



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

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

NOV - 6 2003

Mr. Greg Bilinski
Vice-President
Texas Eastern Transmission Corporation
5400 Westheimer Court
Houston, TX 77056

Re: CPF No. 2-2003-1018-H

Dear Mr. Bilinski:

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 Line 15, a 30-inch pipeline, on your Kosciusko System in Kentucky.

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,

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, D.C. 20590**

In the Matter of)

Texas Eastern Transmission Corporation)

Respondent.)

CPF No. 2 -2003-1018-H

CORRECTIVE ACTION ORDER

Purpose and Background

This Corrective Action Order is being issued, under authority of 49 U.S.C. § 60112, to require Texas Eastern Transmission Corporation (Respondent) to take the necessary corrective action to protect the public and environment from hazards associated with Line 15, a 30-inch pipeline on Respondent's Kosciusko System (Line 15) which extends from Danville, KY to Owingsville, Kentucky in Bath County. Pursuant to 49 U.S.C. § 60117, the Southern Region, Office of Pipeline Safety (OPS), initiated an investigation of the failure.

Preliminary Findings

- On November 2, 2003, at approximately 4:25 a.m. EST, Respondent's 30-inch diameter pipeline, Line 15 ruptured near Moorehead, Kentucky resulting in the release of approximately 167,100 mcf of natural gas which ignited. The fire was extinguished at approximately 5:20 a.m. EST.
- The failure site is located at Mile Post 501.72 (MP 501.72) between the Danville and Owingsville Compressor Stations, approximately one mile south of Owingsville, KY and 3/4 of a mile from Highway 194.
- No fatalities or injuries occurred. The nearest residence is 3/4 of a mile from the failure site.
- Following the failure, Respondent isolated the pipeline at the site of the failure (MP 501.72) by closing upstream main line valve (MLV) at MP 491.84 and downstream gate valve #15-479. The upstream MLV is approximately 10 miles from the Owingsville Compressor Station MP 502.62 and the downstream gate valve is located at the Owingsville Compressor Station.

- Respondent has two additional lines in the same right-of-way (ROW), Line 10 and Line 25. The ROW is 100 feet in width. Line 10 is 30-inches in diameter and lies twenty five feet from Line 15. Line 25 is 36 inches in diameter lies about fifty feet from Line 15. At the time of the failure, the three parallel lines, Line 10, Line 15, and Line 25, were operating at 907 psi.
- After excavating and examining Line 10, the determination was made that the line did not sustain damage from the rupture of Line 15. Line 25 was fifty feet away from the affected heat zone. Respondent returned Line 10 and Line 25 to operation at 824 psi.
- The preliminary investigation, initiated on November 2, 2003, points to material defect in the manufacturing process, midwall lamination or hard spots, as the probable cause of the failure. A lamination is a defect that occurred during the manufacturing of the pipe at the steel mill. A hard spot indicates local changes in hardness of the steel in the pipe resulting from nonuniform quenching procedures during the manufacture of the pipe. Hard spots when stressed, are subject to failure. Once the failure began it continued to fail in a brittle mode. There is no indication of external corrosion, internal corrosion, third party damage or stress corrosion cracking as possible causes of the failure. The section of pipe that failed is approximately 1350 feet in length.
- On November 4, 2003, segments of the failed pipeline were transported to Kiefner and Associates for examination and to assist in the determination of the cause. The cause of the failure is still under investigation.
- The maximum allowable operating pressure (MAOP) of the Line 15 is 1000 psig (77% of SMYS). The pressure at the Owingsville Compressor Station MP 502.62 at the time of failure was 906 psi (69.7% of SMYS).
- The segment of the Line 15 that failed is 30-inch, .375-inch wt, 5LX-52, flash weld pipe manufactured by A.O. Smith. It was installed in 1957 and has a coal tar enamel external coating.
- From the Danville Compressor Station to the Owingsville Compressor Station is 75.1 miles of 30-inch pipe, of which 10.78 miles is pipe manufactured by A.O. Smith. The A.O. Smith pipe lies between MLV15-469 and MLV 15-479.
- The failure site is located within the last 1.6 miles of A.O. Smith pipe, upstream of the Owingsville Compressor Station. The remaining pipe is manufactured by Republic Steel.
- Line 15 was last hydrostatic pressure tested when it was installed in 1957, at 1243 psi for twenty-four (24) hours.

