



US Department  
of Transportation  
**Research and  
Special Programs  
Administration**

400 Seventh St. S.W.  
Washington D.C. 20590

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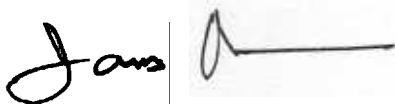
Mr. Dwayne Burton  
Senior Vice President  
Natural Gas Pipeline Company of America  
370 Van Gordon  
P.O. Box 281304  
Lakewood, CO 20228-8304

Re: CPF No. 4-2003-1008H

Dear Mr. Burton:

Enclosed is a Corrective Action Order issued by the Associate Administrator for Pipeline Safety in the above-referenced case. It requires you to take certain corrective actions, including a pressure reduction, with respect to certain portions of your 26-inch Oklahoma Extension natural gas pipeline. Service is being made by certified mail and facsimile. Your receipt of this 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.

Sincerely,

  
for | Gwendolyn M. Hill  
Pipeline Compliance Registry  
Office of Pipeline Safety

Enclosure

**VIA CERTIFIED MAIL (RETURN RECEIPT REQUESTED) AND TELECOPY**

**DEPARTMENT OF TRANSPORTATION  
RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION  
OFFICE OF PIPELINE SAFETY  
WASHINGTON, DC 20590**

**In the Matter of**

**Natural Gas Pipeline  
Company of America,**

**Respondent.**

**CPF No. 4-2003-1008H**

**CORRECTIVE ACTION ORDER**

**Purpose and Background**

This Corrective Action Order is being issued, under authority of 49 U.S.C. § 60112, to require Natural Gas Pipeline Company of America (Respondent), a subsidiary of Kinder Morgan, Inc., to take the necessary corrective action to protect the public, property, and the environment from potential hazards associated with a failure involving Respondent's Oklahoma Extension natural gas pipeline.

On August 8, 2003, a failure occurred on Respondent's Oklahoma Extension pipeline in Caddo County, OK resulting in the release of natural gas into the surrounding environment. The cause of the failure has not yet been determined. Pursuant to 49 U.S.C. § 60117, the Southwest Region, Office of Pipeline Safety (OPS) initiated an investigation of the incident.

**Preliminary Findings**

- On August 8, 2003, at approximately 12:45 P.M. CDT, Respondent's Oklahoma Extension pipeline experienced a failure in Caddo County, OK resulting in the release of an estimated 84,896 million cubic feet (MCF) of natural gas. The failure occurred at Mile Post (MP) 197 in a rural farming area approximately 1-3/4 miles east of the town of Stecker, OK. The nearest residence is located approximately 1/4 mile from the failure site.
- No fires, injuries, or fatalities were reported in connection with the incident. An evacuation zone with a 3/4 mile radius was established. Several single family homes were present in the area, one of which was occupied and its residents evacuated.

- Respondent's Oklahoma Extension pipeline transports natural gas from its origin station near the town of Fritch in Hutchinson County, Texas, across portions of southern Oklahoma, to its end station near the town of Bridgeport in Wise County, Texas. Its total length is approximately 347 miles. Portions of the pipeline are routed near populated areas and cross numerous state and local highways.
- The segment of pipeline on which the release occurred extends approximately 86 miles from Compressor Station 156 (MP 170) located near Mountain View, OK to Compressor Station 801 (MP 256) located near Ratliff City, OK.
- Following the failure, Respondent mitigated the release by shutting down the appropriate compressor stations. In addition, the nearest upstream block valve designated as Valve OE-15 and the nearest downstream block valve designated as Valve OE-16 were closed within approximately 90 minutes of the failure.
- Respondent's personnel conducted a visual examination of the failure site and reported that a 54-foot long section of pipe had blown out and landed approximately 30 feet from the ditch. The visual examination found a rupture along the length of the failed section parallel to and approximately 12 inches from the longitudinal weld seam. Respondent transported the section of pipe containing the rupture to a Kinder Morgan facility in Mountain View, OK for further evaluation.
- On August 10, 2003, Kinder Morgan's Vice President of Engineering and Technical Services contacted the OPS Southwest Regional office and informed OPS that based on the findings of its in-house metallurgist, Respondent had concluded that the cause of the failure was stress corrosion cracking. The investigation is ongoing and a final determination on the cause of the failure has not yet been made.
- There has been no pressure in the Station 156 to Station 801 pipeline segment since the incident occurred. Respondent has discontinued operation of the Station 156 to Station 801 pipeline segment until it can conduct a hydrostatic test to assess the integrity of the pipe in that segment.
- The portion of the Oklahoma Extension pipeline extending from Compressor Station 111 (MP 1) to Compressor Station 801 (MP 256) was installed in 1957 and is constructed of 26-inch nominal diameter, 0.250-inch wall thickness, Grade X-52, electric flash welded (EFW) pipe manufactured by AO Smith. It has an asphalt enamel coating and is cathodically protected by impressed current. The portion extending from Compressor Station 801 (MP 256) to Compressor Station 155 (MP 347) was installed in 2002 and is constructed of 20-inch nominal diameter pipe with a fusion bond epoxy coating.
- The maximum allowable operating pressure (MAOP) of the Oklahoma Extension pipeline is 720 psig. At the time of the failure, the actual operating pressure was reported to be 688 psig.

