

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TIME SCHEDULE ORDER NO. R5-2010-0003

REQUIRING THE CITY OF TURLOCK
WATER QUALITY CONTROL FACILITY
STANISLAUS COUNTY

TO COMPLY WITH REQUIREMENTS PRESCRIBED IN ORDER NO. R5-2010-0003
(NPDES PERMIT NO. CA0078948)

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

1. On 28 January 2010, the Central Valley Water Board adopted Waste Discharge Requirements (WDR) Order No. R5-2010-0002, prescribing waste discharge requirements for the City of Turlock (hereafter Discharger), Water Quality Control Facility (hereafter Facility), Stanislaus County.
2. WDR Order No. R5-2010-0002, contains Final Effluent Limitations for Discharge Point No. 001 in section IV.A.1.a, which read, in part, as follows:

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	8.9	--	15	--	--
Selenium, Total Recoverable	µg/L	3.7	--	9.1	--	--
	lbs/day ¹	0.62	--	1.52	--	--
Carbon Tetrachloride	µg/L	0.25	--	0.72	--	--
Chlorodibromomethane	µg/L	0.41	--	0.78	--	--
Dichlorobromomethane	µg/L	0.56	--	0.81	--	--
Non-Conventional Pollutants						
Nitrate Nitrogen, Total (as N)	mg/L	10	--	--	--	--

¹ Based on a design flow of 20 MGD.

3. WDR Order No. R5-2010-0002, contains Final Effluent Limitations for Discharge Point No. 001 in section IV.A.1.i, which read as follows:
 - i. **Aluminum, Total Recoverable.** For a calendar year, the annual average effluent concentration shall not exceed 200 µg/L.
4. WDR Order No. R5-2010-0002, contains Final Effluent Limitations for Discharge Point No. 002 in section IV.B.1.a, which read, in part, as follows:

Table 7. Effluent Limitations – Discharge Point No. 002

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Priority Pollutants						
Copper, Total Recoverable	µg/L	8.9	--	15	--	--
Selenium, Total Recoverable	µg/L	3.7	--	9.1	--	--
	lbs/day ¹	0.62	--	1.52	--	--
Silver, Total Recoverable	µg/L	1.2	--	2.3		
Chlorodibromomethane	µg/L	7.3	--	14	--	--
Dichlorobromomethane	µg/L	10	--	15	--	--
Non-Priority Pollutants						
Aluminum, Total Recoverable	µg/L	261	--	750	--	--

¹ Based on a design flow of 20 MGD

5. WDR Order No. R5-2010-0002, contains Final Effluent Limitations for Discharge Point No. 002 in section IV.A.1.j, which read as follows:
 - j. **Aluminum, Total Recoverable.** For a calendar year, the annual average effluent concentration shall not exceed 200 µg/L.

6. The effluent limitations at Discharge Point No. 001 specified in Order No. R5-2010-0002 for copper, selenium, carbon tetrachloride, chlorodibromomethane, and dichlorobromomethane are based on implementation of the California Toxics Rule (CTR). The effluent limitation for nitrate is based on the Primary Maximum Contaminant Level (MCL). The effluent limitation for aluminum is based on the Secondary MCL. The effluent limitations for copper, selenium, carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, nitrate, and aluminum are new limitations, which were not prescribed in previous WDR Order No. 5-01-122, adopted by the Central Valley Water Board on 11 May 2001.

7. The effluent limitations at Discharge Point No. 002 specified in Order No. R5-2010-0002 for copper, chlorodibromomethane, dichlorobromomethane, and silver are based on implementation of the CTR. The effluent limitation for selenium is based on a numeric, site-specific objective for the San Joaquin River from the mouth of the Merced River to Vernalis contained in the Basin Plan. The effluent limitations for aluminum are based on the Secondary MCL and National Ambient Water Quality Criteria for the protection of freshwater aquatic life. The effluent limitations for copper, selenium, silver, chlorodibromomethane, dichlorobromomethane, and aluminum are new limitations, which were not prescribed in previous WDR Order No. 5-01-122, adopted by the Central Valley Water Board on 11 May 2001.

