



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, D.C. 20590

OCT 9 2012

Mr. Tim Bradley
President
Kinder Morgan CO₂ Company, LP
500 Dallas Street, Suite 1000
Houston, TX 77002

Re: CPF No. 4-2012-5021

Dear Mr. Bradley:

Enclosed please find the Final Order issued in the above-referenced case. It makes findings of violation and specifies actions that need to be taken by Kinder Morgan CO₂ Company, LP, to comply with the pipeline safety regulations. When the terms of the compliance order have been completed, as determined by the Director, Southwest Region, this enforcement action will be closed. Service of the Final Order by certified mail is deemed effective upon the date of mailing, or as otherwise provided under 49 C.F.R. § 190.5.

Thank you for your cooperation in this matter.

Sincerely,

Jeffrey D. Wiese
Associate Administrator
for Pipeline Safety

Enclosure

cc: Mr. Rodrick Seeley, Director, Southwest Region, OPS
Mr. Alan Mayberry, Deputy Associate Administrator for Field Operations, OPS
Mr. Kenneth H. Havens, Jr., Vice President - Source and Transportation, Kinder Morgan
CO₂ Company, LP

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

**U.S. DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION
OFFICE OF PIPELINE SAFETY
WASHINGTON, D.C. 20590**

_____)
In the Matter of)

Kinder Morgan CO₂ Company, LP,)

Respondent.)
_____)

CPF No. 4-2012-5021

FINAL ORDER

On November 28 – December 2, 2011, and February 1, 2012, pursuant to 49 U.S.C. § 60117, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS), conducted an on-site pipeline safety inspection of the facilities and records of Kinder Morgan CO₂ Company, LP (KMCO₂ or Respondent), a subsidiary of Kinder Morgan Energy Partners, LP, in Cortez, Colorado. The inspection covered facilities and records pertaining to Respondent's Cortez CO₂ pipeline, a 30-inch pipeline that transports carbon dioxide liquid 502 miles from McElmo Dome near Cortez, Colorado, to Denver City, Texas.¹

As a result of the inspection, the Director, Southwest Region, OPS (Director), issued to Respondent, by letter dated May 29, 2012, a Notice of Probable Violation and Proposed Compliance Order (Notice). In accordance with 49 C.F.R. § 190.207, the Notice proposed finding that KMCO₂ had violated 49 C.F.R. §§ 195.571 and 195.577(a) and proposed ordering Respondent to take certain measures to correct the alleged violations.

KMCO₂ responded to the Notice by letter dated July 6, 2012 (Response). The company did not contest the compliance order, but stated it did "not agree with the allegations of the NOPV."² Respondent did not request a hearing and therefore has waived its right to one.

FINDINGS OF VIOLATION

In its Response, KMCO₂ did not contest the proposed compliance order but disputed the allegations of violation of 49 C.F.R. Part 195, as follows:

Item 1: The Notice alleged that Respondent violated 49 C.F.R. § 195.571, which states:

¹ http://www.kne.com/business/co2/transport_cortez.cfm (last accessed on September 24, 2012).

² Respondent's Response to the Notice at 1.

§ 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).

The Notice alleged that KMCO₂ violated 49 C.F.R. § 195.571 by failing to ensure that all buried piping at its Blanco Station had adequate cathodic protection (CP), as provided by NACE SP 0169 (version 2007). Specifically, the Notice alleged that during PHMSA's inspection of the Blanco Station, KMCO₂ personnel conducted an interrupted CP survey that showed insufficient CP on the station bypass piping. PHMSA staff subsequently learned that 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. The Notice further alleged that 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. PHMSA asserted that the bypass piping had inadequate CP and that the only current making it to the station bypass piping was stray cathodic current.

In its Response, KMCO₂ indicated that it had taken immediate action after the PHMSA inspection to restore CP to an acceptable level at the Blanco Station. Although KMCO₂ disagreed with the allegations in the Notice, it did not contest, and expressed its intent to comply with the proposed compliance order. KMCO₂ further stated that it would inspect the station bypass piping for potential corrosion or damage caused by the low CP.

