

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2016-0067

AMENDING WASTE DISCHARGE REQUIREMENTS
ORDER R5-2014-0104 (NPDES PERMIT NO. CA0079464)
AND AMENDING TIME SCHEDULE ORDER R5-2014-0900

SAN ANDREAS SANITARY DISTRICT
WASTEWATER TREATMENT PLANT
CALAVERAS COUNTY

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

1. On 8 August 2014, the Central Valley Water Board adopted Waste Discharge Requirements Order (WDR) R5-2014-0104, renewing NPDES Permit No. CA0079464 that prescribes waste discharge requirements for the San Andreas Sanitary District Wastewater Treatment Plant, Calaveras County. For purposes of this Order, the San Andreas Sanitary District is hereafter referred to as "Discharger" and the Wastewater Treatment Plant is hereafter referred to as "Facility."
2. Order R5-2014-0104 authorizes the seasonal (1 November through 30 April) surface water discharge of up to 1.5 million gallons per day of disinfected secondary treated wastewater to the North Fork Calaveras River, and authorizes the disposal of disinfected secondary treated wastewater via spray irrigation on an approximately 102 acre parcel of land adjacent to the Facility known as the "Neilson Property".
3. The Facility is a Publicly-Owned Treatment Works, owned and operated by the Discharger. The Facility provides sewerage service for the community of San Andreas and serves a population of approximately 2200 and has no industrial users. The Facility has a design average dry weather flow capacity of 0.32 million gallons per day (peak capacity of 1.9 MGD) and is an activated sludge tertiary treatment plant. The treatment system consists of a grit removal chamber, mechanical bar screen (for solids removal), pH control chemical feed, primary clarification, trickling filtration, intermediate secondary clarification, extended aeration activated sludge processing, final clarification, cloth media filtration, chlorination, dechlorination, filter press, sludge drying beds, two storm water storage ponds, and a six million gallon storage reservoir.
4. Limitations and Discharge Requirements Section VI.C.4.a of Order R5-2014-0104 includes Storage Pond and Dedicated Land Disposal Area (DLDA) Operating Requirements. Subsection xvi, requires that "Irrigation of effluent shall not be performed within 24 hours of a forecasted precipitation event, during precipitation, within 24 hours after any measurable precipitation event, or when the ground is saturated." The purpose of this requirement is to ensure water is not applied to DLDA during rainfall or when the ground is saturated. The current requirement, however, is difficult to implement and to enforce. Therefore, this Order modifies the requirement to be consistent with the intent. Specifically, the language has been changed to state that, "Discharge to the DLDA shall not be performed during rainfall or when the ground is saturated."

5. Attachment E Section IX.D.1 of Order R5-2014-0104 requires the Discharger to conduct an Effluent and Receiving Water Characterization Study consisting of four evenly spaced sampling events during a single surface water discharge season (1 November through 30 April). The Discharger submitted a request on 14 December 2015 to reduce the frequency of samples required for the Effluent and Receiving Water Characterization Study due to the surface water discharge season being limited to only six months each year. The reduction in monitoring would help alleviate financial impacts to the Discharger's customers. The Central Valley Water Board finds that two effluent and receiving water characterization samples is sufficient to conduct a reasonable potential analysis for the next permit renewal. Therefore, Order R5-2014-0104 is being amended to reduce the monitoring frequency required for the Effluent and Receiving Water Characterization Study from four samples to two samples.
6. Time Schedule Order (TSO) R5-2014-0900, was issued by the Executive Officer of the Central Valley Water Board on 15 January 2014 and provides compliance schedules for meeting the final effluent limitations for copper, cyanide, and zinc. When the NPDES permit was renewed in August 2014, the effluent limitations for copper and zinc were removed, because there was no longer reasonable potential for the discharge to cause or contribute to an in-stream excursion above the applicable water quality objectives. Therefore, the compliance schedules for these constituents are no longer needed and the TSO is being amended to remove the compliance schedules for copper and zinc.
7. 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 modify a NPDES permit (*Pacific Water Conditioning Ass'n, Inc. v. City Council of City of Riverside* (1977) 73 Cal.App.3d 546, 555-556.).
8. The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to amend the WDR Order R5-2014-0104 and TSO R5-2014-0900 for this discharge and has provided them with an opportunity to submit their written views and recommendations.

IT IS HEREBY ORDERED THAT:

1. Waste Discharge Requirements Order R5-2014-0104 (NPDES No. CA0079464) is amended in order to 1) reduce the number of monitoring events for the Effluent and Receiving Water Characterization Study from four samples to two samples, and 2) modify the requirement in the Storage Pond and DLDA Operation Requirements regarding application during wet conditions. **Effective immediately upon adoption**, Order R5-2014-0104 is amended as shown in Items 1.a through 1.f below.
 - a. Change the order number throughout to R5-2014-0104-01.
 - b. Replace all references to Time Schedule Order R5-2014-0900 with the amended order number R5-2014-0900-01.

- c. **COVER PAGE.** Modify the paragraph above the signatory line on the Cover Page as shown in underline/strikeout format below:

I, Pamela C. Creedon, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 8 August 2014, and amended by Order R5-2016-0067 on 19 August 2016.

