



U.S. Department  
of Transportation

**Research and  
Special Programs  
Administration**

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

MAR 28 2002

Mr. James M. Elkouri, Vice-President  
Operations and Engineering  
Great Lakes Gas Transmission Company  
5250 Corporate Drive  
Troy, MI 48098

Re: Great Lakes Gas Transmission Company CPF No. 3-2002-1003-H

Dear Mr. Elkouri:

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 operation of your pipeline.

Service is being made by certified mail and facsimile. Your receipt of the enclosed document constitutes service of that document. The terms and conditions of this Corrective Action Order are effective upon receipt.

Sincerely,

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  
WASHINGTON, DC 20590

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In the Matter of )  
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Great Lakes Gas Transmission Company )

Respondent. )  
\_\_\_\_\_ )

CPF No. 3-2002-1003-H

**CORRECTIVE ACTION ORDER**

**Purpose and Background**

This Corrective Action Order is being issued, under authority of 49 U.S.C. § 60112, to require Great Lakes Gas Transmission Company (Respondent) to take the necessary corrective action to protect the public and environment from potential hazards associated with Respondent's 36-inch 100 Line which extends from Compressor Station #8 in Iron County, Michigan to Mainline Valve (MLV) 8-2 in Dickinson County, Michigan. Pursuant to 49 U.S.C. § 60117, the Central Region, Office of Pipeline Safety (OPS), assisted by the Michigan Public Service Commission (MPSC) acting as agent, initiated an investigation of the failure.

**Preliminary Findings**

- On March 15, 2002, a failure occurred in Respondent's 36-inch 100 Line near Crystal Falls, Michigan in Iron County which is located in the upper peninsula of Michigan.
- The failure resulted in a release of gas, which did not ignite, that created a crater 30 feet deep, 30 feet wide, and 120 feet long. There were no deaths or injuries.
- Following the failure, Respondent isolated the section of pipeline at the site of the failure (MP 495) by closing remotely operated valves at Compressor Station #8 (MP 487), at Compressor Station #9 (MP 562), and a mainline valve at MP 504. Following evaluation of pipe integrity information, they returned the 100 Line to service, bypassing the failed section from Station 8 to MLV 8-1 at MP 504.
- At the request of OPS, Respondent has additionally, isolated the 100 Line between MLV 8-1 and MLV 8-2 and will maintain the pressure in this line section at a maximum pressure of 750 psig.

- Respondent also shut down the 36-inch 200 Line which lies about 25 feet from the 100 Line. After examining the 200 Line and determining that it did not sustain damage from the failure to the 100 Line, Respondent returned the 200 Line to operation.
- Two sections of the pipe that failed, one 70 feet in length and the other 10 feet, have been located. There is no obvious cause of the failure.
- Respondent has contracted with Kiefner and Associates to examine the failed pipeline and to assist in the determination of the cause. Selected segments of the failed sections have been sent to a laboratory for further examination.
- The maximum allowable operating pressure (MAOP) of the 100 Line is 974 psig. The pressure at Compressor Station #8 at the time of failure was reported by Respondent to have been at or near the MAOP.
- The segment of the 100 Line that failed is 36-inch diameter, .375-inch thick, X-65, double-submerged arc weld steel pipe manufactured by Bethlehem Steel. It was installed in 1968.
- The 100 Line was last pressure tested at the time of construction.
- Respondent ran a high resolution, magnetic flux leakage, internal inspection tool in this line segment in mid-2001. OPS has not yet reviewed the results of the internal inspection, but Respondent has informed OPS that it still has further digs and repairs to complete.
- The 100 Line is an interstate, natural gas, transmission line. It is part of a system that transports natural gas from Canada through northern Minnesota to Wisconsin, and Michigan. It delivers natural gas to customers in Canada and each of these three states.
- There are two Class 2 areas along the pipeline in the Crystal Falls area and a nursing home or hospital within a thousand feet of the pipeline at another site. Other potential public exposure areas include road crossings and a snow mobile path in the vicinity of the failure site. In addition, although discouraged by Respondent, snowmobilers use the pipeline right-of-way.

#### **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 100 Line between Compressor Station #8 and MLV 8-2 without corrective measures would be hazardous to life, property and the environment. Additionally, after considering the lack of apparent cause of the failure, the continued existence in the line of unexamined anomalies from a 2001 internal inspection, the proximity of the pipeline to populated areas, public roads, and areas used for outdoor recreation, the characteristics of natural gas, the pressure required for transporting the material, and the size of the line, I find that a failure to issue expeditiously this Order, requiring immediate corrective action, would result in likely serious harm to life, property, and the environment.

Accordingly, this Corrective Action Order mandating needed 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, 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 Respondent to immediately take the following corrective actions with respect to its 36-inch 100 Line:

1. Shut down the 36-inch 100 Line between Compressor Station #8 and Mainline Valve (MLV) 8-2 at MP 519.7.
  - a) Isolate the 36-inch 100 Line from MLV 8-1 to MLV 8-2 and restrict the operating pressure on the segment to 750 psig.
  - b) Maintain the blown-down and out-of-service status of the 36-inch 100 Line from Compressor Station #8 to MLV 8-1 until such time as appropriate remedial actions have been completed in accordance with the requirements below. This section of pipeline may not return to service without the written consent of the Central Regional Director.

2. Conduct a detailed metallurgical analysis of the pipe that failed on March 15, 2002 to determine the cause and contributing factors. Submit a copy of the report of this analysis to the Central Regional Director, OPS, within one week of your receipt of the report.
3. Within 2 weeks, provide the Central Regional Director with a report of the results of the 2001 internal inspection, including the identification (and location) of any anomalies that remain in the 100 Line that have not yet been evaluated or repaired and the criteria used for classifying the anomalies for evaluation. Include your schedule for completing the evaluation and repair of these anomalies.
4. Respondent may request approval from the Central Regional Director, to increase its operating pressure above the restricted operating pressure provided for under Item 1. The Central Regional Director's determination will be based on the cause of failure and provision of evidence that mitigation actions taken by the operator provide for the safe operation of the pipeline. Satisfactory completion of corrective measures under a plan approved under item 5 will be deemed sufficient basis to support a return of the operating pressure to that allowed prior to the March 15, 2002 failure. Appeals to determinations of the Central Regional Director in this regard will be subject to the decision of the Associate Administrator for Pipeline Safety.
5. In order to support a request under Item 4 for approval of a return to pre-failure operating pressure, Respondent must submit a written plan to verify the integrity of the 100 Line between Compressor Station #8 and MLV 8-2. This plan must include any evaluation, testing, repairs, or other remedial action necessary to verify the integrity of the segment as well as a schedule for completion of these actions. The Central Regional Director may approve the plan and its completion incrementally.
6. The Central Regional Director 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 procedures for the issuance of this Order are described in Part 190, Title 49, Code of Federal Regulations, § 190.233, a copy of which is enclosed, is made part of this Order and describe the Respondents' procedural rights relative to this Order.

Failure to comply with this Order may result in the assessment of civil penalties of not more than \$25,000 per day and in referral to the Attorney General for appropriate relief in United States District Court.

  
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Stacey Gerard  
Associate Administrator  
for Pipeline Safety

MAR 28 2002

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Date Issued