

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TIME SCHEDULE ORDER R5-2014-0900
REQUIRING
THE SAN ANDREAS SANITARY DISTRICT
WASTEWATER TREATMENT PLANT
CALAVERAS COUNTY

TO COMPLY WITH REQUIREMENTS PRESCRIBED IN ORDER R5-2009-0007
(NPDES PERMIT CA0079464)

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

1. On 5 February 2009 the Central Valley Water Board adopted Waste Discharge Requirements (WDR) Order R5-2009-0007, NPDES Permit No. CA0079464, prescribing WDRs for the San Andreas Sanitary District (hereinafter Discharger) Wastewater Treatment Plant (hereafter Facility), Calaveras County.
2. WDR Order R5-2009-0007 section IV.A.1.a. includes, in part, the following final effluent limitations applicable to discharges from the Facility through Discharge Point No. 001:

Table 6. Effluent Limitations – Discharge Point No. 001

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Priority Pollutants						
Copper, Total Recoverable	µg/L	5.4	--	7.9	--	--
Cyanide, Total (as CN)	µg/L	4.3	--	8.5	--	--
Zinc, Total Recoverable	µg/L	48	--	77	--	--

3. The effluent limitations specified in Order R5-2009-0007 for cyanide, copper, and zinc were new limits based on the implementation of the California Toxics Rule, which were not prescribed in previous WDR Order No. R5-2003-0151, adopted by the Central Valley Water Board on 17 October 2003. The Discharger was unable to immediately comply with these effluent limitations, therefore, the Central Valley Water Board adopted Time Schedule Order (TSO) R5-2009-0008 that provided, in part, time schedules for compliance with the effluent limitations for cyanide, copper, and zinc.

Need for Time Schedule Extension and Legal Basis

4. The Discharger owns and operates the Facility, which was upgraded in December 2010 to provide a nitrified, filtered effluent. During periods of acceptable flow between 1 November and 30 April each year the Facility discharges to the North Fork Calaveras River, a water of the United States. Treatment facilities include screening, pH control chemical feed, pre-aeration, primary clarification, trickling filtration, intermediate clarification, extended aeration activated sludge processing, final clarification, cloth media filtration, chlorination, and dechlorination.
5. **Cyanide.** On 1 May 2013 the Discharger submitted a request and justification for an extension of the existing compliance schedule for cyanide that provided information supporting the infeasibility to immediately comply with the new effluent limitations prescribed in Order R5-2009-0007. The

December 2010 Facility upgrades were expected to result in compliance with the cyanide effluent limits. However, continued non-compliance has occurred since the upgrades. The Discharger has requested time to complete its source control investigations, possibly conduct a Mixing Zone and Dilution Study, and evaluate alternative disinfection treatment options. Since TSO R5-2009-0008 was adopted, the Discharger has made diligent efforts through the construction of tertiary filtration to reduce the formation of cyanide in the effluent, but is still unable to comply with the final effluent limits.

