

TIME SCHEDULE ORDER NO. R9-2011-0052

AN ORDER PRESCRIBING A TIME SCHEDULE FOR THE KINDER MORGAN ENERGY PARTNERS TO COMPLY WITH DISCHARGE PROHIBITION NO. IV.C OF ORDER NO. R9-2008-0002 (NPDES PERMIT No. CAG919002) FOR ITS MISSION VALLEY TERMINAL REMEDIATION DEWATERING DISCHARGE TO MURPHY CANYON CREEK

The California Regional Water Quality Control Board, San Diego Region (hereinafter San Diego Water Board) finds that:

1. **SFPP, L.P. operating partnership of Kinder Morgan Energy Partners, L.P. (hereinafter Kinder Morgan or Discharger)** discharges up to 795,000 gallons per day of treated groundwater to the San Diego River via Murphy Canyon Creek (Mission San Diego Hydrologic Area, 907.11) pursuant to waste discharge requirements prescribed in Order No. R9-2008-0002 (NPDES No. CAG919002). On August 24, 2010, Kinder Morgan requested the San Diego Water Board increase the allowable discharge rate to 1.26 million gallons per day (mgd).
2. Kinder Morgan is discharging treated groundwater generated by a project to cleanup soil and groundwater contamination downgradient of the Mission Valley Terminal Aboveground Fuel Tank Farm, located at 9950 and 9966 San Diego Mission Road, San Diego, CA. The cleanup is being conducted in accordance with San Diego Water Board Order No. 92-01, which prescribes a deadline of December 31, 2013 for the cleanup and abatement of petroleum hydrocarbons and associated compounds at the site. The increase in the discharge flow rate discussed in Finding No. 1 will enhance the prospect of Kinder Morgan achieving this deadline.
3. Order No. R9-2008-0002 establishes effluent limitations for 17 general constituents, 126 priority pollutants including metals, and 9 other volatile/metal constituents. No documented violations of the effluent limitations have occurred since January 2009 when Kinder Morgan began full operation of the current treatment system.
4. Order No. R9-2008-0002 neither specifies an effluent limitation nor requires monitoring of the discharge for Total Dissolved Solids (TDS). Based upon the following facts, however, the discharge of groundwater as discussed in the above Finding No. 2 has a reasonable potential to contribute to an in-stream excursion above water quality objectives (WQO) for Total Dissolved Solids (TDS) established in the Water Quality Control Plan for the San Diego Basin (Basin Plan) which would be in violation of Discharge Prohibition IV.C and Receiving Water Limitation VI.A.8.

- a. The Basin Plan states, “*Inland surface waters shall not contain total dissolved solids in concentrations in excess of the numerical objectives described in Table 3-2.*”

Table 3-2 excerpt:

Hydrologic Unit	Constituent (mg/L) - TDS
Mission San Diego (907.11)	1,500

- b. Prohibition IV.C of Order No. R9-2008-0002 states, “*The discharge shall not cause, or contribute to an in-stream excursion above any applicable criterion promulgated by USEPA pursuant to section 303 of the (federal Clean Water Act) or water quality objectives established by the State or Regional Boards.*”
- c. Receiving Water Limitations VI.A.8. of Order No. R9-2008-0002 states, “*Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this WDR. The discharge of groundwater extraction waste from any site shall not, separately or jointly with any other discharge, cause violations of the following water quality objectives. These limitations apply unless more stringent provisions exist in either the Basin Plan, or an applicable State plan. ... 8. Mineral Objectives for Inland Surface Waters (fresh): San Diego Hydrographic Unit 7.11, Objective (mg/L) TDS – 1500.*”
- d. Kinder Morgan has reported that the treated groundwater is high in total TDS concentrations (typically over 2000 milligrams per liter [mg/L]). Kinder Morgan further reported that the various treatment processes (oil/water separation, particulate filtration, manganese and iron removal, carbon absorption, denitrification, and oxygenation do not result in significant changes in the overall TDS of the treated groundwater.
- e. Murphy Canyon Creek has limited, if any, assimilative capacity for additional TDS loading. Murphy Canyon Creek is on the Clean Water Act §303(d) list of water quality limited waterbodies for TDS. In addition, sampling conducted in November 2010 within Murphy Canyon Creek both upstream and downstream of the Mission Valley Terminals discharge point detected TDS concentrations in excess of the Basin Plan WQO.

