

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TIME SCHEDULE ORDER R5-2011-0900

REQUIRING CHEVRON U.S.A. INC. AND CAWELO WATER DISTRICT
PRODUCED WATER RECLAMATION PROJECT
KERN RIVER AREA STATION 36, KERN RIVER OIL FIELD
KERN COUNTY
TO COMPLY WITH REQUIREMENTS PRESCRIBED IN ORDER R5-2007-0170
(NPDES PERMIT NO. CA0082295)

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

1. On 6 December 2007, the Central Valley Water Board adopted Waste Discharge Requirements Order R5-2007-0170, NPDES Permit No. CA0082295, authorizing Chevron U.S.A. Inc. and Cawelo Water District (hereafter collectively referred to as Discharger) to discharge treated oilfield-produced water, blended with imported surface waters, to Poso Creek, a water of the United States.
2. Order R5-2007-0170, section IV.B.1.a., contains final effluent limitations for discharges to Poso Creek, which reads, in part, as follows:

Parameter	Units	Discharge Specifications		
		Daily Maximum	Monthly Average	Annual Average
Arsenic, Total Recoverable	mg/L	10	--	--

3. Order R5-2007-0170 incorrectly lists the units for the arsenic effluent limitation as milligrams per liter (mg/L). The basis for the arsenic effluent limitation is the United States Environmental Protection Agency Primary Maximum Contaminant Level of 10 µg/L, as detailed in Finding 5 below and in the Fact Sheet for Order R5-2007-0170. The units should be micrograms per liter (µg/L), making the effluent limitation for arsenic 10 µg/L.
4. The arsenic effluent limitation became applicable upon adoption of Order R5-2007-0170 and was not included in previous orders. Order R5-2007-0170 does not contain a compliance schedule or an interim effluent limitation for arsenic.
5. The effluent limitation specified in Order R5-2007-0170 for arsenic is based on implementation of the *Water Quality Control Plan for the Tulare Lake Basin, Second Edition*, revised January 2004 (Basin Plan) water quality objective, which states “waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.” Groundwater recharge is a beneficial use of Poso Creek, with the groundwater having a designated beneficial use of municipal and domestic water supply. The arsenic effluent limitation is based on the protection of the beneficial uses of groundwater recharge and municipal and domestic water supply, the Basin Plan water

quality objective for chemical constituents and toxicity, and the United States Environmental Protection Agency Primary Maximum Contaminant Level.

6. 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.

7. 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, are defined per federal regulations as water quality standards.

8. CWC subsections 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) provides protection from mandatory minimum penalties for violations of an effluent limitation when:

...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 of the following requirements are met:

(A) The ... time schedule order is issued on or after July 1, 2000, and specifies the actions that the discharger is required to take in order to correct the violations that would otherwise be subject to subdivisions (h) and (i).

(B) The regional board finds that, for one of the following reasons, the discharger is not able to consistently comply with one or more of the effluent limitations established in the waste discharge requirements applicable to the waste discharge:

(i) The effluent limitation is a new, more stringent, or modified regulatory requirement that has become applicable to the waste discharge after the effective date of the waste discharge requirements and after July 1, 2000, new or modified control measures are necessary in order to comply with the effluent limitation, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

...

(C) (i) The regional board establishes a time schedule for bringing the waste discharge into compliance with the effluent limitation 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 limitation. Except as provided in clause (ii), for the purposes of this subdivision, the time schedule shall not exceed five years in length.

...

(iii) If the time schedule exceeds one year from the effective date of the order, the schedule shall include interim requirements and the dates for their achievement. The interim requirements shall include both of the following:

(I) Effluent limitations for the pollutant or pollutants of concern.

(II) Actions and milestones leading to compliance with the effluent limitation.

(D) The discharger has prepared and is implementing in a timely and proper manner, or is required by the regional board to prepare and implement, a pollution prevention plan pursuant to Section 13263.3.

In accordance with CWC section 13385(j)(3), and based upon effluent monitoring results, the Discharger is unable to consistently comply with the final arsenic effluent limitation contained in Order R5-2007-0170. Discharges to Poso Creek typically occur during winter months when irrigation demand is low.

The final effluent limitation contained in Order R5-2007-0170 for arsenic is a new requirement that became applicable to the discharge on 6 December 2007, and new or modified control measures need to be implemented to comply with the limitation, and these new or modified control measures cannot be completed and put into operation within 30 calendar days. This Order requires the Discharger to prepare and implement a pollution prevention plan pursuant to CWC section 13263.3 for arsenic.