- The Station 156 to Station 801 segment was hydrostatically tested in 1973 to a pressure of 965 psig. An internal inspection was performed on the entire 26-inch portion of the pipeline with a magnetic flux leakage in-line inspection tool in 1995. OPS does not have information on the results from this internal inspection.

#### 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, provides 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 result in likely 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 the continued operation of Respondent's 26-inch Oklahoma Extension natural gas pipeline without corrective measures would be hazardous to life, property and the environment. Additionally, after considering the age of the pipe, the proximity of the pipeline to populated areas, the highly combustible nature of the product the pipeline transports, the pressure required for transporting the material, and the ongoing investigation to determine the cause of the failure, I find that a failure to expeditiously issue this Order requiring immediate corrective action would likely result in 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, delivered personally, by mail or by telecopy at (202) 366-4566. The hearing will be held in Houston, TX or Washington, DC on a date that is mutually convenient to OPS and Respondent.

After receiving and analyzing additional data in the course of this investigation, OPS 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 Natural Gas Pipeline Company of America to immediately take the following corrective actions with respect to the portion of its Oklahoma Extension natural gas pipeline extending from Compressor Station 111 (MP 1) to Compressor Station 801 (MP 256):

1. The operating pressure on the portion of the Oklahoma Extension pipeline extending from Compressor Station 111 (MP 1) to Compressor Station 801 (MP 256) is not to exceed 80 percent (80%) of the actual operating pressure in effect just prior to the August 8, 2003 failure. Specifically, the pressure is not to exceed 550 psig. Reset the discharge pressure settings on the compressor stations associated with this portion of the pipeline and reset any emergency pressure relief or limiting devices as appropriate. 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, OPS.
2. Within 7 days of receipt of this Order, submit a protocol for mechanical and metallurgical testing of the 54-foot long failed section of pipe to the Director, Southwest Region, OPS for prior approval. Provide the Director with the date scheduled for this testing, which OPS may elect to witness. Conduct all mechanical and metallurgical testing of the failed pipe section per the approved protocol. Submit the metallurgical report to the Director within 7 days of receiving it from the metallurgist.
3. Re-evaluate the 1995 internal inspection results for the pipe in the vicinity of the failure site for the purpose of determining whether any anomalies were present that could have contributed to the failure. If any such anomalies are present, re-evaluate the 1995 internal inspection results for the remainder of the portion of the pipeline extending from Compressor Station 111 (MP 1) to Compressor Station 801 (MP 256) for the purpose of identifying similar anomalies. If no such anomalies are present in the data, provide an assessment of whether the type of internal inspection tool used in 1995 was capable of detecting the condition associated with the failure, and if not, whether such a tool is currently available.
4. Within 30 days of receipt of this Order, develop and submit a written plan with corrective measures for prior approval by the Director, Southwest Region, OPS. The plan must provide for the verification of the safety and integrity of the 26-inch portion of the Oklahoma Extension pipeline, must address all known or suspected factors in the August 8, 2003 failure, and must include:
  - A. The integration of available operational data from metallurgical testing, hydrostatic testing, internal inspections, previous failure analyses, leak history, repair records, corrosion control

records, changes in pressure cycling, and other historical data on the 26-inch portion of the Oklahoma Extension pipeline for the purpose of performing a comprehensive failure analysis of the condition(s) causing or contributing to the August 8, 2003 release and identifying any system integrity threatening trends;

B. The performance of appropriate testing, surveys, and evaluations to determine the extent to which the condition(s) associated with the failure, or other integrity threats, are present in the remainder of the 26-inch portion of the pipeline. Include a description of the tools and methods that will be used in the evaluation, and the risk assessment criteria that will be used for the prioritization of any integrity threatening conditions that are identified;

C. The performance of appropriate repairs or other corrective measures fully remediating the integrity threatening condition(s) associated with the failure at every location on the pipeline where such conditions are identified by the evaluation process. Include a description of the repair criteria and methods that will be used in undertaking any corrective measures;

D. A proposed schedule for completion of the testing and repairs.

5. Submit the plan to: Director, Southwest Region, Office of Pipeline Safety, 2320 LaBranch Street, Suite 2100, Houston, TX 77004. The plan must be revised as necessary to incorporate new information obtained during the investigation, assessment, and failure analysis actions required by this Order. Submit such plan revisions to the Director for prior approval. The Director may approve plan elements incrementally. Implement the plan as approved, including any revisions to the plan.
6. The Director, Southwest Region, OPS 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 pipeline to its pre-failure operating pressure is justified based on a reliable engineering analysis showing that such operation would be safe considering all known defects, anomalies and operating parameters of the pipeline.
7. The Director, Southwest Region, OPS may grant an extension of time for compliance with any of the terms of this Order for good cause. A request for an extension must be in writing.
8. The corrective actions required by this Corrective Action Order are in addition to and do not waive any requirements that apply to the Oklahoma Extension pipeline under 49 C.F.R. Part 192. Any hydrostatic testing conducted to address the condition associated with the failure will not be considered as a basis for an increase in the MAOP of the Oklahoma Extension pipeline or any portion thereof.

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

Failure to comply with this Order may result in the assessment of civil penalties of not more than \$100,000 per day and in referral to the Attorney General for appropriate relief in United States District Court.



Stacey Gerard  
Associate Administrator  
for Pipeline Safety

AUG 19 2003

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Date Issued