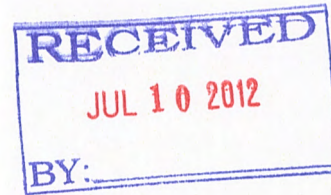




FEDEX TRACKING NUMER: 8744 8042 5934

7/6/2012

Mr. R. M. Seeley
Director, Southwest Region
Pipeline and Hazardous Materials Safety Administration
8701 South Gessner, Suite 1110
Houston, TX 77074



RE: CPF 4-2012-5021

Dear Mr. Seeley:

On June 8, 2012, Kinder Morgan CO2 Company, L.P. (KMCO2) received your Notice of Probable Violation and Proposed Compliance Order, CPF 4-2012-5021, dated May 29, 2012. The Notice contains certain alleged violations based on an inspection conducted in November 2011 by a representative of your office.

KMCO2 does not agree with the allegations of the NOPV. Nevertheless, in an effort to resolve this matter as expeditiously as possible, in accordance with item I.b.1. of the "Response Options for Pipeline Operators in Compliance Proceedings," KMCO2 does not contest the compliance order, and provides the following responses (following the original citations and PHMSA comments) to the Notice:

- §195.571 What criteria must I use to determine the adequacy of cathodic protection? Cathodic protection required by this Subpart must comply with one or more of the applicable criteria and other considerations for cathodic protection contained in paragraphs 6.2 and 6.3 of NACE SP 0169 (incorporated by reference, see §195.3).**

Kinder Morgan CO2 (KMCO2) failed to ensure that all buried piping had adequate Cathodic Protection (CP) as required by NACE SP 0169 (version 2007); specifically at Blanco Station, the CP on the station bypass piping was found to be inadequate.

Based on location descriptions from the annual CP surveys and observations made by PHMSA staff it appeared the station CP levels were recorded only at the station bypass check valve (Identified as the Station Loop Line), and outside the isolating unions at the mainline block valves. PHMSA staff identified that KMCO2 was using the -850 mV (-0.850V) or the "IR free" polarized potential criteria to evaluate CP at all locations at this station in accordance with NACE SP 0169 section 6.2.2.1.2.

The CP at Blanco station was evaluated and found to be inadequate on the bypass piping as CP levels appeared to be below the calculated ON criteria that would yield an -850 mV IR free potential. PHMSA staff then had KMCO2 personnel conduct an interrupted CP survey to determine the IR free potential. Per KM procedure, the rectifier was interrupted on a 4 second on 1 second off interval and portions of the station bypass line had IR free potentials as low as -640 mV.

PHMSA learned the station piping was electrically isolated from the mainline with buried isolation unions and that during a 2008 construction project the rectifier lead cable to the station piping had been cut. When PHMSA staff observed the configuration of the electrical connections at a

rectifier junction box, it was apparent that the station bypass piping was electrically disconnected. The evidence indicates the bypass piping has inadequate CP and that the only current making it to the station bypass piping was stray cathodic current.

PHMSA staff asked KMCO2 personnel to investigate further and take mitigative actions, as well as identify on all stations where similar electrically discontinuous station piping could exist and ensure that all buried pipe has adequate CP applied.

Immediately after identifying the inadequate CP during the audit, KMCO2 personnel bonded the upstream and downstream pipeline cables making the entire system "electrically continuous." Approximately one week after finding the low CP on the station bypass piping at Blanco Station, KMCO2 personnel added a rectifier and conventional ground bed to ensure adequate CP on the station bypass piping. KMCO2 also investigated for this condition at all of their stations where similar conditions could occur and found that all other station piping had adequate CP and that this was an isolated occurrence.

KMCO2's Response: As stated in the Notice, KMCO2 took immediate action to restore cathodic protection to an acceptable level at Blanco Station, and investigated the condition at all of our stations where similar conditions could occur. As an additional measure, we also plan to visually inspect the bypass piping, prior to October 1, 2012, for any potential corrosion or damage caused by the low CP.

2. **§195.577 What must I do to alleviate interference currents?**

(a) For pipelines exposed to stray currents, you must have a program to identify, test for, and minimize the detrimental effects of such currents.

