

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TIME SCHEDULE ORDER NO. R5-2008-0009-01

REQUIRING KINDER MORGAN ENERGY PARTNERS, L.P.,
THROUGH ITS OPERATING PARTNERSHIP SFPP, L.P.
FOX ROAD PETROLEUM RELEASE SITE GROUNDWATER REMEDIATION SYSTEM
SOLANO COUNTY
TO COMPLY WITH REQUIREMENTS PRESCRIBED IN ORDER NO. R5-2008-0008
(NPDES PERMIT NO. CA0084760)

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

1. On **25 January 2008**, the Regional Water Board adopted Waste Discharge Requirements (WDR) Order No. R5-2008-0008, prescribing waste discharge requirements for Kinder Morgan Energy Partners, L.P., Through Its Operating Partnership SFPP, L.P. (hereafter Discharger), Fox Road Petroleum Release Site Groundwater Remediation System (hereafter Facility), Solano County.
2. WDR Order No. R5-2008-0008, contains Final Effluent Limitation IV.A.1., which reads in part as follows:

“The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 001, with compliance measured at Monitoring Location EFF-001 as described in the attached MRP (Attachment E):

“a. The Discharger shall maintain compliance with the effluent limitations specified in Table 6:

Table 6. Effluent Limitations

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Nitrate Nitrogen, Total (as N)	mg/L	10	--	--	--
Tertiary Butyl Alcohol	µg/L	--	20	--	--

*“b. **Total Recoverable Iron.** For a calendar year, the annual average total recoverable iron concentration in the effluent shall not exceed **300 µg/L.**”*

*“c. **Total Recoverable Manganese.** For a calendar year, the annual average total recoverable manganese concentration in the effluent shall not exceed **50 µg/L.**”*

3. The effluent limitations specified in Order No. R5-2008-0008 for iron and manganese are based on the Secondary Maximum Contaminant Level – Consumer Acceptance Level, a numeric receiving water standard incorporated by reference in the Basin Plan. The effluent limitation for nitrate is based on the Primary California Maximum Contaminant Level, a numeric receiving water standard incorporated by reference in the Basin Plan. The effluent limitations for tertiary butyl alcohol are technology-based effluents. The effluent limitations for iron, manganese, nitrate, and tertiary butyl alcohol are new or more stringent limitations, which were not prescribed in previous Order No. 5-01-078, adopted by the Regional Water Board on 27 April 2001.
4. 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.*”
5. 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.
6. In accordance with CWC section 13385(j)(3), the Regional Water Board finds that, based upon results of effluent monitoring, the Discharger is not able to consistently comply with the new effluent limitations for iron, manganese, nitrate, and tertiary butyl alcohol. These limitations are new requirements that become applicable to the Order after the effective date of adoption 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 limitations, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.
7. Immediate compliance with the new effluent limitations for iron, manganese, nitrate, and tertiary butyl alcohol is not possible or practicable. The Clean Water Act and the California Water Code authorize time schedules for achieving compliance.
8. This Order provides a time schedule for the Discharger to develop, submit, and implement methods of compliance, including utilizing pollution prevention activities or constructing necessary treatment facilities to meet these new effluent limitations.
9. CWC sections 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) exempts certain violations from the mandatory minimum penalties. 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.”