Accordingly, based upon a review of all the evidence, I find that Respondent violated 49 C.F.R. § 195.571 by failing to ensure that all buried piping on its pipeline system had adequate cathodic protection, as provided by NACE SP 0169 (version 2007).

Item 2: The Notice alleged that Respondent violated 49 C.F.R. § 195.577(a), which states:

§ 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.

The Notice alleged that KMCO₂ violated 49 C.F.R. § 195.577(a) by failing, in two specific instances, to adequately identify, test for, and minimize the detrimental effects of interference currents on its pipeline. First, the Notice alleged that KMCO₂ failed to test for stray currents on the pipeline segment between Poquita Station and Allred Station, along which parallel high-voltage electrical transmission lines exposed the pipeline to stray alternating current (AC) interference. Second, the Notice alleged that KMCO₂ failed to identify, test for, and minimize detrimental effects of stray AC currents after detecting high AC readings at 109 locations on the Blanco Station to Cortez Station segment.

In the first instance, the Notice alleged that during the inspection of Respondent's Cortez system, PHMSA identified locations where stray currents could cause detrimental effects on the pipeline.

Upon request, KMCO₂ produced segment surveys of the entire Cortez CO₂ pipeline system, including tests for AC interference. PHMSA staff noted that KMCO₂ could not produce any AC reads taken for the pipeline segment between Poquita Station and Allred Station. During the inspection, KMCO₂ staff confirmed that high-voltage electrical transmission lines ran parallel to the right-of-way in this segment and that AC reads had not been taken during the last Close Interval Survey (CIS) performed on this segment in 2007 because, according to Respondent, the company's CP technicians did not have the correct software to allow them to record AC readings.³

In its Response, KMCO₂ contested this allegation, stating that in 2007, no high-voltage electrical transmission lines existed along this section and therefore no AC reads were required. I disagree. Regardless of when the high-voltage electrical transmission lines became operational, they were present and active at the time of the 2011 inspection. KMCO₂ was unable to show PHMSA inspectors that it had a program in place *at the time of the inspection* to identify, test for, and minimize the detrimental effects of AC current in this area. As soon as the transmission lines were installed, KMCO₂ needed to institute a program to identify and alleviate interference currents, since the detrimental effects of stray currents can damage a pipeline quickly and threaten public safety.

In the second instance, PHMSA staff reviewed the May-June 2009 CIS of the Cortez pipeline segment between Blanco Station and Cortez Station. Electronic spreadsheets containing the AC reads from the survey showed 109 instances where the voltage level exceeded 15V AC-RMS and where Respondent should have identified, tested for, and minimized detrimental effects of stray AC currents. During the inspection, KMCO₂ staff stated that they had disregarded the high reads because they were likely due to rocks or high-resistivity soils, but could not provide PHMSA staff with a sound engineering basis for this conclusion.⁴

In its Response, KMCO₂ reasserted that it had a sound basis for disregarding the high-voltage reads and claimed that its conclusion was based on the overall pattern of the AC reads.⁵ However, the company was unable to produce any testing data, engineering analysis, or other documentation to substantiate this claim. Further, by failing to undertake any sort of rigorous analysis, KMCO₂ failed to follow its own procedures, which required the exercise of "sound engineering judgment" when considering potential deficiencies in field data.⁶ Without taking the additional step of verifying the cause of the high AC reads on the underground pipe sections, KMCO₂ failed to adequately identify, test for, and minimize the detrimental effects of potentially damaging stray currents.

³ Pipeline Safety Violation Report (Violation Report), (May 29, 2012) (on file with PHMSA) at 12.

⁴ Violation Report at 20.

⁵ The 2009 CIS of the Cortez Station to Blanco Station segment did not show any AC readings above 5V AC-RMS at any test station or above-ground appurtenances. Due to the frequency and consistency of these above-ground readings, KMCO₂ argued that it was justified in dismissing the higher underground voltage readings as caused merely by rocks and high-resistivity soils. Response at 3.