Table 1: TDS Concentrations (mg/L) in Murphy Canyon Creek

Date:	907MCC2US (upstream)	907MCC1US (upstream)	907MCC1DS (downstream)	907MCC2DS (downstream)
11/10/10	2,227	2,321	2,187	2,195
11/16/10		2,665	2,504	2,326
11/18/10		2,480	2,256	2,163

- The Basin Plan lists the following beneficial uses for Murphy Canyon Creek: agricultural supply, industrial process supply, contact water recreation, non-contact water recreation, warm freshwater habitat, wildlife habitat, and rare, threatened, or endangered species. Murphy Canyon Creek is excepted from the municipal drinking water supply beneficial use.
- The compliance time schedule in this Order includes an interim effluent limitation for TDS based upon the quality of influent. In developing the interim limitation, best professional judgment was applied. When there are ten 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 limit, the maximum detected concentration has been established as the interim limitation. If the statistically projected interim limitation is less than the maximum observed effluent concentration, the interim limitation is established as the maximum observed concentration. The following table summarizes the calculation of the interim effluent limitation for TDS:

Table 2. Interim Limitation Calculation Summary

Parameter	Units	MEC	Mean	Standard Deviation	Number of Samples	Interim Limitation (Maximum Daily)
Total Dissolved Solids	mg/L	2,300	2,071	95.6	38	2,400

- This Order is issued in accordance with California Water Code (CWC) section 13300, which 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. Pursuant to CWC section 13267(b), the San Diego Water Board may require the discharger to furnish, under penalty of perjury, technical or monitoring program reports. Monitoring reports and other technical reports are necessary to determine compliance with the NPDES permit and with this Order.
9. This enforcement action is being taken for the protection of the environment and is exempt from the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code section 21000 et seq.) in accordance with section 15308, chapter 3, Title 14 of the California Code of Regulations. The issuance of this Order is also an enforcement action taken by a regulatory agency and is exempt from the provisions of CEQA pursuant to section 15321 (a)(2), Chapter 3, Title 14 of the California Code of Regulations. Finally, issuance of this Order is exempt from the provisions of CEQA because the Order does not constitute approval of a project.
10. Any person adversely affected by this action of the San Diego Water Board may petition the State Water Resources Control Board (State Water Board) to review the action. The petition must be received by the State Water Board within 30 days of the date on which the action was taken. Copies of the law and regulations applicable to filing petitions will be provided on request.

IT IS HEREBY ORDERED THAT pursuant to CWC sections 13300 and 13267 that Kinder Morgan Energy Partners (Discharger) shall comply with the following time schedule to ensure that the discharge does not cause, have a reasonable potential to cause, or contribute to an in-stream excursion above the Basin Plan's Water Quality Objective for TDS as required by Order No. R9-2008-0002, Discharge Prohibition IV.C and Receiving Water Limitations VI.A.8:

Table 3. Compliance Schedule

Task	Compliance Date
Initiate monitoring as described in Directive No. 2 below.	September 5, 2011
Submit and implement a plan for additional receiving water monitoring that incorporates the provisions described in Directive No. 3 below and any other monitoring measures necessary to assess the compliance of the discharge with Discharge Prohibition IV.C and the impact of the discharge on the downstream beneficial uses.	November 30, 2011
Submit technical report summarizing the results of the study to evaluate the potential for discharge to cause, or contribute to an in-stream excursion above the Basin Plan's Water Quality Objective for TDS as required by Order No. R9-2008-0002, Discharge Prohibition IV.C and Receiving Water Limitations VI.A.8.	June 28, 2013
Submit a workplan that provides a detailed schedule of specific actions and options, including at least one option for additional treatment of the discharge, that Kinder Morgan will take to address compliance with Discharge Prohibition IV.C Order for TDS concentrations in the discharge.	September 30, 2013
Complete feasibility studies for selection of treatment options.	March 31, 2014
Complete preliminary design of the appropriate treatment option.	June 30, 2014
Develop, implement and submit to the San Diego Water Board, a mitigation plan to compensate for TDS loading by the effluent discharge in excess of the Basin Plan's WQO within the San Diego River watershed.	June 30, 2014
Complete final design and select contractor for construction of treatment system.	January 30, 2015

Begin construction of selected treatment option, if other options, which were identified in workplan and pursued by the Discharger are ineffective in demonstrating compliance with Discharge Prohibition IV.C.	April 30, 2015
Complete construction.	September 30, 2015
Achieve full compliance with Discharge Prohibition IV.C	November 30, 2015

