



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety Administration**

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

AUG - 4 2006

Mr. Michel Nelson
Senior Vice President, Operations
ONEOK Partners, L.P.
100 West 5th Street
Tulsa, OK 74103-4240

Re: CPF No. 3-2006-1015H

Dear Mr. Nelson:

Enclosed is a Corrective Action Order issued by the Acting Associate Administrator for Pipeline Safety in the above-referenced case. It requires you to take certain corrective actions on the portion of your 24-inch Viking gas transmission pipeline running from the US-Canadian border to Marshfield, Wisconsin, including a pressure reduction on the segment running from the Osceola compressor station to the Chippewa Falls compressor station. 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

cc: Ivan A. Huntoon
Director, Central Region, OPS

VIA CERTIFIED MAIL (RETURN RECEIPT REQUESTED) AND FACSIMILE

**DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION
WASHINGTON, DC 20590**

In the Matter of)
)
Viking Gas Transmission)
Company,)
)
Respondent.)
)

CPF No. 3-2006-1015H

CORRECTIVE ACTION ORDER

Purpose and Background

This Corrective Action Order is being issued, under authority of 49 U.S.C. § 60112, to require Viking Gas Transmission Company (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 gas transmission pipeline.

On July 26, 2006, a failure occurred on Respondent's 24-inch gas transmission pipeline in Polk County, Wisconsin 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 Pipeline and Hazardous Materials Safety Administration, Office of Pipeline Safety (OPS) initiated an investigation of the incident.

Preliminary Findings

- At approximately 9:00 a.m. CDT on July 26, 2006, a landowner notified Respondent's personnel of a natural gas leak in the vicinity of a rural driveway. At approximately 11:35 a.m., Respondent shut down the nearest upstream and downstream compressor stations. At approximately 11:45 a.m., Respondent isolated the failed pipe section by closing the nearest upstream and downstream mainline valves.
- The failure site was identified in valve section 2222-1 at Mile Post (MP) 16.2, approximately 9 miles south of the town of Amery, Wisconsin. Respondent estimates that approximately 35,500 million cubic feet (mcf) of gas was released during blowdown of the pipe section to accomplish repairs. Three homes within 1000 feet of the failure site were evacuated and County Road H was closed as a result of the incident. No fires, injuries, or fatalities were reported in connection with the incident.

- Respondent's gas transmission pipeline is approximately 672 miles long and transports natural gas from the U.S.-Canadian border near Emerson, Minnesota in a southeasterly direction to Marshfield, Wisconsin. The segment of the line on which the failure occurred is approximately 60 miles long and runs from Osceola, Wisconsin to Chippewa Falls, Wisconsin. This segment traverses Class 1, 2, and 3 populated areas in Polk, St. Croix, Dunn, and Chippewa counties and portions of the line cross various public roads including U.S. Highway 63.
- The cause of the failure has not yet been determined. Respondent conducted a preliminary visual examination at the failure site and reported that an axial crack approximately 3 ½ inches long was identified at approximately the 11 o'clock position on the pipe and three additional small non-leaking crack fields were identified in adjacent pipe. The axial crack and the crack fields are indicative of stress corrosion cracking. The Respondent removed a 50-foot section of pipe containing the failure origin for transport to a metallurgist for detailed analysis. The line was returned to limited service on July 30, 2006 at a reduced pressure of 684 pounds per square inch gauge (psig).
- The segment of Respondent's pipeline containing the failure was installed in 1960 and is constructed of 24-inch diameter, 0.281-inch wall thickness, Grade X-52, seamed pipe manufactured by Republic. It has a tape coating and is cathodically protected by impressed current.
- The maximum allowable operating pressure (MAOP) of the pipeline is 877 psig as established by design. At the time of the failure, the actual operating pressure was approximately 816 psig.
- The pipeline segment containing the failure was internally inspected in 2001 with a high-resolution magnetic flux leakage tool. Respondent reported that the closest anomaly identified was 825 feet from the failure site.
- In 1995, a failure occurred on the pipeline approximately 6 miles south of the U.S.-Canadian border. Subsequent hydrostatic testing resulted in test failures that were attributed to high pH stress corrosion cracking. As a result, approximately 4.6 miles of pipe was eventually replaced in this area.

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 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 the continued operation of Respondent's gas transmission pipeline without corrective measures would be hazardous to life, property and the environment. Additionally, after considering the age of the pipe, its leak history, the proximity of portions of the pipeline to populated areas and public highways, the nature of the product the pipeline transports, the pressure required for transporting the product, 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 facsimile at (202) 366-4566. The hearing will be held in Kansas City, Missouri 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 Viking Gas Transmission Company to immediately take the following corrective actions with respect to its 24-inch gas transmission pipeline:

1. The operating pressure on the line segment running from Osceola to Chippewa Falls is not to exceed 80 percent of the operating pressure in effect immediately prior to the July 26, 2006 failure. Specifically, the operating pressure at Black Brook Meter Station

(approximately 2 miles upstream of the failure site) is not to exceed 652 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, Central Region, OPS. If the results of any action undertaken pursuant to this Order dictate a reduction in the allowable operating pressure below that imposed by this Order, Respondent must further reduce the operating pressure accordingly.

2. Conduct testing and failure analysis of the failed pipe section as follows:
 - (A) When handling and transporting the failed pipe section and any other evidence from the failure site, document the chain-of-custody;
 - (B) Obtain prior approval of the metallurgical 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; and
 - (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.
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 failure and must include, as applicable:
 - (A) The integration of the information developed from the actions required by Item 2 with any relevant information from previous failure investigations, leak history, repair records, corrosion control/cathodic protection records, in-line inspections, hydrostatic testing, changes in pressure cycling, and other relevant operating data for the purpose of performing a comprehensive analysis of the available information associated with the factors that caused or contributed to the failure;
 - (B) The performance of appropriate 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 along the remainder of the pipeline. The field testing must include but is not limited to:
 - (i) hydrostatic testing of the first two valve sections downstream of the Osceola compressor station, including detailed metallurgical testing of any hydrostatic test failures

that occur. The hydrostatic testing plan must include consideration of a “spike” test to 1.39 times MAOP (100% SMYS); and

(ii) a stress corrosion cracking susceptibility evaluation for the entire Viking pipeline that includes, but is not limited to, consideration of the line’s operating history, construction, coating type, results of previous inspections, metallurgy and tests, and soil types.

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 OPS or its representative;

(C) The performance of appropriate repairs or other corrective measures fully remediating the condition(s) associated with the failure everywhere along the Viking pipeline where such conditions, or any other integrity threatening 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; and

(D) A proposed schedule for completion of the testing, evaluation, and repairs required by paragraphs (A)-(C).

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. Submit quarterly reports to the Director, Central Region, OPS that: (1) include the available data and results of the testing and evaluations required by this Order; and (2) describe the progress of the repairs or other remedial actions being undertaken.
7. The Director, Central 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 the pressure increase is safe considering all known defects, anomalies and operating parameters of the pipeline.

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 any other order issued to Respondent under authority of 49 U.S.C. chapter 601, under 49 C.F.R. Part 192, or under any other provision of Federal or state law.

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 administrative civil penalties of up to \$100,000 per violation per day pursuant to 49 U.S.C. 60122, and in referral to the Attorney General for imposition of civil judicial penalties or other appropriate relief in United States District Court pursuant to 49 U.S.C. 60120.



Theodore L. Willke
Acting Associate Administrator
for Pipeline Safety

AUG - 4 2006

Date Issued