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

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

APR - 3 2003

Mr. Tom Morgan
Vice President of Operations
El Paso Corporation
2 North Nevada
Colorado Springs, CO 80903

Re: CPF No. 5-2003-1002H

Dear Mr. Morgan:

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 5B and 5A lines from the Cheyenne Compressor Station to the Watkins Compressor Station.

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
OFFICE OF PIPELINE SAFETY
WASHINGTON, DC 20590**

In the Matter of

El Paso Corporation,

Respondent.

CPF No. 5-2003-1002H

CORRECTIVE ACTION ORDER

Purpose and Background

This Corrective Action Order is being issued, under authority of 49 U.S.C. § 60112, to require El Paso Corporation (Respondent) to take the necessary corrective action to protect the public and environment from potential hazards associated with a failure on Respondent's 24-inch and 22-inch natural gas transmission lines known as the 5B and 5A lines respectively from the Cheyenne Compressor Station (CS) to the Watkins CS. Pursuant to 49 U.S.C. § 60117, the Western Region, Office of Pipeline Safety (OPS), initiated an investigation of the failure.

Based on the information gathered during the investigation of the pipeline failure, I find that the operation of Respondent's "5B" 24-inch and "5A" 22-inch interstate natural gas transmission pipeline from Cheyenne CS to Watkins CS, without corrective measures, would be hazardous to life, property and the environment.

This finding is based on the following factual determinations:

- On March 23, 2003, at approximately 7:50 p.m. Mountain Standard Time, Respondent's 24-inch diameter gas transmission pipeline "5B" ruptured at MilePost (MP) 54.04. The escaping natural gas subsequently ignited.
- Respondent operates a parallel line, the 22-inch diameter "5A" line, that attaches to the "5B" line with valved-cross-over lines. The 5B and 5A lines are normally operated as a single system, that is, there are cross-overs between the lines that are normally open to the flow of natural gas.
- The force of the rupture, blew an approximate 95 to 100 foot segment off the 5B pipeline.

- The incident occurred in a rural area approximately 7 miles north of the town of Greeley in Weld County, Colorado. Three persons from three separate homes were evacuated. No fatalities or injuries were reported. No interruption of supply occurred.
- The pipeline rupture and subsequent fire damaged a house approximately 671 feet away from the north end of the failure site. A barn located approximately 761 feet from the north end of the failure site was undamaged. The fire burned an area approximately 600 feet in diameter.
- The 5B and 5A lines start at the Cheyenne CS, located approximately 10 miles south of Cheyenne, Wyoming, and continue south to the Watkins CS, which is located just east of Denver, Colorado. The right of way is approximately 81 miles long, with 73.5 miles in Class 1, one mile in Class 2, and 6.5 miles in Class 3. The failure site is in an area of farm land.
- The 5B line is buried approximately 12 feet underneath and perpendicular to County Road 72. The failure site is approximately 1/4 mile from the intersection of County Road 72 and Highway 59.
- The failure site is approximately four miles south of the town of Eaton, Colorado. In 2000 Eaton had a population of 2,690, according to the 2000 census.
- Both the 5B and 5A pipelines operate at a Maximum Allowable Operating Pressure (MAOP) of 850 psi. At the time of the explosion, the 5B pipeline was operating at about 814 psi.
- The failed pipe is high frequency Electric Resistance Weld pipe, API 5L X-60 with 0.25-inch wall thickness, manufactured by Stupp. The fractured pipeline segment was installed in 1978.
- The segment of failed pipe is approximately 95 to 100 feet in length. The failure extended through a saddle weld on a 4-inch lateral connection at approximately the three o'clock position (looking south) on the mainline 24-inch pipe. Preliminary examination of the failed pipe revealed no apparent internal or external corrosion nor any visible third party damage on the pipeline. The cause of the failure is unknown at this time.
- Respondent sent its metallurgist from Houston out to the site to get samples of the failed segment of pipeline for metallurgical testing.
- This incident appears to be similar to an incident that occurred on Respondent's "2B" 20-inch pipeline in the area downstream of Watkins CS on 12/20/1994. The 1995 metallurgical report from that incident indicates that an anomaly in the pipe at the toe of the saddle-weld accompanied with fatigue induced from independent motion of the lateral from the mainline 20-inch pipe over an approximate twenty year time frame combined to cause the saddle-weld to fail.

