

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TIME SCHEDULE ORDER NO. R5-2010-0029-02
(as amended by Order R5-2013-0129)

REQUIRING THE CITY OF DAVIS
WASTEWATER TREATMENT PLANT
YOLO COUNTY

TO COMPLY WITH REQUIREMENTS PRESCRIBED IN ORDER R5-2013-0127
(NPDES PERMIT NO. CA0079049)

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

1. On 4 October 2013, the Central Valley Water Board adopted Waste Discharge Requirements (WDR) Order R5-2013-0127, NPDES Permit No. CA0079049, prescribing waste discharge requirements for the City of Davis at the Wastewater Treatment Plant, Yolo County. The Central Valley Water Board also adopted Time Schedule Order No. R5-2013-0128 to provide a time schedule and interim limits for aluminum and copper (Discharge Point No. 001 only). For the purposes of this Order, the City of Davis is hereafter referred to as “Discharger” and the City of Davis Wastewater Treatment Plant is hereafter referred to as “Facility”.
2. WDR Order R5-2013-0127 allows discharges at two locations. Discharge Point 001 is to the Willow Slough Bypass and Discharge Point 002 is to the Conaway Ranch Toe Drain. Both of these waterways are waters of the United States and are part of the Yolo Bypass.
3. WDR Order R5-2013-0127 contains Final Effluent Limitations IV.A.1.a for Discharge Point 001, which reads, in part, as follows:

Effluent Limitations – Discharge Point 001

| Parameter | Units | Effluent Limitations | | | | |
|-----------------------------|----------------------|----------------------|----------------|---------------|-----------------------|-----------------------|
| | | Average Monthly | Average Weekly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum |
| Cyanide | µg/L | 3.8 | -- | 8.1 | -- | -- |
| Selenium, Total Recoverable | µg/L | 4.4 | -- | 7.1 | -- | -- |
| | lbs/day ¹ | 0.28 | -- | 0.44 | -- | -- |

1 Based on an average dry weather flow of 7.5 mgd.

4. WDR Order R5-2013-0127 contains Final Effluent Limitations IV.A.2.a for Discharge Point 002, which reads, in part, as follows:

Effluent Limitations – Discharge Point 002

| Parameter | Units | Effluent Limitations | | | | |
|-----------------------------|----------------------|----------------------|----------------|---------------|-----------------------|-----------------------|
| | | Average Monthly | Average Weekly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum |
| Copper, Total Recoverable | µg/L | 16 | | 33 | | |
| Selenium, Total Recoverable | µg/L | 4.5 | -- | 6.9 | -- | -- |
| | lbs/day ¹ | 0.28 | -- | 0.43 | -- | -- |

1 Based on an average dry weather flow of 7.5 mgd.

5. The final effluent limitations for cyanide and selenium, described in Findings 3 and 4 above, become effective on 1 February 2015. The final effluent limitations for copper, described in Finding 4 above, become effective on 30 September 2014.
6. On 25 October 2007, the Central Valley Water Board adopted WDR Order R5-2007-0132. Order R5-2007-0132 contained a compliance schedule (compliance with final limits by 18 May 2010) and interim effluent limitations for cyanide and selenium. The WDRs were amended on 5 February 2009 (R5-2007-0132-01). The Discharger could not meet the compliance schedule in Order R5-2007-0132 for cyanide and selenium, therefore, TSO R5-2010-0029 was adopted on 18 March 2010 to extend the compliance schedule to 1 February 2015 to comply with final limits for cyanide and selenium. The WDRs were amended a second time (R5-2007-0132-02) on 23 September 2010 to include new final effluent limitations for copper at Discharge Point No. 002. The Discharger could not immediately comply with these new limits, therefore, TSO R5-2010-0029 was amended to include a compliance schedule (compliance with final copper limits by 30 September 2014) and an interim effluent limitation for copper at Discharge Point No. 002. This amended TSO R5-2010-0029-02 reflects the new WDRs adopted on 4 October 2013 and maintains the compliance schedules for copper, cyanide, and selenium contained in TSO R5-2010-0029-01 with compliance with the final effluent limits for copper by 30 September 2014 and for cyanide and selenium by 1 February 2015.
7. 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.”*
8. On 29 October 2009, the Discharger submitted justification for a compliance schedule for cyanide and selenium. The Discharger’s submittal included: (a) documentation that diligent efforts have been made to quantify pollutant levels in the discharge and the

sources of the pollutant in the waste stream; (b) documentation of source control measures and/or pollution minimization measures efforts currently underway or completed; and (c) a proposal for additional or future source control measures, pollutant minimization actions, or waste treatment (i.e., facility upgrades) with projected time schedules to achieve compliance with final effluent limitations. The Discharger indicated that the proposed schedule is as short as practicable, and that full compliance by 18 May 2010 may not provide adequate time for the Discharger to implement actions for the Facility to consistently comply with the final effluent limits for cyanide and selenium.

