



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

SEP 22 2010

1200 New Jersey Ave., SE
Washington, DC 20590

VIA CERTIFIED MAIL AND FACSIMILE TO: (713) 653-6711

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

Re: CPF No. 3-2010-5008H

Amendment to the July 28, 2010 Corrective Action Order

Dear Mr. McGill:

In light of your company's waiver of a hearing, enclosed is a Amendment to the Corrective Action Order issued on July 28, 2010, as proposed in the a Notice of Proposed Amendment to the Corrective Action Order issued on September 17, 2010. Your receipt of this Amendment constitutes service of that document under 49 C.F.R. § 190.5.

Please direct any questions on this matter to David Barrett, Director, Central Region, Office of Pipeline Safety, PHMSA, at (816) 329-3800.

Sincerely,

Jeffery Wiese
Associate Administrator
For Pipeline Safety

Enclosures: Amendment to the Corrective Action Order
Copy of 49 C.F.R. § 190.233

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

In the Matter of)

Enbridge Energy Partners, L.P.,)

Respondent.)

CPF No. 3-2010-5008H

AMENDMENT
TO THE CORRECTIVE ACTION ORDER

Background and Purpose

On July 28, 2010, under authority of 49 U.S.C. § 60112, the Associate Administrator for Pipeline Safety, Pipeline and Hazardous Materials Safety Administration (PHMSA), issued a Corrective Action Order (CAO) to Enbridge Energy Partners, L.P. (Enbridge or Respondent), finding that the continued operation of Respondent's Line 6B extending approximately 286 miles from Griffith, Indiana to the U.S.–Canadian border would be hazardous to life, property, and the environment unless certain corrective actions were taken. PHMSA issued the July 28, 2010 CAO (Original CAO) in response to a failure on Line 6B near Marshall, Michigan that was reported by Enbridge on July 26, 2010 (Marshall Failure). The failure resulted in an estimated release of 19,500 barrels of crude oil. The spilled oil entered the Talmadge Creek and the Kalamazoo River. PHMSA initiated an investigation of the Marshall Failure which is ongoing.

The Original CAO set forth preliminary findings based upon PHMSA's initial investigation of the Marshall Failure and requires, among other things, that the line remain out-of-service until repairs under a pre-approved restart plan are completed and restart of the line is approved by the Director, Central Region, PHMSA. The CAO also imposes an ongoing 20 percent pressure reduction, requires inspections and evaluations of additional sections of the pipeline to determine if conditions similar to those associated with the Marshall Failure were likely to exist elsewhere on Line 6B, and requires the development, implementation, and completion of an integrity verification and remedial work plan before a return to full pressure operations will be permitted.¹

¹ *In the Matter of Enbridge Energy Partners, L.P.*, Corrective Action Order (CPF No. 3-2010-5008H) dated July 28, 2010 (Original CAO).

While the root cause and all contributing factors to the Marshall Failure have not yet been established by the National Transportation Safety Board, additional information about the failure and the condition of Line 6B has become available to PHMSA since the Original CAO was issued as a result of PHMSA's ongoing investigation. This information includes a visual examination of the failed pipe section under laboratory conditions, the results of six anomaly investigation digs and repairs, and a review of previous in-line inspection results, and an extensive amount of other technical information concerning the pipeline.

On September 17, 2010, based on this additional information, PHMSA issued a Notice of Proposed Amendment to the Original CAO (Notice) notifying Respondent of additional preliminary findings of the agency's investigation and proposing that Respondent take certain additional corrective measures with respect to Line 6B. On September 21, 2010, Enbridge responded to the Notice. Enbridge did not contest the Notice, stated its intent to comply with the Notice, and waived its opportunity for a hearing.