- After the 1994 release Respondent uncovered and performed non-destructive testing of 12 hot tap saddle weld connections in the area of the release. Respondent reportedly found no anomalies. Respondent also examined approximately 112 connections associated with the saddle welds, such as blow-off risers, crossover saddles and hot tap piping. Respondent found approximately 30 defects and repaired them, according to Respondent.
- The 4-inch lateral connection pipe, which was constructed around the same time as the 24-inch 5B line, goes to a meter station that has been used only occasionally in the last seven years, according to Respondent. The 4-inch line and meter station were originally intended to supply gas to Colorado Public Service Company for distribution to the greater Greeley, Colorado area. Colorado Public Service Company, however, gets most of its gas from other sources. Respondent had closed the valves to the meter station, but had left the 4-inch line connection intact.
- Respondent has remotely operated valves, approximately 1 mile south of the release site, on both the A and B lines. After recognizing a pressure drop on its SCADA system, Respondent immediately shut off the remotely operated valves and dispatched personnel to shut off the manually operated valves located approximately 9 miles north of the release site.
- Respondent has isolated approximately 9 miles of both 5B and 5A lines since the rupture.
- El Paso Corporation has owned the 5B and 5A pipelines since a merger with Colorado Interstate Gas Company in 2001.

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.

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 pipeline without corrective measures would be hazardous to life, property and the environment. Additionally, after considering the age of the pipe and the method of manufacturing, suspected cause of the failure, the proximity of the pipeline to populated areas, public roads, and environmentally sensitive areas, 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 Denver, Colorado 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

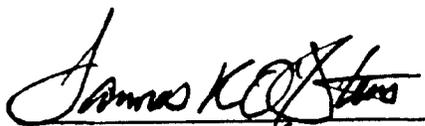
Pursuant to 49 U.S.C. § 60112, I hereby order Respondent to immediately take the following corrective actions with respect to its 5B line from the Cheyenne CS to the Watkins CS, and also with respect to its 5A line from the Cheyenne CS to the Watkins CS :

1. Immediately reduce the operating pressure in the 5B line by 20% of the operating pressure at the time of the March 23, 2003 incident, which was 814 psig. At no time is the pressure to exceed 651 psig.
2. Conduct a detailed metallurgical analysis of the pipe that failed on March 23, 2003, to determine the cause of failure and contributing factors. Submit an original copy of the report of this analysis to the Director, Western Region, OPS, within one week of your receipt of the report.
3. Create a written plan to expose and perform non-destructive-examination (NDE) of each saddle weld reinforcement on the 5B line between the Cheyenne CS and the Watkins CS. If any anomalous conditions are identified during the NDE process, initiate appropriate repairs or remove the saddle weld reinforcement. Submit a copy of the plan to the Director, Western Region, OPS, for approval, before implementing the plan.
4. During the investigation of saddle weld reinforcements, document each step of the process in sufficient detail to be able to subsequently evaluate the results with the purpose of identifying any trends in the data.
5. Continuously review NDE results toward identifying any trends. If a trend is identified, immediately notify the Director, Western Region, OPS, and modify the initial plan required in item #3 above to immediately investigate any and all appurtenances identified by the trend.

6. Once respondent has completed NDE of saddle weld connections and addressed any anomalous conditions identified on the 5B line, reduce the operating pressure on the 5A line by 20% and initiate an immediate plan to expose and perform non-destructive-examination (NDE) of each saddle weld reinforcement on the 5A line between the Cheyenne CS and the Watkins CS. If any anomalous conditions are identified during the NDE process, initiate appropriate repairs or remove the saddle weld reinforcement. Submit a copy of the plan to the Director, Western Region, OPS, for approval, before implementing the plan.
7. Implementation of the plans required in items 3 and 6 above shall be completed within 180 days of the issuance of this corrective action order.
8. Within 30 days of the completion of the investigation on the 5B and 5A lines, Respondent must report the results to the Director, Western Region, OPS. At that time, a plan to address saddle weld reinforcements on the remainder of the CIG system will be discussed.
9. All pressure reductions required in this order will remain in place until the Respondent obtains written approval from the Director, Western Region, OPS, to return to normal operating pressures.
10. The Director, Western 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 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 for each day the violation persists up to a maximum \$1,000,000 for any related series of violations, and in referral to the Attorney General for appropriate relief in United States District Court.



4a Stacey Gerard
Associate Administrator
for Pipeline Safety

APR - 3 2003

Date Issued