



U.S. Department of Transportation
Pipeline and Hazardous Materials
Safety Administration

JAN 19 2010

1200 New Jersey Ave, S.E.
Washington, D.C. 20590

VIA CERTIFIED MAIL AND FAX TO: [REDACTED]

Mr. Terry McGill
President
Enbridge Energy Partners, Ltd.
1100 Louisiana, Suite 3300
Houston, TX 77002

Re: CPF No. 3-2010-5001H

Dear Mr. McGill:

Enclosed is a Corrective Action Order issued by the Pipeline and Hazardous Materials Safety Administration in the above-referenced case. It requires Enbridge Energy Partners to take certain corrective actions with respect to that portion of its hazardous liquid pipeline system designated as Line 2, running from the Canadian border to Superior, Wisconsin, that was involved with the January 8, 2010 failure near Neche, North Dakota. Service is being made by certified mail and facsimile. The terms and conditions of this Order are effective upon service of this document in accordance with 49 C.F.R. § 190.5.

Sincerely,

Jeffrey D. Wiese
Associate Administrator
for Pipeline Safety

Enclosure

cc: Mr. Ivan A. Huntoon
Director, Central Region, OPS

**U.S. DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION
OFFICE OF PIPELINE SAFETY
WASHINGTON, D.C. 20590**

_____))
In the Matter of))
))
Enbridge Energy Partners, Ltd.,))
))
Respondent.))
_____)

CPF No. 3-2010-5001H

CORRECTIVE ACTION ORDER

Purpose and Background

This Corrective Action Order is being issued, under authority of 49 U.S.C. § 60112, to require Enbridge Energy Partners, Ltd. (Enbridge or Respondent), to take the necessary corrective action to protect the public, property, and the environment from potential hazards associated with a failure involving Respondent's 26-inch diameter hazardous liquid pipeline designated as Line 2, which runs from the Canadian border to Superior, Wisconsin.

On January 8, 2010, a failure occurred on Line 2 near Neche, North Dakota, resulting in a release of crude oil. The cause of the failure has not yet been determined. Pursuant to 49 U.S.C. § 60117, the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS), initiated an investigation of the incident.

Preliminary Findings

- At approximately 11:37 p.m. local time, on January 8, 2010, a rupture occurred on Respondent's Line 2, resulting in the release of approximately 3000 barrels of crude oil. The failure occurred at Mile Post (MP) 774, approximately 1.5 miles northeast of the town of Neche, North Dakota.
- At 11:38 p.m., a low-suction alarm initiated an emergency station cascade shutdown. At 11:40 p.m., the Gretna station valve began closing. At 11:44 p.m., the Gretna station was isolated. At 11:49 p.m., Line 2 was fully isolated from the Gretna to Donaldson pump stations.
- The incident was reported to the National Response Center at 3:21 a.m. local time on January 9, 2010 (NRC Report No. 928066).

- The cause of the failure is unknown and the investigation is ongoing. The failed pipe section is being transported to a metallurgist for examination and failure analysis. The preliminary investigation indicates a rupture of approximately 48 inches in length along the longitudinal pipe seam.
- The pipe was manufactured by A.O. Smith in 1956 and is constructed of 26-inch x 0.281-inch wall thickness, grade X-52 electric-flash welded (EFW) pipe. It has a coal tar coating and an impressed current cathodic protection system.
- At the time of the incident, the pressure of the pipeline was 725 psig at the Gretna pump station discharge. The maximum operating pressure (MOP) in the area of the failure is 809 psig.
- Line 2 originates in Canada and runs southeast across North Dakota, Minnesota, and into Wisconsin. The line crosses rivers, highways and populated areas. It is part of the larger Lakehead Pipeline system that consists of approximately 3500 miles of pipe and is the primary transporter of crude oil from Western Canada to the United States.
- Respondent performed several in-line inspections on the pipeline between 2001 and 2009, including ultrasonic crack detection tool runs in 2009. The full results of the 2009 ultrasonic tool runs have not yet been made available to PHMSA. Respondent reported that a preliminary review of the tool data from the failure site may indicate a crack-like feature.
- OPS issued Alert Notices on January 28, 1988, and again on March 8, 1989, determining that pre-1970 low frequency electric resistance welded (ERW) pipe was susceptible to seam failure and informing pipeline operators of the problem. Numerous documented failures of the longitudinal seam of pre-1970 ERW pipe have been caused by the growth over time of manufacturing defects in the ERW seams. Selective corrosion of the seam and cyclic fatigue can contribute to the growth of these defects. In some cases, pipelines that had been successfully hydrostatically tested have later suffered longitudinal seam failures involving selective corrosion or cyclic fatigue, sometimes many years after the test. Various regulations issued by PHMSA since pre-1970 ERW pipe was first determined to be susceptible to seam failure have reflected the need for this threat to be addressed (see e.g., 49 C.F.R. § 195.452(c)(1)(i)). EFW pipe is a type of ERW pipe and has similar history with longitudinal seam concerns.

