

NOV 10 2009

**VIA CERTIFIED MAIL AND FACSIMILE TO:(719)420-4899 [7005 0390 0005 6162 5104]**

Mr. Michael S. Catt  
Vice President of Field Operations  
El Paso Natural Gas Western operations group  
Two North Nevada Ave  
Colorado Springs, CO 80903

**Re: CPF No. 4-2009-1021H**

Dear Mr. Catt:

Enclosed is a Corrective Action Order issued by the Associate Administrator for Pipeline Safety in the above-referenced case. It requires El Paso to take certain corrective actions with respect to the natural gas pipeline that failed on November 5, 2009. Service is being made by certified mail and facsimile. Your receipt of this Corrective Action Order constitutes service of that document under 49 C.F.R. § 190.5. The terms and conditions of this Corrective Action Order are effective upon receipt.

We look forward to a successful resolution of concerns arising out of the recent pipeline failure to ensure pipeline safety. Please direct any questions on this matter to me at (713) 272-2859.

Sincerely,

R. M. Seeley  
Director, Southwest Region

Enclosures

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

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<b>In the Matter of</b>	)	
	)	
<b>El Paso Natural Gas Company,</b>	)	<b>CPF No. 4-2009-1021H</b>
	)	
<b>Respondent.</b>	)	
	)	

**CORRECTIVE ACTION ORDER**

Purpose and Background

This Corrective Action Order is being issued, under authority of 49 U.S.C. § 60112, to require El Paso Natural Gas Company (El Paso or Respondent) to take necessary corrective action to protect the public, property, and the environment from potential hazards associated with a failure involving the Dumas to Amarillo 24-inch natural gas pipeline (Line 1102).

On November 5, 2009, a failure occurred on Line 1102 in Potter County, Texas, resulting in an explosion, fire, personal injuries, and property damage. The cause of the failure has not yet been determined. Pursuant to 49 U.S.C. § 60117, the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS), initiated an investigation of the accident.

Preliminary Findings

- At approximately 12:09 a.m. CT on November 5, 2009, a rupture occurred on Respondent's Dumas to Amarillo 24-inch Line 1102 natural gas pipeline (the affected pipeline), resulting in the release of approximately 98 million standard cubic feet (MMscf) of natural gas. The failure occurred at Mile Post (MP) 42 + 4250, in Potter County, Texas, approximately 15 miles west of Amarillo, Texas, in or near the unincorporated community of Bushland. The incident was reported to the National Response Center (Incident Report # 922663).
- The natural gas pipeline rupture resulted in an explosion and fire. A home near the rupture site was destroyed by fire, and three individuals occupying the home were injured and transported to area hospitals. Approximately 200 people in the adjacent subdivision were evacuated. Natural gas releasing from the pipeline continued to

- burn for approximately eight hours. Other fires caused by the explosion were contained and extinguished. The explosion caused a crater approximately 100-feet long and 15-feet deep, and resulted in approximately 60-feet of damaged pipe.
- Following indications of a pipeline failure on its SCADA system (high temperature alarms and pressure rate of change alarms) controllers in the control room for El Paso directed local personnel to investigate the conditions indicated by the alarms and isolated the pipeline by first closing Valve 3 and Valve 0. El Paso subsequently closed Valve 2 and reopened Valve 0, which further isolated the incident site between Valve 3 and Valve 2, and restored gas service to customers between Valve 2 and Valve 0.
  - Pressure was returned to the pipeline on November 9, 2009. Respondent plans to operator the pipeline at a pressure no greater than 80 percent of the actual operating pressure on the line immediately prior to the failure.
  - The cause of the failure is unknown and the investigation is ongoing. Visual inspection show the failure likely initiated at an abandoned tap connection to the 24-inch pipeline (carrier pipe). Visual analysis performed by El Paso metallurgists of the damaged carrier pipe and pipe from the abandoned tap suggest the cause of the failure may involve the saddle assembly at the abandoned tap. Saddles are used to make connections to a carrier pipe.
  - PHMSA previously issued a Corrective Action Order to Colorado Interstate Gas Company (CIG)—a sister company to El Paso—in 2003 for a pipeline incident caused by a defect in the toe of a saddle weld. That Corrective Action Order (CPF No. 5-2003-1002H), issued April 3, 2003, noted that CIG had also experienced a previous incident in 1994 caused by failure of a saddle weld.
  - El Paso removed and replaced approximately 80-feet of pipe, including the section of pipe damaged from the rupture. Pieces from the failed carrier pipe and the failed abandoned tap connection will be sent to the metallurgical laboratory Stress Engineering in Houston, Texas for analysis. Undamaged pipe from the carrier pipe (north and south ends of failed pipe) and an undamaged tap to Atmos Energy similar to the tap at the location of the failure, including the saddle, will also be sent to the lab for analysis.
  - Respondent's Line 1102 originates in Dumas, Texas, travels approximately 47 miles to Amarillo, Texas, and then an additional 200 miles to Eunice, New Mexico. The entire pipeline crosses counties Moore, Potter, Randall, Castro, Lamb, Hockley, Cochran, Yoakum, Gaines, in Texas, and Lea County, New Mexico. The pipeline travels in close proximity to Buffalo Lake National Wildlife Refuge in Randall County, Texas. The line crosses Interstate 40 (Route 66) and various other Federal, State, and local highways. The pipeline is predominately routed through Class 1 locations, but crosses through Class 2 and Class 3 locations.

