



U.S. Department
of Transportation

**Research and
Special Programs
Administration**

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

MAR 29 2004

Mr. Dwayne Burton
Vice President - Gas Operations and Engineering
Natural Gas Pipeline Company of America (KMI)
One Allen Center
500 Dallas Street, Suite 1000
Houston, TX 77002

Re: CPF No. 3-2004-1005H

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 with respect to the portion of your 36-inch natural gas pipeline designated as Line No. 3 running from Compressor Station 105 near Glasco, KS to Compressor Station 106 near Beatrice, NE. 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.

Sincerely,

James Reynolds
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 (KMI))	CPF No. 3-2004-1005H
Respondent.)	

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 (KMI) (Respondent) to take the necessary corrective action to protect the public, property, and the environment from potential hazards associated with a failure involving Respondent's 36-inch natural gas pipeline designated as Line No. 3 running from Compressor Station 105 near Glasgo, KS to Compressor Station 106 near Beatrice, NE (hereinafter, "the affected segment").

On March 20, 2004, a failure occurred on the affected segment in Washington County, KS resulting in the release of natural gas. The cause of the failure has not yet been determined. Pursuant to 49 U.S.C. § 60117, the Central Region, Office of Pipeline Safety (OPS) initiated an investigation of the incident.

Preliminary Findings

- On March 20, 2004 at approximately 9:22 A.M. CST, the affected segment experienced a failure in Washington County, KS resulting in the release of an estimated 38,511 Mcf of natural gas which ignited.
- The failure occurred at Mile Post (MP) 416.5 in a rural area approximately 3 ½ miles southwest of the town of Haddam, KS. The failure site is approximately ½ mile south of U.S. Highway 36 and ½ mile west of Concord Road. The nearest residence is located approximately ¾ of a mile from the failure site.
- No injuries, fatalities, or evacuations were reported in connection with the incident.

- Following the failure, the pipeline system's automatic line-break controls closed the upstream and downstream mainline valves at MPs 416 and 444, respectively, and isolated the section of pipe on which the failure occurred.
- The cause of the failure has not yet been determined. A representative of OPS conducted a preliminary visual examination at the failure site and reported that the pipe was fractured in two locations approximately 25 feet apart and that one of the fractures contained a circumferential gouge-like deformation. Respondent removed the sections of pipe containing the fractures and transported them to a metallurgist for detailed analysis under OPS oversight.
- The affected segment is 123 miles in length and was installed in 1958. It is constructed of 36-inch nominal diameter, 0.344-inch wall thickness, Grade X-52, electric flash welded pipe manufactured by A.O. Smith Corp. The pipe has an asphalt enamel coating and is cathodically protected by impressed current. Two other gas pipelines, one 26-inch and one 36-inch, run parallel to the subject pipeline.
- The maximum allowable operating pressure (MAOP) of the affected segment is 712 pounds per square inch gauge (psig). At the time and location of the failure, the actual operating pressure was 689 psig.
- The affected segment was hydrostatically tested in 1981 to a pressure of 928 psig at the failure location.

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 the portion of Respondent's 36-inch natural gas pipeline designated as Line No. 3 running from Compressor Station 105 near Glasco, KS to Compressor Station 106 near Beatrice, NE 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 highways and populated areas, the

combustible nature of the products 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 Kansas City, MO 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 (KMI) to immediately take the following corrective actions with respect to the portion of its 36-inch natural gas pipeline designated as Line No. 3 running from Compressor Station 105 near Glasco, KS to Compressor Station 106 near Beatrice, NE:

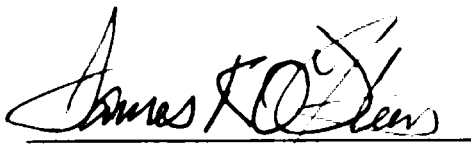
1. Conduct mechanical and metallurgical testing of the failed pipe sections as follows:
 - (A) Collect, catalog, and seal the pipe and all other evidence in the presence of OPS or an OPS representative and document the chain-of-custody;
 - (B) Obtain prior approval of the metallurgical testing laboratory to be used, as well as the testing protocol, from the Director, Central Region, OPS;
 - (C) Prior to commencing the metallurgical testing, provide the Director, Central Region, OPS with the scheduled date, time, and location of the testing to allow an OPS representative to witness it;
 - (D) Ensure that the laboratory distributes all resulting metallurgical reports, whether draft or final, to OPS at the same time as they are made available to Respondent.

2. Within 30 days of receipt of this Order, perform a finite element stress analysis or other appropriate engineering analysis on the pipe in the vicinity of the failure site to replicate and analyze the failure sequence and to evaluate the stresses on the segment prior to the failure. Make the results of this analysis available for review by OPS or its representative.
3. Within 30 days of receipt of this Order, develop and submit a written plan with corrective measures for prior approval by the Director, Central Region, OPS. The plan must fully address all known or suspected factors that caused or contributed to the March 20, 2004 failure and must include:
 - (A) The integration of the information developed from the actions required by Items 1 and 2, along with any relevant information from previous failure investigations, leak history, repair records, corrosion control records, in-line inspections, hydrostatic testing, changes in pressure cycling, and other relevant operating data for the purpose of performing a comprehensive analysis of all factors that caused or contributed to the March 20, 2004 failure;
 - (B) The performance of appropriate field testing, inspections, and evaluations to determine whether and to what extent the condition(s) associated with the failure, or other integrity threatening trends, are present along the remainder of the affected segment. This must include, but is not limited to, an internal inspection with a multi-channel caliper tool designed to locate and characterize any pipe deformations. Include a description of the tools and methods to be used in any field evaluations and the criteria to be used for the prioritization of any integrity threats that are identified. Make the results of any field evaluations available to OPS or its representative;
 - (C) The performance of appropriate repairs or other corrective measures fully remediating the integrity threatening condition(s) associated with the failure everywhere along the affected segment where such conditions are identified by the evaluation process. Include a description of the repair method(s) to be used in undertaking any repairs or other remedial actions; and
 - (D) A proposed schedule for completion of the testing and repairs.
4. Submit the plan to: Director, Central Region, Office of Pipeline Safety, 901 Locust Street, Suite 462, Kansas City, MO 64106-2641. The plan must be revised as necessary to incorporate new information obtained during the failure investigation and remedial activities undertaken pursuant to this Order. Submit any such plan revisions to the Director for prior approval. The Director may approve plan elements incrementally.
5. Implement the plan as it is approved, including any revisions to the plan.
6. The Director, Central 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.

The corrective actions required by this Corrective Action Order are in addition to and do not waive any requirements that apply to the pipeline under 49 C.F.R. Part 192, including the integrity management program regulations.

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

MAR 23 2004

Date Issued