9. On 21 December 2009, the Discharger submitted a request for a compliance schedule for the arsenic effluent limitation. The Discharger is proposing to cease discharge to Poso Creek and route the treated oilfield-produced water, blended with imported surface waters, to the Famoso Groundwater Recharge Facility. The Discharger is conducting studies to determine the feasibility of its proposed discharge and to quantify potential impacts on groundwater.
10. On 28 September 2009, the Discharger submitted a Notice of Intent to Adopt a Mitigated Negative Declaration to the State Clearinghouse for the construction of a 3-mile-long pipeline from the Cawelo Water District's S5 Lateral to its Conduit F pipeline. This pipeline would allow the Discharger to convey water from the Cawelo Reservoir "B" to the Cawelo Water District Famoso Groundwater Recharge Facility, which is adjacent to Poso Creek.
11. On 25 January 2010, the Discharger submitted a Report of Waste Discharge (RWD) for discharges to the Famoso Groundwater Recharge Facility. The RWD was deemed incomplete. In a letter dated 17 February 2010, Central Valley Water Board staff notified the Discharger that it must submit the following items to complete the RWD:

(1) specific technical information regarding the size, location, and capacities of the basins and an engineering demonstration that the basins are sized to accommodate all groundwater recharge flows, wastewater flows, and ancillary precipitation flows associated with a 100-year wet year; (2) an engineering demonstration that wastewater from the basins will not percolate through basin levees into Poso Creek; and (3) a complete Antidegradation Analysis demonstrating the proposed discharges satisfy the provisions of State Water Resources Control Board Resolution 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (Antidegradation Policy).

12. On 7 October 2010 and 28 June 2010, the Discharger submitted items 1 and 2 listed in Finding 11, respectively. The Discharger is currently working on the Antidegradation Analysis (Item 3, Finding 11) and has been in close communication with Central Valley Water Board staff regarding its content.
13. This Order provides a time schedule that is as short as possible for the Discharger to either complete the improvements necessary to cease discharging to Poso Creek and provide the Antidegradation Analysis necessary to complete the RWD described in Finding 11, or to implement alternative measures to comply with the final arsenic effluent limitation contained in Order R5-2007-0170, section IV.B.1.a.
14. This Order includes interim requirements and dates for their achievement. The time schedule does not exceed five years from the date the arsenic effluent limitation became applicable to the discharge.
15. The compliance time schedule in this Order includes an interim performance-based effluent limitation for arsenic. The interim effluent limitation consists of a maximum daily effluent concentration derived using sample data provided by the Discharger during the current permit term (approximately 3 years). In developing the performance-based interim effluent limitation, where there are ten sampling data points or more, sampling and laboratory variability is accounted for by establishing interim limitations 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*). When at least 80 percent of the data points are reported as non-detect values, or if there are less than ten data points available, interim limitations are based on 3.11 times the maximum observed effluent concentration (MEC) to obtain the daily interim limitation. The following table summarizes the calculation of the interim performance-based effluent limitation for arsenic:

Parameter	Units	MEC	Mean	Std. Dev.	Number of Data Points	Formula Used	Interim Limitation Daily Maximum
Arsenic, Total Recoverable	µg/L	29	20.3	4.4	9	3.11 x MEC	90

16. 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 limitations, however, establish an enforceable ceiling concentration until compliance with the final effluent limitations can be achieved.
17. The Executive Officer has provided a 30-day public comment period and addressed all pertinent comments.
18. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code § 21000 et seq.), in accordance with CWC section 13389 and California Code of Regulations, title 14, section 15321(a)(2).

IT IS HEREBY ORDERED, pursuant to sections 13300 and 13267 of the California Water Code, that:

1. The Discharger shall comply with the following time schedule to ensure compliance with the arsenic effluent limitation at section IV.B.1.a. in Order R5-2007-0170 as described in the above Findings:

Task	Task Description	Due Date
a.	Submit and implement a Pollution Prevention Plan for arsenic pursuant to CWC section 13263.3 ¹	1 April 2011
b.	(1) Submit an amended Report of Waste Discharge for land disposal, including the following: i. State Form 200; ii. A study demonstrating that the discharge is consistent with the State's Antidegradation Policy; or (2) Submit an alternative proposal for achieving full compliance with the final effluent limitation for arsenic.	1 July 2011
c.	Submit progress report ²	1 July 2011
d.	Full compliance with the final effluent limitation for arsenic at section IV.B.1.a. contained in Order R5-2007-0170 or cease discharging to Poso Creek by implementing land disposal	1 November 2011

¹ The Pollution Prevention Plan (PPP) shall be prepared and implemented for arsenic and shall meet the requirements specified in CWC section 13263.3. The PPP shall describe pollution prevention activities the Discharger will implement in the short-term and the long-term to reduce effluent concentrations for arsenic.

² The progress report shall detail what steps have been implemented towards achieving compliance with Task d, 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 limitation for arsenic at Discharge Point 003 shall be effective upon the effective date of this Order. The interim effluent limitation shall be effective through **31 October 2011**, or when the Discharger is able to come into compliance with the final effluent limitation, whichever is sooner:

Parameter	Units	Daily Maximum
Arsenic, Total Recoverable	µg/L	90

3. 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.

Issuance of this Order does not preclude the Central Valley Water Board from taking additional enforcement actions against the Discharger. If compliance is not achieved by the full compliance date, the discharge will be subject to mandatory minimum penalties for violations of the arsenic effluent limitation.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Resources Control 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 Resources Control 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 or furlough day, the petition must be received by the State Water Resources Control 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 the signature.

Original signed by Clay L. Rodgers for

PAMELA C. CREEDON, Executive Officer

13 January 2011