

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2013-0903
AMENDING TIME SCHEDULE ORDER R5-2008-0056-02
(NPDES PERMIT NO. CA0077691)

CITY OF VACAVILLE
EASTERLY WASTEWATER TREATMENT PLANT
SOLANO COUNTY

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

1. The Central Valley Water Board adopted Waste Discharge Requirements (WDR) Order R5-2008-0055-01 (NPDES Permit No. CA0077691) and Time Schedule Order (TSO) R5-2008-0056-02 prescribing waste discharge requirements and compliance schedules for the City of Vacaville Easterly Wastewater Treatment Plant in Solano County. For the purposes of this Order, the City of Vacaville is hereafter referred to as "Discharger" and the Easterly Wastewater Treatment Plant is hereafter referred to as "Facility".
2. The Discharger owns and operates the Facility, which consists of two parallel treatment plants, the existing North Plant and the newly constructed South Plant. The treatment system consists of headworks, primary sedimentation basins, aeration basins, secondary clarifiers, chlorination and dechlorination facilities, emergency storage ponds, dissolved aeration floatation thickener, anaerobic digesters, biosolids storage ponds, biosolids belt filter press and biosolids drying beds. Secondary treated wastewater is discharged to Old Alamo Creek, a water of the United States.
3. The Discharger is constructing the Easterly WWTP Filtration Project in order to comply with California Code of Regulations, Title 22, or equivalent disinfection requirements. As part of the Filtration Project it is necessary to take the Facility out of service. The construction-related plant shutdowns require influent waste streams to be stored in the emergency storage basins, while water in the secondary clarifiers is pumped out to temporary storage in order to make new connections within the plant. When the plant flow resumes, the stored wastewater is added to normal flows, which decreases process treatment times and results in lower process removal efficiencies than under normal operations. The increased biochemical oxygen demand (BOD) and total suspended solids (TSS) in the secondary effluent requires more chlorine (sodium hypochlorite) be added to achieve proper disinfection. More chlorine increases effluent chlorodibromomethane and dichlorobromomethane concentrations.
4. The interim effluent limitations for chlorodibromomethane and dichlorobromomethane in TSO R5 -2008-0056-02 were originally established based on the performance of the Facility under normal operating conditions. As discussed above, during construction of the Filtration Project, higher concentrations of chlorodibromomethane and dichlorobromomethane are unavoidably produced resulting in exceedances of the interim performance-based effluent limits. Due to the change in Facility operations, the chlorodibromomethane and dichlorobromomethane data used to calculate the performance-based interim effluent limitations is no longer applicable. The Discharger requested a change to the interim effluent limits for chlorodibromomethane and dichlorobromomethane to represent the current Facility performance while construction continues. Based on the recent changes to the Facility, this Order amends TSO R5-2008-0056-02 to modify the interim effluent limits for chlorodibromomethane and dichlorobromomethane.

5. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) ("CEQA"). This Order does not modify any compliance dates or other requirements of NPDES Order R5-2008-0055-01, which requires compliance with the effluent limitations addressed by this Order. The amended TSO serves to enforce Order R5-2008-0055-01. This Order is exempt from CEQA under Water Code Section 13389, since the adoption or modification of a NPDES permit for an existing source is exempt and this Order only serves to amend a TSO that implements a NPDES permit. (*Pacific Water Conditioning Ass'n, Inc. v. City Council of City of Riverside* (1977) 73 Cal.App.3d 546, 555-556.).
6. 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.
7. The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to amend Time Schedule Order R5-2008-0056-02 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:

Time Schedule Order R5-2008-0056-02 (NPDES No. CA0084255) is amended solely to change the interim effluent limitations for chlorodibromomethane and dichlorobromomethane. Time Schedule Order R5-2008-0056-02 is amended as shown in Items 1-4, below.

1. Change the Order number throughout from "Order R5-2008-0056-02" to "R5-2008-0056-03."
2. Modify Finding 13 as shown in underline/strikeout format below:
 13. Since the time schedules for completion of action necessary to bring the waste discharge into compliance exceeds 1 year, this Order includes interim requirements and dates for their achievement. The time schedules do not exceed 5 years.

The compliance time schedules in this Order include interim performance-based effluent limitations for nitrate, dibromochloromethane and dichlorobromomethane. The interim effluent limitations consist of a maximum daily effluent concentration derived using sample data provided by the Discharger. ~~The interim limitations for dibromochloromethane, and dichlorobromomethane in WDR Order R5-2008-0055-01 are re-established in this Order and they are based on the current plant performance.~~

When there are ten 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% 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*). Therefore, for nitrate, the interim limitations were originally established as the mean plus 3.3 standard deviations of the available data.

The interim limitations for nitrate were re-established in this Order based on Facility performance. However, during construction of the Facility upgrades to improve nitrification and denitrification, it was necessary to take some of the aeration basins out of service, which reduced the ability of the Facility to denitrify the wastewater. This has resulted in higher concentrations of nitrate. Due to the change in Facility operations, the nitrate data used to calculate the performance-based interim effluent limitations is no longer applicable. By letter dated 16 March 2012, the Discharger requested a change to the interim effluent limits for nitrate to represent the current Facility performance. Based on the changes to the Facility, the interim effluent limits ~~have been~~ were modified by amending Order R5-2012-0072.

The interim limitations for dibromochloromethane and dichlorobromomethane in WDR Order R5-2008-0055-01 were re-established in this Order and were based on Facility performance. However, during construction of the Facility upgrades to add filtration, it was necessary to take the Facility out of service and store influent waste streams in emergency storage basins. When the plant flow resumed, the stored wastewater was added to normal flows, which decreased process treatment times and resulted in lower process removal efficiencies than normal operations. The increased biochemical oxygen demand (BOD) and total suspended solids (TSS) in the secondary effluent requires more chlorine (sodium hypochlorite) be added to achieve proper disinfection. More chlorine increases disinfection byproducts such as chlorodibromomethane and dichlorobromomethane, consequently, changing the performance of the Facility. By letter dated 25 October 2013, the Discharger requested a change to the interim effluent limits for chlorodibromomethane and dichlorobromomethane to represent the Facility performance during this construction period. Based on these changes to the Facility, the interim effluent limits were modified by Order R5-2013-0903.

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

15. On 25 April 2008, 18 March 2010, and 3 August 2012, in Sacramento, California, after due notice to the Discharger and all other affected persons, the Central Valley Water Board conducted public hearings at which evidence was received to consider a Time Schedule Order and amendments of the Time Schedule Order, respectively, under CWC section 13300 to establish a time schedule to achieve compliance with waste discharge requirements.

On 12 November 2013, the Central Valley Water Board provided notice for public comment on proposed Time Schedule Order R5-2008-0056-03. The public comment period was provided for at least 30 days (from 12 November 2013 to 12 December 2013) as required pursuant to Water Code section 13167.5 for a time schedule order adopted pursuant to Water Code section 13300.

4. Modify interim effluent limitations table as shown in underline/strikeout format below:

Parameter	Maximum Daily Effluent Limitation
Nitrate as N (Total Recoverable) (mg/L)	40
Dibromochloromethane (µg/L)	1449
Dichlorobromomethane (µg/L)	4362

Any person aggrieved by this action of the Executive Officer may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with CWC 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 (including mandatory furlough days), 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

13 December 2013

Date