6. **Copper.** On 18 November 2013 the Discharger submitted a request and justification for an extension of the existing compliance schedule for copper that provided information supporting the infeasibility to immediately comply with the new effluent limitations prescribed in Order R5-2009-0007. The Discharger has conducted a site-specific Copper Water Effects Ratio (WER) Study that resulted in a WER of 7.55 for copper. The Discharger expects the WER will be applied in the Reasonable Potential Analysis (RPA) for copper during the upcoming renewal process for NPDES permit No. CA0079464. The results are expected to demonstrate that the discharge does not have reasonable potential to cause or contribute to an in stream excursion above the water quality objective for copper, thus negating the need for effluent limitations for copper in the upcoming permit renewal. However, Time Schedule Order R5-2009-0008 includes a final compliance date of 1 February 2014 while the schedule for renewal of the NPDES permit is expected in June 2014. Therefore, the Facility may remain out of the compliance with the existing effluent limits for copper until the NPDES permit is renewed. In addition, if despite the presence of the WER for copper, the RPA in the upcoming permit renewal process finds reasonable potential for the discharge to cause or contribute to an in stream excursion above the water quality objective for copper, an effluent limit will continue to be required and the Discharger will remain out of compliance with copper. The Discharger has made diligent efforts through the construction of tertiary filtration to reduce copper concentrations in the effluent from the Facility and conducted a copper WER study in attempt to comply with the final effluent limitations.
7. **Zinc.** On 18 November 2013 the Discharger submitted a request and justification for an extension of the existing compliance schedule for zinc that provided information supporting the infeasibility to immediately comply with the new effluent limitations prescribed in Order R5-2009-0007. The Discharger completed the implementation of tertiary filtration upgrades to the Facility in December of 2010, thus improving the quality of the effluent being discharged. Monitoring data collected since the implementation of these upgrades has demonstrated that the use of data collected prior to the upgrades is no longer representative of the discharge currently produced at the Facility. The minimum hardness value associated with the effluent discharged prior to the completed upgrades was 59 mg/L (as CaCO₃), while the minimum hardness value observed since the upgrades have been implemented is 71 mg/L (as CaCO₃), making hardness dependent metals, such as zinc, less toxic to aquatic life. It is expected that the current effluent zinc concentrations and hardness will be used for the RPA in the upcoming renewal process for NPDES permit No. CA0079464. The results are expected to demonstrate that the discharge no longer exhibits reasonable potential to cause or contribute to an in stream excursion above the water quality objective for zinc, thus negating the need for effluent limitations for zinc in the renewed NPDES permit. However, Time Schedule Order R5-2009-0008 includes a final compliance date of 1 February 2014 while the schedule for renewal of the NPDES permit is expected in June 2014. Therefore, the Facility may remain out of the compliance with the existing effluent limits for zinc until the NPDES permit is renewed. In addition, if the RPA in the upcoming permit renewal process finds reasonable potential for the discharge to cause or contribute to an in stream excursion above the water quality objective for zinc, the Discharger will need a continuance of the compliance schedule for zinc. The Discharger has made diligent efforts through the construction of tertiary filtration to reduce zinc concentrations in the effluent from the Facility in an attempt to comply with the final effluent limitations.

Mandatory Minimum Penalties

8. California Water Code sections 13385(h) and (i) require the Central Valley Water Board to impose mandatory minimum penalties (MMP's) upon dischargers that violate certain effluent limitations. California Water Code 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 or 13308, if all the [specified] requirements are met...for the purposes of this subdivision, the time schedule may not exceed five years in length...*".
9. Per the requirements of California Water Code section 13385(j)(3), the Central Valley Water Board finds that:
 - a. This Order specifies the actions that the Discharger is required to take in order to correct the violations that would otherwise be subject to California Water Code sections 13385(h) and (i).
 - b. To comply with final effluent limitations for cyanide, the Discharger had determined that while the sample preservation process and chlorine dose may be contributing to the elevated cyanide formation in the Facility's effluent, an additional five years is necessary to: 1) further investigate the feasibility of alternatives associated with the sample preservation process, 2) determine the feasibility of reliable cyanide source control, 3) if reliable source control is not feasible, then the Discharger would conduct a mixing zone and dilution study for cyanide, 4) if the Central Valley Water Board determines that dilution credits for cyanide are not appropriate, then the Discharger would need to design, finance, and build a UV disinfection system.
 - c. In the event that during the upcoming permit renewal process water quality-based effluent limits continue to be required for copper and/or zinc, the Discharger has determined that an additional five years will be necessary to: 1) determine the feasibility of alternative treatment options to remove copper and/or zinc from the discharge, and 2) implement necessary controls or construct treatment systems to remove the constituent(s).
 - d. This Order establishes a time schedule to bring the waste discharge into compliance with the effluent limitations 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 limitations.
10. The final effluent limitations for cyanide, copper, and zinc became applicable to the waste discharge on the effective date of WDR Order R5-2009-0007 (5 February 2009). TSO R5-2009-0008 provided protection from MMPs for violations of effluent limitations for cyanide, copper, and zinc from 5 February 2009 until the issuance of this Order (15 January 2014).
11. By statute, a Time Schedule Order may provide protection from MMPs for no more than five years, except as provided in CWC section 13385(j)(3)(C)(ii).
12. Per the requirements of CWC Section 13385(j)(3)(C)(ii)(II) for the purpose of treatment facility upgrade, the time schedule shall not exceed five years. Per the requirements of 13385(j)(3)(C)(ii)(II) following a public hearing, and upon a showing that the Discharger is making diligent progress toward bringing the waste discharge into compliance with the effluent limitation, the Central Valley Water Board may extend the time schedule for an additional five years, if the Discharger demonstrates that the additional time is necessary to comply with the effluent limitation. In accordance with CWC Section 13385(j)(3)(C)(ii)(II) the total length of the time schedule is less than