8. 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.”*
9. Federal regulations, 40 CFR 122.44 (d)(1)(i), require that NPDES permit effluent limitations must control all pollutants which are or may be discharged at a level which will cause or have the reasonable potential to cause or contribute to an in-stream excursion above any State water quality standard, including any narrative criteria for water quality. Beneficial uses, together with their corresponding water quality objectives or promulgated water quality criteria, can be defined per federal regulations as water quality standards.
10. 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 effluent limitations for copper, selenium, carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, nitrate, and aluminum at Discharge Point No. 001 and copper, selenium, silver, chlorodibromomethane, dichlorobromomethane, and aluminum at Discharge Point No. 002. These limitations are based on new requirements that become applicable to the Order after the effective date of the waste discharge requirements, and after 1 July 2000, for which new or modified control measures are necessary in order to comply with the limitation, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.
11. Immediate compliance with the new effluent limitations for copper, selenium, carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, nitrate, and aluminum at Discharge Point No. 001 and copper, selenium, silver, chlorodibromomethane, dichlorobromomethane, and aluminum at Discharge Point No. 002 are not possible or practicable. The Clean Water Act and the California Water Code authorize time schedules for achieving compliance.

The Discharger indicated in an Infeasibility Analysis Report submitted 31 December 2008 that additional time is required to comply with the final effluent limitations for copper, selenium, silver, carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, nitrate, and aluminum. For copper, selenium, silver, and aluminum the Discharger anticipates that additional time is necessary to conduct source identification studies and implement additional source controls. For carbon tetrachloride, chlorodibromomethane, and dichlorobromomethane, the Discharger anticipates that additional time is necessary to investigate the possibility of using alternative chlorination methods, investigate replacing the chlorination disinfection facilities with ultraviolet (UV) disinfection, conduct a source identification study, and

implement additional source controls. For nitrate, the Discharger anticipates that additional time is necessary to investigate adding denitrification facilities. Therefore, the Central Valley Water Board is providing no later than **1 January 2015** for the Discharger to comply with the final effluent limitations for copper, selenium, carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, nitrate, and aluminum at Discharge Point No. 001 and copper, selenium, silver, chlorodibromomethane, dichlorobromomethane, and aluminum at Discharge Point No. 002.

12. This Order provides a time schedule for the Discharger to develop, submit, and implement methods of compliance, including developing and implementing pollution prevention activities or constructing necessary treatment facilities to meet these new effluent limitations.
13. CWC sections 13385(h) and (i) require the Central Valley Water Board to impose mandatory minimum penalties upon dischargers that violate certain effluent limitations. CWC section 13385(j)(3) exempts certain violations from the 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.”*
14. Compliance with this Order exempts the Discharger from mandatory penalties for violations of effluent limitations at Discharge Point No. 001 for copper, selenium, carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, nitrate, and aluminum only, in accordance with CWC section 13385(j)(3), until 1 January 2015. Compliance with this Order also exempts the Discharger from mandatory penalties for violations of effluent limitations at Discharge Point No. 002 for copper, selenium, chlorodibromomethane, dichlorobromomethane, silver, and aluminum only, in accordance with CWC section 13385(j)(3), until 1 January 2015. CWC section 13385(j)(3) requires the Discharger to prepare and implement a pollution prevention plan pursuant to section 13263.3 of the California Water Code. Therefore, a pollution prevention plan will be necessary for copper, selenium, carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, nitrate, silver, and aluminum in order to effectively reduce the effluent concentrations by source control measures.
15. Since the time schedule 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 schedule does not exceed 5 years.

The compliance time schedule in this Order includes interim performance-based effluent limitations for copper, selenium, carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, nitrate, and aluminum at Discharge Point No. 001 and interim performance-based effluent limitations for copper, selenium, chlorodibromomethane, dichlorobromomethane, silver, and aluminum at Discharge Point No. 002. The interim effluent limitations consist of a maximum daily effluent concentration 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. In developing the interim limitations, when there are less than 10 sampling data points available, the USEPA *Technical Support Document for Water Quality- based Toxics Control* ((EPA/505/2-90-001), TSD) recommends a coefficient of variation of 0.6 be utilized as representative of wastewater effluent sampling. The TSD recognizes that a minimum of 10 data points is necessary to conduct a valid statistical analysis. The multipliers contained in Table 5-2 of the TSD are used to determine a maximum daily limitation based on a long-term average objective. In this case, the long-term average objective is to maintain, at a minimum, the current plant performance level. Therefore, when there are less than 10 sampling points for a constituent, interim limitations are based on 3.11 times the maximum observed effluent concentration to obtain the daily maximum interim limitation (TSD, Table 5-2). Because the maximum effluent concentrations (MECs) for copper, selenium, aluminum, and nitrate were greater than the statistically calculated effluent limitations, interim limitations were established at the MEC.