⁶ KMCO₂ Procedure L-O&M 903, section 3.7.5.2. Violation Report, Exhibit F at 14.

In its Response, KMCO₂ disagreed with the allegations in the Notice, but did not contest, and expressed its intent to comply with, the proposed compliance order. Accordingly, based upon a review of all the evidence, I find that Respondent violated 49 C.F.R. § 195.577(a) by failing to adequately identify, test for, and minimize the detrimental effects on interference currents in the two instances described above.

These findings of violation will be considered prior offenses in any subsequent enforcement action taken against Respondent.

COMPLIANCE ORDER

The Notice proposed a compliance order with respect to Items 1 and 2 in the Notice for violations of 49 C.F.R. §§ 195.517 and 195.577(a), respectively. Under 49 U.S.C. § 60118(a), each person who engages in the transportation of hazardous liquids or who owns or operates a pipeline facility is required to comply with the applicable safety standards established under chapter 601. Pursuant to the authority of 49 U.S.C. § 60118(b) and 49 C.F.R. § 190.217, Respondent is ordered to take the following actions to ensure compliance with the pipeline safety regulations applicable to its operations:

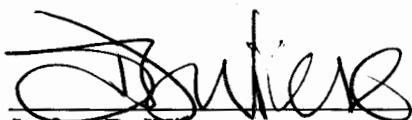
1. With respect to the violation of § 195.571 (**Item 1**), Respondent must perform a review and assessment to identify any impact the lack of CP protection has had on its piping. KMCO₂ must remediate any deficiencies found.
2. With respect to the violation of § 195.577(a) (**Item 2**), Respondent must:
 - a. Perform a survey to test for and evaluate AC interference currents that may be induced on the Poquita Station to Allred Station pipeline segment, and address/remediate any areas of high AC inductance as referred to in KMCO₂ IM Protocol 14.
 - b. Survey the Blanco Station to Cortez Station line segment in accordance with KMCO₂ IM Protocol 14 and properly address any results requiring mitigation.
 - c. Develop a plan to survey the remaining portions of the Cortez system in accordance with KMCO₂ IM Protocol 14.
3. KMCO₂ must submit to the Region Director, Southwest Region, Pipeline and Hazardous Materials Administration, 8701 South Gessner Drive, Suite 1110, Houston, Texas 77074:
 - a. Results of surveys and plans, with time tables, within 30 days following receipt of the Final Order.
 - b. Confirmation of completion of all items within 365 days following the receipt of the Final Order.
4. KMCO₂ is requested (not mandated) to maintain documentation of the safety

improvement and compliance costs associated with fulfilling this Compliance Order and submit the total to Rodrick Seeley, Director, Southwest Region, Pipeline and Hazardous Materials Administration. It is requested that these costs be reported in two categories: (1) total cost associated with preparation/revision of plans, procedures, studies, and analyses; and (2) total cost associated with replacements, additions, and other physical changes to the pipeline infrastructure.

The Director may grant an extension of time to comply with any of the required items upon a written request timely submitted by the Respondent and demonstrating good cause for an extension.

Failure to comply with this Order may result in the administrative assessment of civil penalties not to exceed \$100,000 for each violation for each day the violation continues or in referral to the Attorney General for appropriate relief in a district court of the United States.

Under 49 C.F.R. § 190.215, Respondent has a right to submit a Petition for Reconsideration of this Final Order. The petition must be sent to: Associate Administrator, Office of Pipeline Safety, PHMSA, 1200 New Jersey Avenue, SE, East Building, 2nd Floor, Washington, DC 20590, with a copy sent to the Office of Chief Counsel, PHMSA, at the same address. PHMSA will accept petitions received no later than 20 days after receipt of service of this Final Order by the Respondent, provided they contain a brief statement of the issue(s) and meet all other requirements of 49 C.F.R. § 190.215. Unless the Associate Administrator, upon request, grants a stay, the terms and conditions of this Final Order are effective upon service in accordance with 49 C.F.R. § 190.5.



Jeffrey D. Wiese
Associate Administrator
for Pipeline Safety

OCT 9 2012

Date Issued