five years. The Central Valley Water Board finds, as described in previous findings in this Order, that the Discharger has demonstrated due diligence through the construction of tertiary filtration and is making diligent progress to bring the waste discharge into compliance with final effluent limitations for cyanide, copper, and zinc contained in WDR Order R5-2009-0007.

13. Compliance with this Order exempts the Discharger from MMP's for violations of the final effluent limitations for cyanide, copper, and zinc found in WDR Order R5-2009-0007 from the date of this Order (15 January 2014) until 1 December 2018.
14. In accordance with CWC section 13385(j)(3)(C), the total length of protection from mandatory minimum penalties for the final effluent limitations for cyanide, copper, and zinc do not exceed ten years.
15. This Order provides a time schedule for completing the actions necessary to ensure compliance with the final effluent limitations for cyanide, copper and zinc contained in WDR Order R5-2009-0007. Since the time schedule for completion of actions necessary to bring the waste discharge into compliance exceeds one year, this Order includes interim effluent limitations and interim requirements and dates for their achievement.
16. The compliance time schedules in this Order include performance-based interim effluent limitations for cyanide, copper, and zinc. The calculated interim average monthly effluent limitations (AMEL) and maximum daily effluent limitations (MDEL) for cyanide, copper, and zinc are based on the current treatment plant performance. In developing effluent limitations, the USEPA has developed a statistical approach in which the estimated maximum effluent concentration is calculated as the upper bound of the log normal distribution of effluent concentrations at a high confidence level. Table 3-1 *Reasonable Potential Multiplying Factors: 99% Confidence Level and 99% Probability Basis*, in USEPA's Technical Support Document For Water Quality-based Toxics Control, March 1991, (EPA/505/2-90-001) (TSD). The interim performance based AMELs in this Order are established as the estimated maximum effluent concentration determined through the above mentioned method. The interim performance-based MDELs in this Order were established using the procedures described in Table 5-3. *Multipliers for Calculating Maximum Daily Permit Limits From Average Monthly Permit Limits*, in USEPA's TSD by multiplying the interim AMELs by the MDEL/AMEL multipliers. In calculating interim effluent limitations for cyanide, copper, and zinc, seasonal effluent data (1 November through 30 April) from December 2010 through April 2013 was used. Derivation of the interim effluent limitations is summarized below.

Constituent	Units	Maximum Effluent Concentration (MEC)	Mean	Standard Deviation	# of Samples	Average Monthly Effluent Limitation (AMEL)	Maximum Daily Effluent Limitation (MDEL)
Cyanide	µg/L	11	4.3	3.5	13	39	90 ¹
Copper, Total Recoverable	µg/L	15	7.6	3.6	13	35	63 ²
Zinc, Total Recoverable	µg/L	87	53	15.5	13	147	220 ³

¹ MDEL for Cyanide calculated using a multiplier of 2.31.

² MDEL for Total Recoverable Copper calculated using a multiplier of 1.8.

³ MDEL for Total Recoverable Zinc calculated using a multiplier of 1.49.

17. The Central Valley Water Board finds that the Discharger can 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 Facility. 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 limitation can be achieved.
18. If an interim effluent limit contained in this Order is exceeded, then the Discharger is subject to MMPs for that particular exceedance as it will no longer meet the exemption in CWC 13385(j)(3). It is the intent of the Central Valley Water Board that a violation of an interim monthly effluent limitation subjects the Discharger to only one MMP for that monthly averaging period. In addition, a violation of an interim daily maximum effluent limit subjects the Discharger to one MMP for the day in which the sample was collected.