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, and may require various corrective actions to be taken, including 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 notice and an opportunity for a 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 Line 2 without corrective measures would be hazardous to life, property and the environment. Additionally, after considering the age of the pipe, the manufacture of the EFW pipe and the seam type, the particular circumstances surrounding this failure and crude oil spill, the proximity of the pipeline to populated areas, public roadways and high consequence areas, the hazardous nature of the product being transported, the pressure required for transporting the material, the uncertainties as to the cause of the failure, and the ongoing investigation to determine the cause of the failure, I find that a failure to issue this order expeditiously to require immediate corrective action would result in likely serious harm to life, property, and the environment. Accordingly, this Corrective Action Order mandating 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 service 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, D.C., on a date that is mutually convenient to PHMSA and Respondent.

After receiving and analyzing additional data in the course of this investigation, PHMSA may identify other corrective measures that need to be taken. 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 Enbridge Energy Partners, Ltd., to immediately take the following corrective actions with respect to Line 2:

1. Prior to resuming operation of Line 2, develop and submit a written re-start plan for prior approval to the Director, Central Region, OPS (Director), Pipeline and Hazardous Materials Safety Administration, 901 Locust Street, Suite 462, Kansas City, MO 64106-2641.
2. The restart plan must provide for adequate patrolling of Line 2 during the restart process. The restart plan must specify a daylight restart and include advance communications with local emergency response officials. Obtain approval to resume operation of the line from the Director prior to resuming operation.

3. After receiving approval from the Regional Director to restart the pipeline, maintain a twenty percent (20%) pressure reduction in the operating pressure of Line 2, running from the Canadian border to Superior, Wisconsin. The discharge pressure at the Gretna pump station is not to exceed eighty percent (80%) of the pressure at which the line was operating immediately prior to the failure. Specifically, the discharge pressure is not to exceed 580 psig at the Gretna pump station discharge. The pump station discharge pressure from Donaldson to Superior is not to exceed 80% of the highest recorded 30-day discharge pressure recorded at each pump station. Specifically, the discharge pressures are not to exceed the following: Donaldson – 623 psig; Viking – 524 psig; Plummer – 543 psig; Clearbrook – 644 psig; North Cass Lake – 614 psig; Deer River – 593 psig; and Floodwood – 505 psig. This pressure restriction will remain in effect until such time as written approval to increase the pressure or return the pipeline to its pre-failure operating pressure is obtained from the Director pursuant to Item 12 below.
4. Within 30 days of service of this order, complete mechanical and metallurgical testing and failure analysis of the failed pipe, including analysis of soil samples and any foreign materials. The testing and analysis must be completed as follows:
 - A. Document the chain-of-custody when handling and transporting the failed pipe section and other evidence from the failure site;
 - B. Utilize the mechanical and metallurgical testing protocols, including the testing laboratory, approved by the Director;
 - C. Prior to commencing the mechanical and metallurgical testing, provide the Director with the scheduled date, time, and location of the testing to allow a PHMSA representative to witness the testing; and
 - D. Ensure that the testing laboratory distributes all resulting reports in their entirety (including all media), whether draft or final, to the Director at the same time they are made available to Respondent.
5. Within 60 days of service of this order, re-analyze the results of the 2009 ultrasonic crack detection tool runs for the purpose of determining whether any anomalies were present that could have contributed to the failure and whether any other similar anomalies are currently present elsewhere on Line 2. Make the results of this analysis available to PHMSA.
6. Within 60 days following service of this order, submit an integrity verification and remedial work plan to the Director for approval. The plan must provide for the verification of the integrity of the pipeline and must address all factors known or suspected in the January 8, 2010 failure. Respondent must, at a minimum:
 - A. Integrate the results of the analysis required by Items 4 and 5 with all relevant operating and maintenance data and perform a root cause analysis of the failure;

