



U.S. Department  
of Transportation

**Research and  
Special Programs  
Administration**

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

Register  
OPS

OCT - 7 1996

Mr. James H. Elmore  
Senior Vice President  
Koch Pipeline Company LP  
P.O. Box 2258  
Wichita, Kansas 67201

Re: CPF No. 46510-H

Dear Mr. Elmore:

Enclosed is a Hazardous Facility Order issued by the Associate Administrator for Pipeline Safety in the above-referenced case. Your receipt of the enclosed document constitutes service of that document under 49 C.F.R. § 190.5.

Sincerely,

Gwendolyn M. Hill  
Pipeline Compliance Registry  
Office of Pipeline Safety

Enclosure

cc: Mr. Quentin Kurtz  
P.O. Box 2256  
Wichita, KS 67201

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DEPARTMENT OF TRANSPORTATION  
RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION  
WASHINGTON, DC

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In the Matter of )  
Koch Pipeline Company LP )  
Respondent. ) CPF No. 46510-H  
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HAZARDOUS FACILITY ORDER

On September 6, 1996, the Director, Southwest Region, Office of Pipeline Safety (OPS) issued a Notice of Proposed Hazardous Facility Order (Notice), pursuant to 49 U.S.C. § 60112, proposing to require Koch Pipeline Company LP (Koch) to take certain corrective measures on its highly volatile liquid (HVL) line running between Medford, Oklahoma to Mont Belvieu, Texas.

The Notice was issued following a rupture on August 24, 1996 on an 8-inch section of the line located near Lively, Kaufman County, Texas. The rupture resulted in two fatalities when a vapor cloud ignited while two teenagers were in a vehicle en route from the scene of the failure to notify authorities of the pipeline leak. Following the rupture, Koch voluntarily isolated the segment of pipe involved in the failure and ceased operations over its entire Sterling #1 system from Medford, Oklahoma to Mont Belvieu, Texas (HVL line). The Notice proposed that Koch keep the HVL line out of service until Koch developed a plan that included addressing the areas of severe corrosion on the line and providing a public education and awareness program.

Koch responded to the Notice by letter dated September 12, 1996 (Response). Koch corrected and clarified some of the Notice's preliminary findings but did not contest the proposed determination that the HVL line poses a threat to life, property or the environment. Koch has been cooperating with the Southwest Region in preparing a plan to verify the integrity of the HVL line.

Based on the information gathered during the inspection, and during subsequent correspondence, I find that the operation of Koch's HVL line between Medford, Oklahoma to Mont Belvieu, Texas is hazardous to life, property or the environment. This finding is based on the following factual determinations:

- a. On August 24, 1996, a rupture occurred in an 8-inch section of Koch's HVL pipeline at MP - 331. The failure occurred in a rural subdivision near Lively, Kaufman County, Texas, approximately 40 - 50 miles southeast of Dallas, Texas.
- b. Two fatalities resulted when two teenagers drove a pick-up truck into the vapor cloud. Danielle L. Smalley and Jason Stone, both age 17 years, were killed when the resulting vapor cloud ignited while the two teenagers were in a vehicle en route from the scene of the failure to notify authorities of the pipeline leak. George York, Constable, Precinct 4 Kaufman County, Texas, stated that Mrs. Smalley had directed her daughter, Danielle, and Jason Stone to drive the pick-up truck to notify emergency response personnel of the vapor cloud.
- c. The line, which consists of 8-inch and 10-inch sections, originates in Medford, Oklahoma, and transports HVLs to Mont Belvieu, Texas. The pipeline route intersects many rural primary and secondary roads and highways, potentially exposing the public to pipeline failures.
- d. The line is in close proximity to an ARCO pipeline along the route of the pipeline in Kaufman County. A rupture of the HVL line could cause damage or interruption of service to the ARCO pipeline.
- e. The 8-inch line sections from Medford, Oklahoma, to Corsicana, Texas, and from Cleveland, Texas to Mont Belvieu, Texas, were both installed in 1981.
- f. The 10-inch line section from Corsicana, Texas, to Cleveland, Texas was installed in 1995.
- g. The segment involved in the rupture consists of 8 5/8-inch O.D., 0.188 - inch wall thickness, API 5L, Grade - X46 pipe, manufactured by Republic Steel.
- h. The maximum operating pressure (MOP) of the line was established in July 1995 at 1440 psig.