1. Progress reports shall be submitted semiannually and as otherwise required according to the time schedule and shall continue until compliance is achieved.
2. In addition to constituents in the discharge already being analyzed for compliance with Order No. R9-2008-0002, the Discharger shall also analyze a monthly grab sample of influent and effluent for TDS. The Discharger shall also include a grab sample of TDS with the monthly upstream receiving water monitoring conducted for Order No. R9-2008-0002.
3. In addition to the Monitoring and Reporting Program requirements specified in the June 23, 2009 enrollment and in Order No. R9-2008-0002, the Discharger shall develop and implement a monitoring plan for Murphy Canyon Creek and the San Diego River at various predetermined points during the increased discharge flow rate to observe any effects that the flows are having on the chemical, physical and biological environment in the receiving waters (Receiving Water Limitations; Water Quality Objectives; and Beneficial Uses). The discharger shall review and consider any additional surface water monitoring data that was conducted by other regulated parties within the sub-watershed.
 - a) Additional monitoring points shall include at a minimum the following:
 - i. Point #1: At the point where Murphy Canyon Creek discharges in to the San Diego River;
 - ii. Point #2: 100 feet downstream of Point #1 within the San Diego River;
 - iii. Point #3: 500 feet downstream of Point #2 within the San Diego River.
 - iv. Alternative locations may be proposed by the discharger based on the safety and accessibility of locations.

- b) The Discharger shall make the following observations and measurements at each point identified in Directive 3.a above and any additional points identified in the monitoring plan at a minimum frequency of every two weeks during the first quarter of monitoring. If monitoring during the first two weeks demonstrates insignificant variability, then the monitoring may be reduced to monthly concurrently with the effluent sampling in directive 2:
- i. Visual observation of the receiving water for color, turbidity plumes, erosion, and sedimentation;
 - ii. pH;
 - iii. Temperature;
 - iv. Dissolved Oxygen and
 - v. TDS. Conductivity may alternatively be measured with sufficient data demonstrating the correlation between conductivity and laboratory TDS measurements.
- c) The Discharger shall conduct upstream (reference) and downstream bioassessment monitoring to assess the condition of biological communities in the receiving waters:
- i. Locations: The discharger shall choose the locations as suitable to conduct the bioassessment. Where possible the bioassessment monitoring should be collocated with the receiving waters monitoring. The locations must have year round flow.
 - ii. Frequency: Bioassessment stations must be monitored twice a year in May or June and in September or October.
 - iii. Parameters/Methods: The bioassessment analysis procedures must include calculation of the Index of Biotic Integrity (IBI) for benthic macroinvertebrates for all bioassessment stations, as outlined in "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams," by Ode, et al. 2005. If bioassessment monitoring cannot be collocated with the receiving waters monitoring, then the Discharger must also measure the constituents in Task 2.b at the bioassessment station. The discharger must conduct, concurrently with all required macroinvertebrate collections, the "full" suite of physical/habitat characterization measurements specified in the SWAMP Bioassessment SOP.
 - iv. Monitoring of bioassessment stations must be conducted according to bioassessment procedures developed by the Surface Water Ambient Monitoring Program (SWAMP), as amended.
 - v. A qualified professional environmental laboratory must perform all laboratory, quality assurance, and analytical procedures.

- vi. An appropriately experienced and trained professional must perform all sampling.
4. The following interim effluent limitation for concentration of TDS in the discharge shall be effective until November 30, 2015 or when the Discharger achieves compliance with Order No. R9-2008-0002, Discharge Prohibition IV.C and Receiving Water Limitation VI.A.8, whichever is earlier:

Table 4: Interim Effluent Limitation for TDS

Parameter	Interim Average Monthly Effluent Limitation (AMEL)
TDS	The concentration in the discharge from the treatment process to Murphy Canyon Creek shall not exceed an average monthly concentration of 2,400 mg/L.

5. If noncompliance with the interim effluent limitation is confirmed through Tasks 1 through 3 above, within 24 months of the adoption of this Order, the Discharger shall develop, implement, and submit to the San Diego Water Board, a Pollution Prevention Plan (PPP) pursuant to CWC Section 13263.3 for TDS.
6. The discharge of groundwater to the San Diego River via Murphy Canyon Creek shall not exceed 1.26 million gallons per day.
7. Failure to comply with requirements of this Order may subject the Dischargers to enforcement action, including but not limited to administrative enforcement orders requiring you to cease and desist from violations, imposition of administrative civil liability, pursuant to Water Code sections 13350, in an amount not to exceed \$5,000 for each day in which the violation occurs referral to the State Attorney General for injunctive relief and referral to the District Attorney for criminal prosecution.
8. As required by the California Business and Professions code Sections 6734, 7835, and 7835.1, all technical reports required herein shall be prepared by, or under the supervision of, a California Registered Engineer or Registered Geologist (as applicable) and shall be signed by the registered professional.
9. 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

Kinder Morgan
Mission Valley Terminals

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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.”

I, David Gibson, 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, San Diego Region, on August 10, 2011.

TENTATIVE

DAVID W. GIBSON
Executive Officer