- B. Perform additional inspections and evaluations as necessary to confirm the adequacy of the seam integrity verification program. The evaluation methods used must be technologically appropriate for assessing the pipeline, based on the type of failure that occurred on January 8, 2010, and should include the consideration of pressure testing and/or additional in-line inspections;
 - C. Include a detailed description of the inspection and repair criteria to be used in the field evaluation of any 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;
 - D. Include provisions for continuing long-term periodic testing and integrity verification measures to ensure the ongoing safe operation of Line 2 and for considering the results of the analyses, inspections, and corrective measures undertaken pursuant to this order; and
 - E. Include a proposed schedule for completion of the actions required by paragraphs A-D of this Item.
7. The integrity verification and remedial work plan described above is incorporated by reference into this order and shall be revised as necessary to incorporate the results of actions undertaken pursuant to this order and whenever necessary to incorporate new information obtained during the failure investigation and remedial activities. Submit any proposed revisions to such plan to the Director for prior approval. The Director may approve plan elements incrementally.
 8. Implement the work plan as it is approved by the Director, including any revisions to the plan.
 9. Submit reports to the Director on a quarterly basis or other interval determined by the Director that: (1) include all available data and results of the testing and evaluations required by this order; and (2) describe the progress of the repairs or other remedial actions being undertaken. The first report shall be due by April 30, 2010.
 10. Maintain documentation of the costs associated with implementation of this Corrective Action Order. Include in each monthly report submitted, the to-date total costs associated with: (1) preparation and revision of procedures, studies and analyses; (2) physical changes to pipeline infrastructure, including repairs, replacements and other modifications; and (3) environmental remediation, if applicable.
 11. With respect to each submission that under this order requires the approval of the Regional Director, the Director may: (a) approve, in whole or part, the submission; (b) approve the submission on specified conditions; (c) modify the submission to cure any deficiencies; (d) disapprove in whole or in part, the submission, directing that Respondent modify the submission, or (e) any combination of the above. In the event of approval, approval upon conditions, or modification by the Director, Respondent shall proceed to take all action required by the submission as approved or modified by the Director. If the

Director disapproves all or any portion of the submission, Respondent shall correct all deficiencies within the time specified by the Director, and resubmit it for approval.

12. The Director may allow the removal or modification of the pressure restriction set forth in Item 3 upon a written request from Respondent demonstrating that the hazard has been abated and that restoring the pipeline to its pre-failure operating pressure is justified based on a reliable engineering analysis showing that the pressure increase is safe considering all known defects, anomalies and operating parameters of the pipeline.

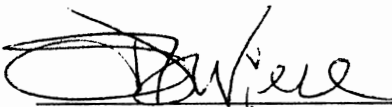
The Director may grant an extension of time for compliance with any of the terms of this order upon a written request timely submitted demonstrating good cause for an extension.

The actions required by this Corrective Action Order are in addition to and do not waive any requirements that apply to Respondent's pipeline system under 49 C.F.R. Part 195, under any other order issued to Respondent under authority of 49 U.S.C. § 60101 et seq., or under any other provision of Federal or State law.

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

Failure to comply with this order may result in the assessment of civil penalties and in referral to the Attorney General for appropriate relief in United States District Court pursuant to 49 U.S.C. § 60120.

The terms and conditions of this Corrective Action Order are effective upon receipt.



Jeffrey D. Wiese
Associate Administrator
for Pipeline Safety

JAN 19 2010

Date Issued