- i. The HVL line, in the area of the failure, was hydrostatically tested in 1995 at 1855 psig.
- j. At the time of the accident, the operating pressure at the Nevada pump station was between 1280 psig and 1438 psig.
- k. Koch's examination of the pipe after excavation of the rupture location revealed a 12 to 14 - inch tear in the pipe.
- l. Examination by a technical consultant for Koch determined that the pipe wall in the area of the failure had been thinned by corrosion pitting; the corroded area occurred near the 10 o'clock position, looking north.
- m. Koch also found evidence of mechanical damage to the pipeline near the rupture. This mechanical damage appeared regularly at ten-foot intervals for a length of over 100 feet.
- n. Koch's technical consultant also identified severe corrosion pitting on other portions of the 8-inch pipeline near the rupture.
- o. Koch voluntarily ceased operations on the HVL line between Medford, Oklahoma to Mont Belvieu, Texas.
- p. Koch conducted a public education program in December 1995. The program consisted of a pamphlet outlining the characteristics of HVL and the name of the company. The public education campaign advised that care was to be taken to keep sources of ignition a safe distance from a liquid spill area. The program did not advise recipients of the dangers of operating motorized vehicles and equipment in or near the vapor cloud caused by HVLs escaping from a ruptured pipeline. A property owner living in the vicinity of the pipeline informed OPS personnel that she had never received this public education literature.
- q. Koch conducted a liaison program in April 1996 with fire, police, and other public officials to learn the responsibilities and resources of each government organization that may respond to a hazardous liquid emergency and to acquaint the officials with the operator's ability to respond to a hazardous liquid pipeline emergency and means of communication. Although Koch's records indicate that Sheriff Robert Harris (in office since 1986) was notified in March 1995 and April 1996 of liaison meetings, Sheriff Harris informed OPS personnel that he has never received notice of such liaison meetings.

Based on the above information, I find that operation of the HVL line between Medford, Oklahoma and Mont Belvieu, Texas in the absence of the following safety measures is hazardous to life, property or the environment. Accordingly, pursuant to 49 U.S.C. § 60112, Koch is required to take the following corrective actions with respect to its Sterling #1 system located between Medford, Oklahoma and Mont Belvieu, Texas (HVL line or pipeline):

1. Remain out of service until -
  - a. In accordance with Item 2 of this Order, a plan for identifying and correcting areas of continuing corrosion is found acceptable by the Director, Southwest Region, OPS (Regional Director);
  - b. In accordance with Items 3 and 4 of this Order, public awareness action has been taken and found acceptable by the Regional Director;
  - c. In accordance with Item 6 of this Order, a reasonable and prudent operating scenario had been established and approved by the Regional Director.
2. Submit for approval by the Regional Director, within 30 days after an Order is issued, a written plan addressing a program of tests or studies that will identify the extent of and propose a solution to the external corrosion problem on the HVL line and allow for the verification and maintenance of the HVL line. The plan is to include, at minimum, provisions and time frames for identifying the extent of corrosion and correcting the external corrosion problems of the HVL line. The plan should address, at minimum -
  - a. The 8-inch pipeline section between block valves at stations 17316 + 16 to 17849 + 48 (approximately 10 miles) -
    - i. Run an ultrasonic "smart" pig or high resolution magnetic flux "smart" pig to determine pipe wall condition.
    - ii. Complete installation of new ground bed and test, and activate rectifier.
    - iii. Perform a close interval survey.
    - iv. Retain any exposed pipe removed from the line during preparation for the "smart" pig run for OPS examination. Provide a detailed pipe and coating condition report.