Kinder Morgan CO2 failed to test for stray currents and minimize the detrimental effects of stray currents on a portion of the Cortez system. Locations were identified along this segment where stray currents could cause detrimental effects on the pipeline, as portions paralleled high voltage Alternating Current "AC" electrical corridors. KMCO2 personnel clarified that to test for AC induced stray currents, AC reads are taken during a five (5) year Close Interval Survey "CIS." KMCO2 then produced segment surveys performed in the past 5 years for the entirety of the Cortez CO2 Pipeline system. PHMSA staff noted in the Poquita Station to Allred Station that during August 2007 CIS that there were no AC reads listed. KMCO2 confirmed that high voltage electrical transmission lines paralleled the right-of-way and that "AC reads were not taken because their devices didn't have the correct version of the software installed at the time to record AC reads."

Kinder Morgan CO2 failed to minimize the detrimental effects of stray currents identified in the Close Interval Survey of the Cortez to Blanco station line segment. To address AC induced stray current KMCO2 was using Procedure L-O&M 903 "External Corrosion Control for Buried or Submerged Pipelines." Section 3.9 "AC Voltage and Fault Current Mitigation" states:

"Pipelines operating in the same corridor or near electric high voltage transmission lines often experience high voltage levels due to a combination of conditions. These conditions can occur both during steady AC transmission system operation as well as during fault conditions. Take remedial measures to prevent the voltage level from exceeding 15 VAC-RMS."

During a follow-up meeting in February 2012, KMCO2 personnel provided PHMSA with the "Interrupted Survey Cortez CO2 Line Cortez Station to Blanco" dated May-June 2009. The CIS graphs provided did not adequately show the AC reads claimed by KMCO2 and an electronic spreadsheet was then reviewed. PHMSA staff identified approximately 109 (One hundred and nine) instances above the criteria of 15 VAC-RMS where mitigation should have taken place.

KMCO2 stated "The high reads were disregarded because they were more than likely rocks or high resistivity soils." When PHMSA staff asked how this was confirmed, KMCO2 personnel

stated "They were just errant reads." Testing for AC induced stray current is crucial to ensure that no hazardous conditions exist that would impact the integrity of the pipeline. AC Values that are above 15VAC-RMS not only pose a corrosion hazard to the integrity of the pipeline, they pose a hazard to the public and KMCO2 personnel. Dismissing high values without sound engineering judgment and verification presents a significant safety risk to life and property.

The evidence demonstrates that the operator violated § 195.577 by failing to test for stray currents where they were exposed to such currents. In the event that such inspections were, in fact, performed, the evidence demonstrates the operator violated §195.589(c) by failing to maintain a record of each inspection and test required by this subpart for at least 5 years in sufficient detail to demonstrate the adequacy of corrosion control measures or that corrosion requiring control measures does not exist.

KMCO2's Response: No high voltage electrical transmission lines existed along the pipeline section from Poquita Station to Allred Station at the time of the 2007 CIS; therefore, no AC voltage readings were taken. KMCO2 is conducting a CIS on the Cortez Pipeline from Poquita Station to Allred Station this year, and AC voltage readings will be taken at all test stations.

For the pipeline segment from Cortez Station to Blanco, while the CIS did show AC readings above 15 volts, at no time did it show voltages above 5 volts at any test stations or aboveground appurtenances that were accessible to KMCO2's personnel or the public. We believe that the high AC readings were a combination of hitting rocks, high resistance soil, and induced AC on the survey wire itself during the survey and not representative of the actual AC voltages on the pipeline. If there were induced AC on the pipeline, we would have seen the high AC voltage readings at the test stations and valves as well as between the test stations. No test leads or aboveground appurtenances showed AC voltages above 5 volts as shown in the CIS records, which were reviewed during the audit.

Since the inspection, we have investigated the area where the AC voltage readings were above 15 volts on the Cortez Station to Blanco pipeline segment, and did not find any readings above 3.3 VAC. Also, in accordance with Kinder Morgan's Liquids Pipelines Integrity Management Program Protocol 14, AC Corrosion Mitigation and Monitoring, KMCO2 has installed coupon test stations, which will be used to measure AC current density, the primary indicator of the probability that AC corrosion will occur. As an additional verification, an engineering firm has been hired to develop a model to define the probability of AC corrosion at the locations where AC voltage values were above 15 VAC-RMS during the 2009 CIS. We expect the results of this model prior to October 1, 2012. KMCO2 will use this analysis to determine appropriate mitigation, if necessary. KMCO2 strongly disagrees that any of the AC values or any of KMCO2's actions presented a significant safety risk to life and property.

We are committed to operating our pipelines safely and in compliance with all applicable regulations. We appreciate the Pipeline and Hazardous Materials Safety Administration's efforts in helping us to achieve this goal.

Sincerely,



Kenneth H. Havens Jr.
Vice President, Source and Transportation