9. **Selenium.** The source of selenium in the Discharger's influent is primarily due to the high levels of selenium contained in the municipal water supply. The municipal water supply for the City of Davis is primarily from groundwater sources. The Discharger anticipates that the most cost effective method for lowering the level of selenium in the effluent is to obtain new municipal water supplies by using groundwater contained in the deep aquifer and/or by obtaining surface water supplies. The Discharger is currently in coordination with the City of Woodland in developing a regional treated surface water supply project that is expected to improved drinking water quality. The improved drinking water supply will improve the water quality entering the Facility. On 15 October 2009, a Joint Powers Authority, which consists of the Cities of Davis and Woodland, was sworn in and officers and staff appointed. The schedule currently shows completion of the project by 1 January 2021.
10. **Cyanide.** Design alternatives for a Facility upgrade to identify a cost effective project that will achieve compliance with the final effluent limits for cyanide are in review by two emeritus professors of the University of California, Davis College of Civil and Environmental Engineering and a panel of wastewater treatment professionals. The Facility upgrades are expected to be online by 25 October 2017. In addition, the analytical testing methodology for cyanide has been suspected of resulting in false positive results due to the complex chemistry associated with cyanide. The United States Environmental Protection Agency is currently developing regulatory changes to the analytical testing methods to address possible interferences that may be caused by sample preservation. The proposed changes to the analytical testing requirements could result in compliance with the cyanide effluent limitations.
11. On 23 June 2010, the Discharger submitted an Infeasibility Analysis Report for copper in Discharge 002. The Discharger's submittal included: (a) documentation that diligent efforts have been made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream; (b) documentation of source control measures and/or pollution minimization measure efforts currently underway or completed; and (c) a proposal for additional or future source control measures, pollutant minimization actions, or waste treatment (i.e., facility upgrades) with projected time schedules to achieve compliance with final effluent limitations. The Discharger indicated that the proposed schedule is as short as practicable, and that immediate compliance with the final effluent limitation for copper at Discharge No. 002 is not possible or practicable.

12. **Copper.** A Source Identification Study conducted by the Discharger estimated that up to 25% of the influent copper concentrations may be attributed to discharge from car wash facilities. Best Management Practices (BMPs) are being established for sand and oil separators including cleanout frequencies. Currently, additional control mechanisms for this source are being evaluated. Furthermore, the Discharger plans to conduct a study to establish a site-specific metals translator for copper at Discharge 002, which could affect the water quality-based effluent limits for copper. The Discharger is also in the process of upgrading the Facility to provide a tertiary level of treatment to wastewater. The proposed upgrade will include activated sludge and tertiary filters to achieve compliance with final effluent limitations for copper. The Facility upgrades are expected to be online by 25 October 2017.
13. The Discharger requests time to develop and implement a Pollution Prevention Plan (PPP); and given the uncertainty as to the potential need to design and construct a new treatment process at the Facility, the Discharger requests additional time to re-evaluate copper sources and develop a site-specific metals translator, introduce new municipal water supply, find a more accurate analytical technique to comply with the new final effluent limits for copper, cyanide, and selenium contained in WDR Order R5-2013-0127.
14. Immediate compliance with the new effluent limitations for cyanide, selenium and copper is not possible or practicable. The Clean Water Act and the California Water Code authorize time schedules for achieving compliance.

Mandatory Minimum Penalties

15. CWC section 13385(h) and (i) require the Regional Water Board to impose mandatory minimum penalties upon dischargers that violate certain effluent limitations. CWC 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, if all the [specified] requirements are met...For the purposes of this subdivision, the time schedule may not exceed five years in length...*"
16. In accordance with CWC section 13385(j)(3), the Central Valley Water Board finds that, based upon results of effluent monitoring, the Discharger is not able to consistently comply with the new water quality-based effluent limitations for copper, cyanide, and selenium. The final effluent limitations for these constituents were new, or more stringent, requirements included in WDR Order R5-2007-0132-02. WDR Order R5-2013-0127 also includes final effluent limitations for these constituents. TSO Order No. R5-2010-0029-01 provides a time schedule to bring the effluent discharge into compliance with the new cyanide and selenium effluent limitations by 1 February 2015 and with the new copper effluent limit at Discharge Point 002 by 30 September 2014. The new or modified control measures cannot be designed, installed, and put into

operation within 30 calendar days as reflected in the compliance schedule in this Order.

