



US Department  
of Transportation

**Research and  
Special Programs  
Administration**

400 Seventh St S W  
Washington D C 20590

A

MAR 24 2003

Mr. Mike J. Brenk  
President  
Dixie Pipeline Company  
1117 Perimeter Center West  
Suite West 301  
Atlanta, GA 30338

Re: CPF No. 2-2003-5002H

Dear Mr. Brenk:

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 8-inch pipeline, which extends from Milner, Georgia to Cheraw, South Carolina. 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 Final 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  
OFFICE OF PIPELINE SAFETY  
WASHINGTON, DC 20590

\_\_\_\_\_  
In the Matter of )

DIXIE PIPELINE COMPANY, )

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

CPF No. 2-2003-5002H

**CORRECTIVE ACTION ORDER**

**Purpose and Background**

This Corrective Action Order is being issued, under authority of 49 U.S.C. § 60112, to require Dixie Pipeline Company (Dixie) to take the necessary corrective action to protect the public and environment from potential hazards associated with its 8-inch pipeline, which extends from Milner, Georgia to Cheraw, South Carolina (hereinafter referred to as the Milner-Cheraw Line).

On March 13, 2003, a segment of Dixie's 8-inch Milner-Cheraw Line failed near Appling, GA, resulting in the release of more than 1581 barrels of propane.

Pursuant to 49 U.S.C. § 60117, the Southern Region, OPS initiated an investigation of this failure.

**Preliminary Findings**

1. At approximately 8:00 p.m. EST, on March 13, 2003, a segment of Dixie's Milner-Cheraw 8-inch Line failed, resulting in the release of more than 1581 barrels of propane. The failure at Mile Post 834.96 (MP 834.96), occurred in an open field, approximately 3.16 miles downstream from the Appling, Georgia pump station (MP 831.8).
2. No injuries or fatalities occurred.

3. The Milner-Cheraw Line passes through 14.5 miles of highly populated areas in addition to 2.9 miles of other populated areas designated as High Consequence Areas (HCA). The Milner-Cheraw Line is also routed through rural areas of Georgia and South Carolina. The pipeline also passes through numerous large and small communities along the route as well as crossing numerous state and interstate highways, rivers, and streams.
4. The Milner-Cheraw Line transports liquid propane gas, a highly volatile liquid. Highly volatile liquids form a vapor cloud when released into the atmosphere and have vapor pressures exceeding 40 psia at 100°F. The vapor clouds generated by propane will stay close to the ground and follow the terrain accumulating in the low areas, such as the ditches along a highway, valleys and streams.
5. The Milner-Cheraw pipeline was installed in 1961 and is constructed of 8-inch x 0.188-inch w.t., API 5L-X52, high frequency ERW(electric resistance welded) pipe manufactured by Stupp Corporation. The protective coating is coal tar enamel (TGF-2).
6. On March 14 and 15, 2003, a preliminary investigation was conducted that indicated the failure may have initiated in the longitudinal seam of a 47-foot single pipe joint. The rupture appeared to have propagated down the longitudinal seam. The length of the fracture was approximately 6 to 8 feet. The upstream end of the rupture arrested at the first girth weld. The downstream end of the rupture arrested in the pipe body. The failed pipe segments have been sent to a metallurgical laboratory for further analysis.
7. The cause of the failure could not be determined by examination at the site. The investigation is ongoing.
8. At the time of the incident, discharge pressure at the upstream Appling Pump Station (MP831.8) was 1437 psig. Pressure at the failure site (MP 834.96) was 1354 psig. The maximum operating pressure (MOP) of this line segment ranges from 1445 to 1480 psig.
9. Following the March 13, 2003 failure, Dixie's personnel isolated the segment of pipeline involved in the failure by closing the upstream mainline valve at Appling Pump Station (MP 831.8) and the downstream valve at Motor Operated Mainline Valve (MP842.24). The upstream valve is located approximately 3.16 miles from the failure site. The downstream valve is located approximately 7.28 miles from the failure site.
10. On March 17, 2003, Respondent restarted the Milner-Cheraw Line with a 20% pressure reduction from the calculated MOP. The reduction in pressure includes the Milner, Jackson, Eatenton, White Paint, Norwood, Appling, Trenton, Batesburg, Lexington, Camden, and Bethune pump stations. The failure site is approximately 119.96 miles northeast of the Milner Pump Station (MP 715) and approximately 133.24 miles southwest of the Bethune Pump Station (MP 968.2).