- The incident site is a newly-developed residential area, which meets the definition of a Class 2 location under 49 C.F.R. § 192.5 because there are more than 10 but fewer than 46 buildings intended for human occupancy within 220 yards on either side of the pipeline at that location.
- The pipe that failed is 24-inch nominal diameter, 0.250-inch wall thickness, Grade X-52, electric fusion welded pipe with coal tar enamel coating, manufactured by A.O. Smith and constructed in 1948. The pipeline is cathodically protected.
- The maximum allowable operating pressure (MAOP) of the pipeline that failed is 780 pounds per square inch gauge (psig), established in June 1991 by an eight-hour hydrostatic test to a pressure of 1022 psig. Actual operating pressure of the pipeline segment at time of failure was 762 psig.
- The failure occurred between El Paso's Dumas Compressor Station and Amarillo Compressor Station, but neither stations were operating at the time of the failure. Gas flow is bi-directional on this line. On the afternoon prior to the failure, gas flow was moving in a northerly direction from Amarillo to Dumas. At the time of the incident, the pipeline segment was in balance without significant flow in either direction.
- Respondent reports the most recent inline inspection of the pipeline was performed in 2003 using a metal loss tool. No actionable anomalies were identified in the area of the failure.

#### Determination of Necessity for Corrective Action Order and Right to Hearing

Section 60112 of Title 49, United States Code, provides for the issuance of a Corrective Action Order, after reasonable notice and the opportunity for a hearing, requiring corrective action, which may include the suspended or restricted use of a pipeline facility, physical inspection, testing, repair, replacement, or other action, as appropriate. The basis for making the determination that a pipeline facility is hazardous, requiring corrective action, is set forth both in the above-referenced statute and 49 C.F.R. § 190.233, a copy of which is enclosed.

Section 60112 and the regulations promulgated thereunder provide for the issuance of a Corrective Action Order without prior opportunity for notice and hearing upon a finding that failure to issue the Order expeditiously will likely result in serious harm to life, property, or the environment. In such cases, an opportunity for a hearing will be provided as soon as practicable after the issuance of the Order.

After evaluating the foregoing preliminary findings of fact, I find that continued operation of the affected pipeline without corrective measures would be hazardous to life, property, and the environment. Additionally, having considered the age of the pipe, circumstances surrounding this failure, the possibility that the incident was caused by a type of saddle assembly that has caused previous incidents, the proximity of the pipeline to publicly accessed areas and roadways, the hazardous nature of the product the pipeline transports, the pressure required for transporting the material, the uncertainties as to the cause of the failure, and the ongoing investigation to

determine the cause of the failure, I find that a failure to issue this Order expeditiously to require immediate corrective action would result in the likelihood of serious harm to life, property, or the environment.

Accordingly, this Corrective Action Order mandating immediate corrective action is issued without prior notice and opportunity for a hearing. The terms and conditions of this Order are effective upon receipt.

Within 10 days of receipt of this Order, Respondent may request a hearing, to be held as soon as practicable, by notifying the Associate Administrator for Pipeline Safety in writing, with a copy to the Director, Southwest Region, PHMSA. If a hearing is requested, it will be held telephonically or in-person in Houston, Texas, or Washington, D.C., on a date that is mutually convenient to PHMSA and Respondent.

After receiving and analyzing additional data in the course of this investigation, PHMSA may identify other corrective measures that need to be taken. In that event, Respondent will be notified of any additional measures required and amendment of this Order will be considered. To the extent consistent with safety, Respondent will be afforded notice and an opportunity for a hearing prior to the imposition of any additional corrective measures.

#### Required Corrective Action

Pursuant to 49 U.S.C. § 60112, I hereby order El Paso Natural Gas Company to immediately take the following corrective actions with respect to Line 1102 from Amarillo Compressor Station to Dumas Compressor Station (the affected pipeline):

1. The operating pressure on the affected pipeline shall not exceed 80 percent of the actual operating pressure in effect immediately prior to the November 5, 2009, failure. Specifically, operating pressure shall not exceed 609 psig. This pressure restriction will remain in effect until written approval to increase the pressure or return the pipeline to its pre-failure operating pressure is obtained from the Director, Southwest Region, PHMSA (Director) as set forth in Item 8. If the results of any action undertaken pursuant to this Order necessitate a reduction in the allowable operating pressure permitted by this Order, Respondent must further reduce the allowable operating pressure accordingly.
2. Within 30 days of receipt of this Order, complete mechanical and metallurgical testing and failure analysis of the failed pipe. The testing and analysis shall be completed as follows:
  - (A) Document the chain of custody when handling and transporting the failed pipe section and other evidence originating from the failure site;
  - (B) Utilize mechanical and metallurgical testing protocols, including selection of the testing laboratory, approved by the Director;