Other Regulatory Requirements

19. California Water Code 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.”*
20. Water Code section 13267 states in part: *In conducting an investigation specified in 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.*
21. The Discharger owns and operates the wastewater treatment facility which is subject to this Order. The technical and monitoring reports required by this Order are necessary to determine compliance with the WDRs and with this Order.
22. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) (“CEQA”) pursuant to Water Code section 13389, since the adoption or modification of a NPDES permit for an existing source is statutorily exempt and this Order only serves to implement a NPDES permit. (*Pacific Water Conditioning Ass’n, Inc. v. City Council of City of Riverside* (1977) 73 Cal.App.3d 546, 555-556.).

23. On 10 December 2009, the Central Valley Water Board adopted Resolution R5-2009-0114 to provide explicit authority to the Executive Officer to issue or modify time schedule orders, and to make this authority known to the public and regulated community. This Order may be issued by the Executive Officer of the Central Valley Water Board.
24. The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to extend the compliance schedules for copper, cyanide, and zinc contained in Time Schedule Order R5-2009-0008 for this discharge and has provided them with an opportunity to submit their written views and recommendations. No adverse public comments were received during the 30-day public comment period as required pursuant to Water Code section 13167.5.

IT IS HEREBY ORDERED THAT:

1. Time Schedule Order R5-2009-0008 is rescinded upon the effective date of this Order except for enforcement purposes.
2. Pursuant to California Water Code Sections 13300 and 13267, the Discharger shall comply with the following time schedule to submit reports and ensure completion of the compliance project described in Finding 9.b, above, for cyanide:

Task	Compliance Date
Annual Progress Reports. The Discharger shall submit annual progress reports. 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.	1 November, annually
Source Control / Sample Preservation. Submit report regarding the feasibility of reliable cyanide source control to comply with the final effluent limitations for cyanide, as well as the feasibility of sample preservation alternatives.	1 September 2014
Mixing Zone Study. If reliable source control is not feasible, then the Discharger would conduct a mixing zone and dilution study for cyanide. Submit mixing zone study for cyanide and request dilution credits.	1 March 2015
Construction Upgrades. If source control and/or a regulatory mixing zone do not result in compliance with the final effluent limitations for cyanide, the Discharger shall submit construction schedule to implement improvements to meet the final effluent limitations.	1 September 2016
Final Compliance. Comply with the Final Effluent Limitations for cyanide.	1 December 2018

3. Pursuant to California Water Code Sections 13300 and 13267, the Discharger shall comply with the following time schedule to submit reports and ensure completion of the compliance project described in Finding 9.c, above, for copper and zinc:

Task	Compliance Date
Annual Progress Reports. The Discharger shall submit annual progress reports. 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.	1 November, annually
Work Plan and Schedule. The Discharger shall submit a work plan and schedule to achieve compliance with the final effluent limitations for copper and zinc.	1 September 2014
Treatment Feasibility Study. The Discharger shall submit a treatment feasibility study for copper and zinc examining the feasibility, cost and benefits of different treatment options that may be required to remove copper and zinc from the discharge.	1 September 2015
Final Compliance. Comply with the Final Effluent Limitations for copper and zinc.	1 December 2018

4. The following interim effluent limitations shall be effective immediately. The interim effluent limitations for cyanide, copper, and zinc shall be effective until **30 November 2018**.

Parameter	Units	Interim Maximum Daily Effluent Limit	Interim Average Monthly Effluent Limit
Cyanide	µg/L	39	90
Copper, Total Recoverable	µg/L	35	63
Zinc, Total Recoverable	µg/L	147	220

5. Any person signing a document submitted under this Order shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

6. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain work plans for, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall contain the professional's signature and/or stamp of the seal.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order or with the WDRs may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water 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

PAMELA C. CREEDON, Executive Officer

1/15/2014

Date