

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TIME SCHEDULE ORDER R5-2012-0054
REQUIRING
UNIVERSITY OF CALIFORNIA
CENTER FOR AQUATIC BIOLOGY AND AQUACULTURE
YOLO COUNTY

TO COMPLY WITH REQUIREMENTS PRESCRIBED IN ORDER R5-2012-0053
(NPDES PERMIT CA0083348)

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

1. On 8 June 2012 the Central Valley Water Board adopted Waste Discharge Requirements (WDR) Order R5-2012-0053, NPDES Permit No. CA0083348, prescribing WDRs for the University of California, Center for Aquatic Biology and Aquaculture (hereinafter Discharger) at the Aquatic Center and Putah Creek Facility (hereafter Facilities), Yolo County.
2. WDR Order R5-2012-0053 section IV.A.1.a. includes, in part, the following final effluent limitations applicable to discharges from the Aquatic Center 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
Chromium (VI)	µg/L	11	--	15	--	--

WDR Order R5-2012-0053 section IV.A.2.a. includes, in part, the following final effluent limitations applicable to discharges from the Putah Creek Facility through Discharge Point No. 002:

Table 7. Effluent Limitations – Discharge Point No. 002

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Chromium (VI)	µg/L	10	--	16	--	--

Need for Time Schedule Extension and Legal Basis

3. On 3 January 2012 the Discharger submitted a request and justification for a compliance schedule for chromium (VI). On 25 January 2012 the Discharger submitted an amended request for a compliance schedule for chromium (VI) that provided more detailed information supporting the infeasibility to immediately comply with the new effluent limitations for chromium (VI) due primarily to the presence of chromium (VI) in the source water used at the

Facilities. For compliance with the final effluent limitations for chromium (VI), the Discharger has requested time to develop and implement pollution prevention practices, confirm the source(s) of chromium (VI), and evaluate alternative water sources and/or treatment options.

Mandatory Minimum Penalties

4. California Water Code sections 13385(h) and (i) require the Central Valley Water Board to impose mandatory minimum penalties (MMPs) 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...*”.
5. 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. The Discharger has stated that an additional five years is necessary to allow the time to implement a three-phased approach to comply with the final effluent limitations for chromium (VI). Phase I would involve performing an assessment of shallow groundwater in the vicinity of the Facilities to verify the areal extent of elevated chromium (VI). In addition, the Discharger would concurrently develop and implement a pollution prevention program at the Facilities. Phase II would involve performing a feasibility study of compliance alternatives needed to come into compliance with the applicable effluent limitations. These alternatives could include either installation of additional wastewater treatment capabilities or identification of alternative water sources. Phase III would involve implementation of the selected compliance alternative and compliance with the new effluent limitations for chromium (VI).
 - c. The final effluent limitations for chromium (VI) are new, more stringent, or modified regulatory requirements that became applicable to the waste discharge after the effective date of Order R5-2012-0053 and after 1 July 2000. New or modified control measures are necessary in order to comply with the final effluent limitations for chromium (VI). The new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.
 - 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.

6. By statute, a Cease and Desist Order or Time Schedule Order may provide protection from MMPs for no more than five years.
7. Compliance with this Order exempts the Discharger from mandatory minimum penalties for violations of the final effluent limitations for chromium (VI) found in WDR Order R5-2012-0053 from 8 June 2012 (the date of this Order) until 1 June 2017. The Discharger has not previously been protected from mandatory minimum penalties for violations of the chromium (VI) effluent limitations.
8. In accordance with CWC section 13385(j)(3)(C), the total length of protection from mandatory minimum penalties for the final effluent limitations for chromium (VI) does not exceed five years.
9. This Order provides a time schedule for completing the actions necessary to ensure compliance with the final effluent limitations for chromium (VI) contained in WDR Order R5-2012-0053. 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.
10. This Order includes new performance-based interim effluent limitations for chromium (VI). The Central Valley Water Board calculated an interim maximum daily effluent limitation (MDEL) for chromium (VI) based on the current treatment plant performance. With 10 or more sampling data points, sampling and laboratory variability is accounted for by establishing interim effluent limitations that are based on normally distributed data where 99.9% of the data points will lie within 3.34 standard deviations of the mean (Basic Statistical Methods for Engineers and Scientists, Kennedy and Neville, Harper and Row). Therefore, an interim MDEL for chromium (VI) was calculated using the mean plus 3.3 standard deviations.