The following tables summarize the calculations of the interim performance-based effluent limitations at Discharge Point Nos. 001 and 002:

Interim Effluent Limitation Calculation Summary for Discharge Point No. 001

Parameter	Units	MEC	Mean	Std. Dev.	# of Samples	Interim Limitation
Copper, Total Recoverable	µg/L	16	5.88	2.28	31	16
Selenium, Total Recoverable	µg/L	5	1.1	1.1	20	5
Carbon Tetrachloride	µg/L	1.9	0.4	0.6	10	2.2
Chlorodibromomethane	µg/L	10.3	5.8	3.2	10	16.2
Dichlorobromomethane	µg/L	28.9	19.5	5.4	18	37.2
Nitrate Nitrogen, Total (as N)	mg/L	31	16	3.8	35	31
Aluminum, Total Recoverable	µg/L	640	114	151	42	640

Interim Effluent Limitation Calculation Summary for Discharge Point No. 002

Parameter	Units	MEC	Mean	Std. Dev.	# of Samples	Interim Limitation
Copper, Total Recoverable	µg/L	16	5.88	2.28	31	16
Selenium, Total Recoverable	µg/L	5	1.1	1.1	20	5
Silver, Total Recoverable	µg/L	2.6	7.4	4.1	20	21
Chlorodibromomethane	µg/L	10.3	5.8	3.2	10	16.2
Dichlorobromomethane	µg/L	28.9	19.5	5.4	18	37.2
Aluminum, Total Recoverable	µg/L	640	114	151	42	640

16. The Central Valley Water Board finds that the Discharger can, in addition to other treatment and control options, undertake source control to maintain compliance with the interim limitation 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 limitation, however, establishes an enforceable ceiling concentration until compliance with the effluent limitations can be achieved.
17. On 28 January 2010, 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.
18. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code section 21000, et seq.), in accordance with CWC section 13389 and section 15321 (a)(2), Title 14, California Code of Regulations.
19. 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 copper, selenium, carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, nitrate, and aluminum effluent limitations at Discharge Point No. 001 and copper, selenium, silver, chlorodibromomethane, dichlorobromomethane, and aluminum effluent limitations at Discharge Point No. 002, as described in the above Findings.

Task

Date Due

Submit Infeasibility Report

Within **50 days** after adoption of this Order

Submit Method of Compliance Workplan/Schedule

Within **6 months** after adoption of this Order

Submit and implement Pollution Prevention Plan (PPP)¹ pursuant to CWC section 13263.3 for copper, selenium, carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, nitrate, silver, and aluminum

Within **1 year** after adoption of this Order

Progress Reports²

28 February, annually, after approval of work plan until final compliance

Full compliance with copper, selenium, carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, nitrate, silver, and aluminum effluent limitations

1 January 2015

¹ The PPP shall be prepared and implemented for copper, selenium, carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, nitrate, silver, and aluminum, as appropriate, 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.

2. The following interim effluent limitations shall be effective immediately. The interim effluent limitations at Discharge Point No. 001 for copper, selenium, carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, nitrate, and aluminum shall be effective up through **31 December 2014**, or when the Discharger is able to come into compliance with final effluent limitations, whichever is sooner:

Parameter	Units	Maximum Daily Effluent Limitation
Copper, Total Recoverable	µg/L	16
Selenium, Total Recoverable	µg/L	5
Carbon Tetrachloride	µg/L	2.2
Chlorodibromomethane	µg/L	16.2
Dichlorobromomethane	µg/L	37.2
Nitrate Nitrogen, Total (as N)	mg/L	31
Aluminum, Total Recoverable	µg/L	640

3. The following interim effluent limitation shall be effective immediately. The interim effluent limitations at Discharge Point No. 002 for copper, selenium, silver, chlorodibromomethane, dichlorobromomethane, and aluminum shall be effective up through **31 December 2014**, or when the Discharger is able to come into compliance with final effluent limitations, whichever is sooner:

Parameter	Units	Maximum Daily Effluent Limitation
Copper, Total Recoverable	µg/L	16
Selenium, Total Recoverable	µg/L	5
Silver, Total Recoverable	µg/L	21
Chlorodibromomethane	µg/L	16.2
Dichlorobromomethane	µg/L	37.2
Aluminum, Total Recoverable	µg/L	640

4. For the compliance schedule required by this Order, the Discharger shall submit to the Central Valley Water Board on or before each 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 Central Valley Water Board by letter when it returns to compliance with the time schedule.
5. 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 28 January 2010.

Original signed by Kenneth Landau, Asst. E.O.
for PAMELA C. CREEDON, Executive Officer