10. Compliance with this Order exempts the Discharger from mandatory penalties for violations of effluent limitations for iron, manganese, nitrate, and tertiary butyl alcohol only, in accordance with CWC section 13385(j)(3). CWC section 13385(j)(3) requires the Discharger to prepare and implement a pollution prevention plan pursuant to section 13263.3(d)(2) of the California Water Code. Therefore, a pollution prevention plan will be necessary for iron, manganese and nitrate in order to effectively reduce the effluent concentrations by source control measures. The Discharger can operate the groundwater extraction system to minimize the concentrations of iron and manganese, therefore, this Order requires that the Discharger update its pollution prevention plan accordingly. Tertiary butyl alcohol naturally forms during the reduction of methyl tert-butyl ether, therefore, it is infeasible to reduce tertiary butyl alcohol through source control measures. Consequently, a pollution prevention plan is not required for tertiary butyl alcohol.
11. 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 iron, manganese and nitrate. The interim effluent limitations consist of a maximum daily effluent concentration derived using sample data provided by the Discharger. In developing the interim limitations for nitrate, 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*). Therefore, the interim limitations for nitrate in this Order are established as the mean plus 3.3 standard deviations of the available data. 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. The interim effluent limitations for iron and manganese consist of a maximum daily effluent concentration derived using sample data provided by the Discharger from extraction Trench T-2 in December 2009. In developing the interim limitations for iron and manganese, the maximum concentrations were multiplied by a safety factor of two. Based on the Trench T-2 data, the interim effluent limitations for iron and manganese were calculated as 17 mg/L and 4.6 mg/L, respectively.

The statistical methods normally used to calculate performance-based effluent limits were found to be inadequate due to the large statistical variability of the data. The Discharger

is able to extract groundwater from multiple wells and trenches with metals concentrations that vary in each location. To statistically calculate a concentration that is coming from multiple locations with their own statistical variability is difficult. The proposed interim limitations are applicable only to extraction from trench T-2. If in the future groundwater extraction is required from a different area it may be necessary to revise the interim limitations.

Tertiary butyl alcohol (TBA) is a break down product of methyl tert-butyl ether. TBA has been increasing in the groundwater over the past year and it is likely to continue to increase. It is infeasible to determine a performance-based effluent limitation for TBA based on past data, because the data may not be representative of TBA levels in the future.

12. The Regional Water Board finds that 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 effluent limitation can be achieved.
13. On **25 January 2008**, in Sacramento, California, after due notice to the Discharger and all other affected persons, the 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.
14. 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 15321 (a)(2), Title 14, of the California Code of Regulations.
15. Any person adversely affected by this action of the Board may petition the State Water Resources Control Board to review this action. The petition must be received by the State Water Resources Control Board, Office of the Chief Counsel, P.O. Box 100, Sacramento, CA 95812-0100, within 30 days of the date on which this action was taken. Copies of the law and regulations applicable to filing petitions will be provided on request.

IT IS HEREBY ORDERED THAT:

1. The Discharger shall comply with the following time schedule to ensure compliance with the iron, manganese, nitrate, and tertiary butyl alcohol effluent limitations at Section IV.A.1. contained in WDR Order No. R5-2008-0008 as described in the above Findings:

Task

Date Due

Submit Method of Compliance Workplan/Schedule

Within 4 months of adoption of this Order

Submit and Implement Pollution Prevention Plan pursuant to CWC section 13263.3(d)(2) for manganese and nitrate

Within 12 months of adoption of this Order

Submit and Implement an updated Pollution Prevention Plan pursuant to CWC section 13263.3(d)(2) for iron, manganese, nitrate, and tertiary butyl alcohol, which includes a plan to operate the groundwater extraction system to strategically pump from areas that minimize pollutant concentrations.

1 September 2011

Progress Reports¹

1 January, annually, after approval of workplan until final compliance

Full compliance with iron, manganese, nitrate, and tertiary butyl alcohol limitations

1 January 2013

¹ 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 for iron, manganese, nitrate, and Tertiary butyl alcohol shall be effective until **31 December 2012**, or when the Discharger is able to come into compliance, whichever is sooner:

Parameter	Units	Maximum Daily Effluent Limitation
Iron, Total Recoverable	mg/L	17
Manganese, Total Recoverable	mg/L	4.6
Nitrate Nitrogen, Total (as N)	mg/L	34
Tertiary Butyl Alcohol	µg/L	No Limit ¹

¹ It is infeasible to calculate a performance-based limit. See Finding 11.

3. For the compliance schedule required by this Order, the Discharger shall submit to the Regional 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 Regional Water Board by letter when it returns to compliance with the time schedule.
4. 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 **25 January 2008** and amended on **2 May 2011**.

Original Signed By Kenneth D. Landau
PAMELA C CREEDON, Executive Officer