- (C) Prior to commencing the mechanical and metallurgical testing, provide the Director with the scheduled date, time, and location of the testing to allow a PHMSA representative to witness the testing; and
  - (D) Ensure that the testing laboratory distributes all resulting reports in their entirety, whether draft or final, to the Director at the same time they are made available to Respondent.
3. Within 60 days of receipt of this Order, develop and submit to the Director for prior approval a written remedial work plan that includes corrective measures. The work plan must provide for the verification of the integrity of the pipeline and must fully address all known or suspected factors that caused or contributed to the November 5, 2009, incident including, but not limited to:
- (A) The integration of the information developed from the actions required by Item 2 with all relevant operating data and performance of a root cause analysis of the November 5, 2009, failure;
  - (B) The performance of additional field testing, inspections, and evaluations to determine whether and to what extent the conditions associated with the failure, or any other integrity-threatening conditions, are present elsewhere on the affected pipeline. Data gathering activities shall include, to the extent warranted by the root cause analysis, identification of the location, materials, and fabrication methods of saddle assemblies. To the extent warranted by the failure analysis, include consideration of an in-line inspection or hydrostatic testing. Include a detailed description of the criteria to be used for the evaluation and prioritization of any integrity threats/anomalies that are identified. Make the results of the inspections, field excavations, and evaluations available to PHMSA or its representative;
  - (C) The performance of repairs or other corrective measures that fully remediate the condition(s) associated with the pipeline failure and any other integrity-threatening condition everywhere along the affected pipeline where such conditions are identified by the evaluation process. Include a detailed description of the repair criteria and method(s) to be used in undertaking any repairs or other remedial actions;
  - (D) Provisions for continuing long-term periodic testing and integrity verification measures to ensure the ongoing safe operation of the pipeline considering the results of the analyses, inspections, and corrective measures undertaken pursuant to this Order; and
  - (E) A proposed schedule for completion of the actions required by paragraphs (A) through (D) of this Item.

4. The remedial work plan becomes incorporated into this Order and shall be revised as necessary to incorporate the results of actions undertaken pursuant to this Order and whenever necessary to incorporate new information obtained during the failure investigation and remedial activities. Submit any such plan revisions to the Director for prior approval. The Director may approve plan elements incrementally.
5. Implement the work plan as it is approved by the Director, including any revisions to the plan.
6. Submit quarterly reports to the Director that: (1) include available data and results of the testing and evaluations required by this Order; and (2) describe the progress of the repairs and other remedial actions being undertaken. The first quarterly report shall be due December 31, 2009.
7. Maintain documentation of the costs associated with implementation of this Corrective Action Order. Include in each quarterly report submitted pursuant to Item 6, the to-date total costs associated with: (1) preparation and revision of procedures, studies and analyses; (2) physical changes to pipeline infrastructure, including repairs, replacements and other modifications; and (3) environmental remediation.
8. The Director may allow the removal or modification of the pressure restriction set forth in Item 1 upon a written request from Respondent demonstrating that the hazard has been abated and that restoring the affected pipeline, or portion thereof, to its pre-failure operating pressure is justified based on a reliable engineering analysis showing that the pressure increase is safe considering all known defects, anomalies, and operating parameters of the pipeline.

The Director may grant an extension of time for compliance with any of the terms of this Order upon a written request timely submitted demonstrating good cause for an extension.

With respect to each submission that under this Order requires the approval of the Director, the Director may: (a) approve, in whole or part, the submission; (b) approve the submission on specified conditions; (c) modify the submission to cure the deficiencies; (d) disapprove in whole or in part, the submission, directing that Respondent modify the submission, or (e) any combination of the above. In the event of approval, approval upon conditions, or modification by the Director, Respondent shall proceed to take all action required by the submission as approved or modified by the Director. In the event that the Director disapproves all or any portion of the submission, Respondent shall correct all deficiencies within the time specified by the Director, and resubmit it for approval. In the event that a resubmitted item is disapproved in whole or in part, the Director may again require Respondent to correct the deficiencies in accordance with the foregoing procedure, and/or the Director may otherwise proceed to enforce the terms of this Order.

Respondent may appeal any decision of the Director to the Associate Administrator for Pipeline Safety. Decisions of the Associate Administrator shall be final.

The actions required by this Corrective Action Order are in addition to and do not waive any requirements that apply to Respondent's pipeline system under 49 C.F.R. Parts 190 through 199, under any other order issued to Respondent under authority of 49 U.S.C. chapter 601, or under any other provision of Federal or State law.

Failure to comply with this Order may result in the assessment of civil penalties and in referral to the Attorney General for appropriate relief in United States District Court pursuant to 49 U.S.C. § 60120.

The terms and conditions of this Corrective Action Order are effective upon receipt.

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Jeffrey D. Wiese  
Associate Administrator  
for Pipeline Safety

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Date Issued