11. In 1989, Respondent internally inspected the failed line section using a Tuboscope Low-Resolution Magnetic Flux Leakage inspection tool, to address integrity concerns. According to the computer enhanced report, there were no graded anomalies identified at the failure site by the tool.
12. The Milner-Cheraw pipeline was last pressure tested on April 26, 1991 at pressures ranging from eighty-percent (80%) to ninety-percent (90%) of the Strength Yield Maximum Stress (SYMS). There were six leaks recorded along the 280-miles of 8.0-inch pipeline. Two of the six were seam failures. The seam failures occurred at test pressures of approximately 1856 and 1883 psi. The failure location was tested at a minimum pressure of 1952 psi, which is one hundred-twenty percent (125%), or more than the maximum operating pressure or eighty-six percent (86 %) SYMS for 4 hours followed by a four-hour leak test as described in § 195.304.

#### **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, provide 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 this pipeline without corrective measures would be hazardous to life, property and the environment. Additionally, after considering the circumstances surrounding this failure, the proximity of the pipeline to populated and high consequence areas, the line's proximity to a public highway, the highly volatile liquids the pipeline facility transports, the pressure required for transporting the material, and the uncertainties as to the cause of the failure, 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, Dixie 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, Georgia 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 longer term measures that need to be taken. Dixie will be notified of any additional measures required and amendment of this Order will be considered. To the extent consistent with safety, Dixie 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 Dixie to immediately take the following corrective actions with respect to its Milner-Cheraw pipeline:

1. Maintain the 20 percent (20%) pressure reduction in the operating pressure along the entire Milner-Cheraw pipeline, which is not to exceed 80% of the operating pressure in effect just prior to the failure. Specifically, the pressure at the failure site, between Milner, GA and Cheraw, SC, is not to exceed 1083 psig at the failure site.
2. Conduct a detailed metallurgical analysis of the pipe that failed on March 13, 2003 to determine the cause and contributing factors. Submit to the Director, Southern Region, OPS, within one week of its receipt by Dixie Pipeline.
3. Submit a written plan, with a schedule, to verify the integrity of the line segment from Milner, GA to Cheraw, SC. The plan must provide integrity testing that addresses all known or suspected factors in the failure, including, but not limited to:
  - A. Internal inspection tool surveys and remedial action. The type of internal inspection tools used shall be technologically appropriate for assessing the system based on the type of failure that occurred on March 13, 2003, with emphasis on identifying and evaluating the following: 1) anomalies associated with dents, gouges and grooves; 2) metal loss due to corrosion; 3) the orientation of the longitudinal seam of the pipe; 4) pipe deformation, and 5) longitudinal cracks, mill defects and stress corrosion cracking.
  - B. A detailed description of the inspection and repair criteria that will be used in the field evaluation of the anomalies that are excavated. This is to include a description of how any defects are to be graded and the schedule for repairs or replacement.
  - C. An evaluation of the line for areas of damaged or disbonded coating, including but not limited to, a close-interval, current interrupted, and pipe-to-soil potential survey.

- D. Integration of all available data from internal inspections, metallurgical analyses, and historical data, including repair and cathodic protection records.
  - E. Hydrostatic pressure testing of the line segment and/or other mitigative measures required to address the cause and contributing factors to the March 13, 2003 pipeline failure.
  - F. A schedule and means for providing the results and data for testing programs performed to the Southern Region.
- 4. Each element of the plan must be approved by the Director, Southern Region, who may provide approvals incrementally. Implement the plan as approved.
  - 5. Respondent may request approval from the Director, Southern Region to increase its operating pressure above the interim maximum operating pressure under item 1, based on a showing that the hazard has been abated or that a higher pressure is justified based on an analysis showing that the pressure increase is safe considering all known defects, anomalies and operating parameters of the pipeline. The Regional Director's determination will be based on cause of failure and provision of evidence that mitigative actions taken by the operator provide for the safe operation of the pipeline. Appeals to determinations of the Regional Director in this regard will be subject to the decision of the Associate Administrator for Pipeline Safety.
  - 6. The Director, Southern Region, 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.

Failure to comply with this Final Order may result in the assessment of civil penalties of up to \$25,000 per violation per day and in referral to the Attorney General for appropriate relief in United States District Court.

  
Stacey Gerard  
for Associate Administrator  
for Pipeline Safety

MAR 24 2003

Date Issued