Similarly, an interim average monthly effluent limitation (AMEL) for chromium (VI) is based on normally distributed data where 95% of the data points will lie within 2.0 standard deviations of the mean. Therefore, an interim AMEL for chromium (VI) was calculated using the mean plus 2.0 standard deviations.

In calculating interim effluent limitations for chromium (VI), effluent data for the period from January 2007 through October 2011 was used. The following table summarizes the calculation of the interim effluent limitations for chromium (VI):

Discharge Point No.	Units	Mean	Standard Deviation	Interim MDEL ¹	Interim AMEL ²
001	µg/L	24	4.4	39	33
002	µg/L	17	3.9	30	25
¹ Mean+3.3 Standard Deviations of the mean ² Mean+2.0 Standard Deviations of the mean					

According to the 25 January 2012 request from the Discharger, the effluent quality for both Discharge Points is influenced by groundwater quality. The source water for the Putah Creek Facility at times consists of a blend of groundwater and Lake Berryessa surface water. When this blending of source waters occurs, the Lake Berryessa surface water, which contains much lower concentrations of chromium (VI), tends to dilute the concentrations in the groundwater supply (and therefore the expected concentrations at Discharge Point No. 002). Depending on the requirements for research, Lake Berryessa surface water may not be blended with groundwater for use in the Putah Creek Research Facility. In these instances the effluent discharge concentrations of chromium (VI) may be higher and similar to the concentrations reported for Discharge Point No. 001. For these reasons and until the source of chromium (VI) can be confirmed and controlled, the interim effluent limitations for both Discharge Points will be based on those established for Discharge Point No. 001.

11. 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.
12. 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 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

13. 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.”*
14. 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.

15. 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.
16. 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.).
17. On 8 June 2012, in Rancho Cordova, California, after due notice to the Discharger and all other affected persons, the Central Valley Water Board conducted a public hearing at which evidence was received to consider this Cease and Desist Order under Water Code section 13301 to establish a time schedule to achieve compliance with waste discharge requirements.

IT IS HEREBY ORDERED THAT:

1. 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 5.b, above:

Task	Compliance Date
Submit and implement a Pollution Prevention Plan (PPP) for Chromium (VI) that meets the requirements specified in California Water Code Section 13263.	31 December 2012
Submit a technical report documenting the results of the Phase I Investigation (including the groundwater source assessment)	30 June 2014
Submit a technical report documenting the results of the Phase II Feasibility Study of compliance alternatives, and describing the selected alternative	30 June 2016
Submit a technical report documenting that the selected alternative has been implemented. This report may be combined with the annual progress report.	1 June 2017
Comply with the Final Effluent Limitations for Chromium (VI)	1 June 2017
Submit Annual Progress Reports documenting the steps taken to comply with this Order, describing the completion of tasks, progress of construction, evaluation of the effectiveness of the implemented measures, and an assessment of whether additional measures are necessary to meet the final compliance date.	1 June 2014, 1 June 2015, 1 June 2016, and 1 June 2017

2. Discharge from both Discharge Point No. 001 and Discharge Point No. 002 shall not exceed the following interim effluent limitations. These interim effluent limitations for chromium (VI) are effective upon adoption of this Order and shall apply in lieu of the corresponding final effluent limitations in WDR Order R5-2012-0053. The Discharger shall comply with the following interim effluent limitations through 1 June 2017.

Parameter	Units	Interim Maximum Daily Effluent Limit	Interim Average Monthly Effluent Limit
Chromium (VI)	µg/L	39	33

3. 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."

4. 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.

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 8 June 2012.

Original signed by

PAMELA C. CREEDON, Executive Officer