirtieth day following the date that this Order becomes final falls on a Saturday, Sunday, or State holiday, the petition must be received by the State Water Resources Control Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

This Order is effective upon the date of signature.

Original signed by Clay L. Rodgers for
PAMELA C. CREEDON, Executive Officer

20 June 2011