- Respondent ran an internal inspection tool on this segment of Line 15 in 1986 and in 1999. Respondent has informed OPS that a review of the results of the 1999 in-line inspection report did not reveal the manufacturing defect that is likely the cause of the failure.
- On February 21, 1986, a failure occurred on Line 15 in the first valve section on the discharge side of the Danville Compressor Station. The failure was attributed to external corrosion.
- A close interval survey was conducted in 1986.
- Line 15 is an interstate, natural gas, transmission line. It is part of the Kosciusko system that transports natural gas from northeast Mississippi across the northeastern corner of Alabama into Tennessee, and continues in a northeasterly direction through eastern Kentucky passing through Danville and Owingsville, KY on into southeast Ohio, and terminates in eastern Pennsylvania, near Uniontown, PA.
- Although Line 15 is routed through predominantly Class 1 locations, it passes within 1 mile or less of a residential area. The 75.1 mile segment, between the Danville and Owingsville Compressor Stations, has one Class 3 location. Other potential public exposure areas include County Road SSR 1602, Highway 194, road crossings and highways. Line 15 passes numerous small communities, as well as crossing numerous public roadways, rivers, streams from northeast Mississippi to Uniontown, PA.
- The affected line segment is currently out of service.

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 segments of A.O. Smith pipe on Line 15 from northeast Mississippi to Uniontown, Pennsylvania without corrective measures would be hazardous to life, property and the environment.

Additionally, after considering the lack of apparent cause of the failure, safety concerns about the integrity of the line, proximity of the pipeline to populated areas, rivers and streams, public roads, 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 Atlanta, GA or Washington, D.C. 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 30-inch, Line 15 from northeast Mississippi to Uniontown, Pennsylvania:

1. Maintain the out-of-service status of the affected line segment on Line 15 between the MLV (MP 491.84) and the Owingsville Compressor Station (MP 502.62).
 - a) The affected segment from the MLV at MP 491.84 to Owingsville Compressor Station (MP 502.62), is to remain isolated from regular operation. Pressure within this isolated segment is not to exceed 50 psig. This restriction shall remain in place until written approval, pursuant to Items 2 through 5, is received from the Director Southern Region.
 - b) This section of pipeline may not return to service without the written consent of the Director, Southern Region.
2. Conduct a detailed metallurgical analysis of the pipe that failed on November 2, 2003 to determine the cause and contributing factors for the failure. Submit the testing protocol for the failed pipe to the Director, Southern Region as soon as it is developed. Submit each report of the failure analysis to the Director, Southern Region, OPS, within one week of your receipt of the report.

Submit a written plan within 30 days of receipt of this Order, with a schedule for completion, to verify the integrity of the affected segment from the MLV at MP 491.84 to Owingsville Compressor Station (MP 502.62). The plan must address and provide integrity testing that addresses all known or suspected factors in the November 2, 2003 failure. The Director, Southern Region, OPS may approve the plan and its completion incrementally. The plan may be revised to incorporate new information obtained during the investigation.

Respondent may request approval from the Director, Southern Region, OPS to return to service by submitting a return to service plan that includes the final results of all testing and activities conducted. The Regional Director's determination will be based upon the satisfactory completion of Items 2 through 5 of this Order.

Respondent may request approval from the Director, Southern Region, OPS to increase its operating pressure above the restricted operating pressure provided for under Item 1. The Regional Director's determination will be based on the cause of failure and provision of evidence that mitigative actions taken by the operator provide for the safe operation of the pipeline. Satisfactory completion of corrective measures under a plan approved under Item 4 will be deemed sufficient basis to support a return of the operating pressure to 80 percent (80%) of that allowed prior to the November 2, 2003 failure. Appeals to determinations of the Director, Southern Region, OPS in this regard will be subject to the decision of the Associate Administrator for Pipeline Safety.


6. The Director, Southern 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.

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

The actions required by this Order are in addition to and do not waive any requirements that apply to the affected segment under 49 CFR Part 195, including the integrity management program regulations.

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 \$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

NOV - 6 2003

Date Issued