- v. Notify the appropriate public officials of Henderson and Kaufman Counties whenever tests are performed involving the movement of HVLs through the pipeline.
  - vi. Expose anomalies indicating 20% or greater wall loss, and repair or replace areas of 20% or greater wall loss, or as may be agreed upon with the Regional Director.
  - vii. Determine MOP subject to final approval by the Regional Director.
  - viii. The corrosion mitigation measures must conform with approved industry standards such as NACE Standard RP-0169-92, Recommended Practices for Control of External Corrosion on Underground or Submerged Metallic Piping Systems.
  - ix. Results of tests and metallurgical and chemical analysis of pipe now underway.
- b. Remaining 8-inch and 10-inch pipeline sections of the HVL line not addressed in Item 2.a above -
- i. Run an ultrasonic "smart" pig or high resolution magnetic flux "smart" pig to determine pipe wall condition.
  - ii. Retain any exposed pipe removed from the line during preparation for the "smart" pig run for OPS examination. Provide a detailed pipe and coating condition report.
  - iii. Notify the appropriate public officials in affected counties whenever tests involving the movement of HVLs through the pipeline.
  - iv. Expose anomalies indicating 20% or greater wall loss, and repair or replace areas of 20% or greater wall loss, or as may be agreed upon with the Regional Director.
  - v. Determine MOP subject to final approval by the Regional Director.

- vi. The corrosion mitigation measures must conform with approved industry standards such as NACE Standard RP-0169-92, Recommended Practices for Control of External Corrosion on Underground or Submerged Metallic Piping Systems.
3. Submit for approval by the Regional Director, within 30 days after an Order is issued, a written plan to provide a public awareness program for residents located along the pipeline right-of-way. The program, at minimum, should include the following information -
  - a. Identification of pipeline location.
  - b. Recognizing a HVL pipeline leak and action to be taken.
  - c. Reporting to Koch any right-of-way encroachment or other activity which could damage the pipeline.
  - d. Information about the danger of operating motorized vehicles and equipment in or near a vapor cloud caused by HVLs escaping from a ruptured pipeline.

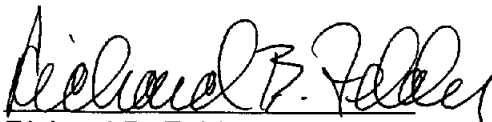
Provide verification to the Regional Director that this program is being carried out.

4. Submit for approval by the Regional Director, within 30 days after an Order is issued, a written plan to establish a liaison program with fire, police, and other public officials to learn the responsibilities and resources of each government organization that may respond to a hazardous liquid emergency and to acquaint the officials with the operator's ability in responding to a hazardous liquid pipeline emergency. The plan shall address establishing means of communication between the officials and Koch, and coordinating additional precautions for an emergency involving a pipeline that transports HVLs.

Provide verification to the Regional Director that this program is being carried out.

5. After receipt of the written plans required by Items 2-4 of this Order, the Regional Director will make a determination as to the adequacy of the plans, and if acceptable, issue a directive to Koch to proceed with the proposed testing and corrective actions. Should OPS determine that a written plan is deficient, informal discussions will be held between Koch and the Regional Director to resolve the issues.
6. Determine operating characteristics, such as operating pressure and further testing, in consultation with the Regional Director, with final approval by the Regional Director.
7. Notwithstanding other provisions of this Order, upon the written request by Koch, the Regional Director may, for good cause shown, authorize resumed operation of the pipeline.
8. The Regional Director may grant an extension of time, upon receipt of a written request stating reasons therefor, for completion of any of the actions required herein.
9. The Regional Director may not unreasonably withhold any approval or determination provided for in this Order. Any denial or determination may be appealed to the Associate Administrator for Pipeline Safety within 15 days of Koch's receipt of denial or determination.

Failure to comply with the terms of this Order may result in the assessment of civil penalties of up to \$25,000 per day and in referral of the matter to the Attorney General for appropriate action in the United States District Court. The terms and conditions of this Order are effective upon receipt.



Richard B. Felder  
Associate Administrator  
for Pipeline Safety

Date Issued: OCT - 7 1996