- d. **Storage Pond and DLDA Operation Requirements.** Modify Limitations and Discharge Requirements Section VI.C.4.a.xvi. as shown in underline/strikeout format below:

xvi. ~~Irrigation of effluent shall not be performed within 24 hours of a forecasted precipitation event, during precipitation, within 24 hours after any measurable precipitation event, or when the ground is saturated. Discharge to the DLDA shall not be performed during rainfall or when the ground is saturated.~~

- e. **ATTACHMENT E (MONITORING AND REPORTING PROGRAM) EFFLUENT AND RECEIVING WATER CHARACTERIZATION.** Modify Section IX.D.1 of Attachment E (Monitoring and Reporting Program) as shown in underline/strikeout format below:

1. **Monthly Monitoring.** Samples shall be collected from the effluent and upstream receiving water (EFF-001 and RSW-001) and analyzed for the constituents listed in Table E-11, below. Monitoring shall be conducted when discharging to surface water during the November 2015 – April 2016¹ discharge season (~~4-2~~ consecutive samples, approximately evenly distributed throughout the discharge season, once discharge begins) and the results of such monitoring shall be submitted to the Central Valley Water Board with the monthly self-monitoring reports. Each individual monitoring event shall provide representative sample results for the effluent and upstream receiving water.

- f. **ATTACHMENT F (FACT SHEET) PERMIT INFORMATION.** Insert new subsection D to Section I of Attachment F (Fact Sheet) as shown in underline format below:

D. This Order was amended by Order R5-2016-0067 on 19 August 2016 to modify the Effluent and Receiving Water Characterization Study monitoring requirements and the Storage Pond and DLDA Operation Requirements.

2. Time Schedule Order R5-2014-0900 is amended in order to remove the compliance schedules for copper and zinc. **Effective immediately upon adoption**, Order R5-2014-0900 is amended as shown in Items 2.a through 2.q below.

a. **TITLE.** Update information found in the title of the Order to reflect changes made in this amending Order as shown in underline/strikeout format below:

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
 CENTRAL VALLEY REGION**

**TIME SCHEDULE ORDER R5-2014-0900-01
AS AMENDED BY ORDER R5-2016-0067
 REQUIRING**

**THE SAN ANDREAS SANITARY DISTRICT
 WASTEWATER TREATMENT PLANT
 CALAVERAS COUNTY**

**TO COMPLY WITH REQUIREMENTS PRESCRIBED IN ORDER
R5-2009-0007R5-2014-0104-01
 (NPDES PERMIT CA0079464)**

b. Change the order number to R5-2014-0900-01.

c. **FINDINGS.** Modify Finding 1 as shown in underline/strikeout format below:

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. The Central Valley Water Board renewed the NPDES permit, Order R5-2014-0104-01, which was adopted on 8 August 2014, and amended by Order R5-2016-0067 on 19 August 2016.

d. **FINDINGS.** Modify Finding 2 as shown below in underline/strikeout format:

1. WDR Order ~~R5-2009-0007~~ R5-2014-0104-01 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	4.33.8	--	8.59.4	--	--
Zinc, Total Recoverable	µg/L	48	--	77	--	--

e. FINDINGS. Modify Finding 3 as shown below in underline/strikeout format:

3. The effluent limitations originally 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. On 15 January 2014, the Executive Officer of the Central Valley Water Board issued TSO R5-2014-0900 extending the time schedules for cyanide, copper, and zinc. Finally, on 19 August 2016 the Central Valley Water Board adopted Order R5-2016-0067 amending TSO R5-2014-0900 to remove the compliance schedules for copper and zinc, because the Discharger was in compliance with the California Toxics Rule criteria for these constituents.

f. FINDINGS. Modify Finding 5 as shown in underline/strikeout format below:

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.

g. FINDINGS. Remove Findings 6 and 7 as shown below in strikeout format:

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.~~

h. FINDINGS. Remove Finding 9.c as shown below in strikeout format:

~~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).~~

i. FINDINGS. Modify Finding 10 as shown below in underline/strikeout format:

~~10.8.~~ 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).

j. FINDINGS. Modify Finding 12 as shown below in underline/strikeout format:

~~12.10.~~ 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-~~2014-0104-01~~2009-0007.

k. FINDINGS. Modify Finding 13 as shown below in underline/strikeout format:

~~13.11.~~ 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 and WDR Order R5-2014-0104-01 from the date of this Order (15 January 2014) until 1 December 2018.

I. FINDINGS. Modify Finding 14 as shown below in underline/strikeout format:

~~14.12.~~ 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~~ does not exceed ten years.

m. FINDINGS. Modify Finding 15 as shown below in underline/strikeout format:

~~15.13.~~ 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 and WDR Order R5-2014-0104-01. 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.

n. FINDINGS. Modify Finding 16 as shown below in underline/strikeout format:

~~16.14.~~ 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	45	7.6	3.6	13	35	63²

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Constituent	Units	Maximum Effluent Concentration (MEC)	Mean	Standard Deviation	# of Samples	Average Monthly Effluent Limitation (AMEL)	Maximum Daily Effluent Limitation (MDEL)
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.~~

o. FINDINGS. Modify Finding 23 as shown below in underline/strikeout format below:

~~23-22.~~ 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.

p. HEREBY ORDERED SECTION. Remove compliance schedule for copper and zinc from Item 2 as shown in strikeout format below:

~~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.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

q. **HEREBY ORDERED SECTION.** Modify Item 3 as shown below in underline/strikeout format:

3. 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

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.

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 **19 August 2016**

ORIGINAL SIGNED BY

PAMELA C. CREEDON, Executive Officer