17. By statute, a Cease and Desist Order or Time Schedule Order may provide protection from MMPs for no more than five years. Prior to issuance of TSO R5-2010-0029, the Central Valley Water Board had not issued an Order to provide MMP protection for this facility. Therefore, compliance with this Order exempts the Discharger from mandatory penalties for violations of the final effluent limitations for Discharge Points 001 and 002 for selenium and cyanide and for Discharge Point No. 002 for copper in accordance with CWC section 13385(j)(3). Protection from MMPs for cyanide and selenium began on 18 March 2010 and may not extend beyond the compliance schedule listed in this Order (i.e., 31 January 2015). Protection from MMPs for copper began on 23 September 2010 and may not extend beyond the compliance schedule listed in this Order (i.e., 30 September 2014).
18. Since the time schedules for completion of actions necessary to bring the waste discharge into compliance exceeds one year, this Order includes interim requirements and dates for achievement. The time schedules do not exceed five years.

The compliance time schedules in this Order include interim effluent limitations for copper, cyanide, and selenium. The interim effluent limitations for copper, cyanide, and selenium are based on the current treatment plant performance.

The interim effluent limitations consist of average monthly and maximum daily effluent limits derived using sample data provided by the Discharger. In developing the interim limitations, where there are 10 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 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*). Where actual sampling shows an exceedance of the proposed 3.3-standard deviation interim limit, the maximum detected concentration has been established as the interim limitation.

19. The Central Valley Water Board finds that the Discharger can maintain compliance with the interim limitations included in this Order. Interim 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 limitations, however, establish an enforceable ceiling concentration until compliance with the final effluent limitation can be achieved.
20. 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 Water Code 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

21. On **18 March 2010, on 23 September 2010, and on 4 October 2013**, 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 a Time Schedule Order under CWC section 13300 to establish a time schedule to achieve compliance with waste discharge requirements.
22. Issuance of this Order is exempt from the provisions of the CEQA (Pub. Resources Code, § 21000 et seq.) 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. Discharger Council of Discharger of Riverside* (1977) 73 Cal.App.3d 546, 555 556.).
23. 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 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 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 (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.

IT IS HEREBY ORDERED THAT:

1. The Discharger shall comply with the following time schedule to ensure compliance with the final effluent limitations for cyanide and selenium contained in WDR Order R5-2013-0127 as described in the above Findings:

| <u>Task</u> | <u>Date Due</u> |
|---|----------------------|
| Submit and implement an Pollution Prevention Plan (PPP) pursuant to CWC section 13263.3 | 1 December 2010 |
| Annual Progress Reports ¹ | 1 December, annually |
| Full compliance with the final effluent limitations for cyanide and selenium | 1 February 2015 |

¹ The progress reports for cyanide and selenium 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.

2. The following interim average monthly and maximum daily effluent limitations shall be effective immediately and until 31 January 2015, or when the Discharger is able to come into compliance, whichever is sooner.

| Parameter | Units | Average Monthly Effluent Limitation | Maximum Daily Effluent Limitation |
|-----------------------------|----------------------|-------------------------------------|-----------------------------------|
| <i>Discharge Point 001</i> | | | |
| Cyanide | µg/L | 9.6 | 18 |
| Selenium, Total Recoverable | µg/L | 7.1 | 11 |
| | lbs/day ¹ | 0.44 | 0.69 |
| <i>Discharge Point 002</i> | | | |
| Selenium, Total Recoverable | µg/L | 7.2 | 12 |
| | lbs/day ¹ | 0.45 | 0.75 |

¹ Based on an average dry weather discharge flow of 7.5 mgd.

3. The Discharger shall comply with the following time schedule to ensure compliance with the final effluent limitations for copper at Discharge Point No. 002, as described in the above Findings.

| <u>Task</u> | <u>Date Due</u> |
|--|--|
| Submit Method of Compliance Workplan/Schedule | 23 March 2011 |
| Submit and implement Pollution Prevention Plan (PPP) ¹ pursuant to CWC section 13263.3 for copper | 23 September 2011 |
| Progress Reports ² | 28 February, annually, after approval of work plan until final compliance |
| Full compliance with copper effluent limitations | 30 September 2014 |

¹ The PPP shall be prepared and implemented for copper and shall meet the requirements specified in CWC section 13263.3.

² 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.

4. The following interim effluent limitations shall be effective immediately. The interim effluent limitations at Discharge Point 002 for copper shall be effective up through 30 September 2014, or when the Discharger is able to come into compliance with final effluent limitations, whichever is sooner:

| Parameter | Units | Average Monthly Effluent Limitation | Maximum Daily Effluent Limitation |
|---------------------------|-------|-------------------------------------|-----------------------------------|
| Copper, Total Recoverable | µg/L | 39 | 82 |

5. For the compliance schedules 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 Regional Water Board by letter when it returns to compliance with the time schedule.

6. If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may apply to the Attorney General for judicial enforcement. If compliance with these effluent limitations is not achieved by the Full Compliance date, the discharge would not be exempt from the mandatory minimum penalties for violation of certain effluent limitations, and would be subject to issuance of a Cease and Desist Order in accordance with CWC section 13301.

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 **18 March 2010, amended on 23 September 2010, and amended on 4 October 2013.**

Original Signed By

PAMELA C. CREEDON, Executive Officer