Additional Preliminary Findings

The preliminary findings in the Original CAO are hereby amended by adding the following additional preliminary findings:

- The timeline of discovery of the failure is as follows:

| | | |
|------------|----------|--|
| 07/25/2010 | 5:56 PM | Scheduled shutdown of Line 6B initiated by Enbridge. |
| 07/25/2010 | 5:58 PM | Actual time of pressure drop on pressure logs. |
| 07/25/2010 | 9:32 PM | First of nine 911 odor complaints in area. |
| 07/25/2010 | 10:54 PM | Odor investigation closed by Marshall Township Fire Dept. |
| 07/26/2010 | 11:18 AM | Consumers Energy reports odor to Enbridge Control Center. |
| 07/26/2010 | 11:45 AM | Enbridge personnel confirm leak at rupture site. |
| 07/26/2010 | 11:45 AM | Enbridge emergency response is initiated. |
| 07/26/2010 | 1:33 PM | Enbridge notifies National Response Center – Report #948903. |
- On June 4, 2008, Enbridge received the final report on the 2007 MFL inspections results from the tool vendor. The final report indicated a total of 140 anomalies requiring action within 180 days, of which 26 were repaired and 114 remain.
- The 2009 in-line inspection using ultrasonic technology identified 250 anomalies, 35 of which were immediately repaired, and 215 remain. The remaining anomalies are between mileposts 650 and 753.
- Following the removal and inspection of the failed pipe, Enbridge performed additional anomaly investigation digs at Mile Posts 611.72, 619.57, 654.42, 654.71, and 682.72. In some cases, these investigations revealed the presence of anomalies which were repaired.
- On August 21, 2010, an engineering analysis of the deformation anomaly under the St. Clair River at Mile Post 751.22 performed by a third-party laboratory was provided to PHMSA.

- PHMSA secured the services of Oak Ridge National Laboratory to provide an independent review of Enbridge in-line inspection data and support for PHMSA's review of Enbridge actions. Oak Ridge is analyzing the growth rates of certain identified anomalies.
- On January 21, 2010, PHMSA issued a Warning Letter to Enbridge related to the disconnection of five hydrogen permeation internal corrosion monitors installed on Line 6B, one in January 2006, two in May 2006, and two in October 2007. Enbridge reported that the monitoring systems were disconnected due to communications/instrumentation problems. The warning noted that Enbridge was not able to prove to PHMSA that its interim measures properly managed the threat of internal corrosion.
- On January 26, 2010, PHMSA issued an Advisory Bulletin reminding hazardous liquid pipeline operators of the importance of prompt and effective leak detection capability in protecting public safety and the environment.

Finding of Hazardous Condition

Section 60112 of Title 49, United States Code, provides for the issuance of a Corrective Action Order, including amendments, after reasonable notice and the opportunity for a hearing, requiring the operator of a pipeline determined to pose a hazard to take corrective actions to protect the public and the environment. These 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 a determination that a pipeline facility is or would be 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.

After evaluating the all available information on the safety of Line 6B including the foregoing additional preliminary findings, and considering the nature of the Marshall Failure, the age of the pipe involved, the manufacturer, the hazardous nature of the product transported, the pressure required for transporting such product, and the ongoing investigation to determine the root cause of the failure, I find that the continued operation of the Line 6B without additional corrective measures would be hazardous to life, property, and the environment.

Accordingly, PHMSA hereby issues this Amendment to the CAO requiring the additional actions specified herein be taken to protect life, property, and the environment. The additional actions set forth in this Amendment to the CAO are in addition to the actions set forth in the Original CAO and do not suspend or eliminate the requirements of the Original CAO, unless otherwise specifically provided herein.

Amendments to Required Corrective Action

Pursuant to 49 U.S.C. § 60112 and 49 C.F.R. § 190.233, Enbridge Energy Partners, L.P. is ordered to comply with this Amendment to the CAO and take the following additional corrective actions with respect Line 6B. Enbridge shall comply with the following amendments:

1. **Restart Plan.** Item 2 of the Original CAO is amended by adding paragraphs (D)–(F) as follows:

- (D) Incorporate the actions set forth in PHMSA's letter of August 10, 2010 including additional anomaly investigations and hydrostatic testing into the plan.²
- (E) Incorporate the actions set forth in PHMSA's letter of September 3, 2010 into the plan.³
- (F) Enbridge must secure the services of a third-party monitor to provide monitoring during the restart process. Such monitoring shall include monitoring from the Edmonton Control Center as well as review of start-up procedures and documentation, pipe design criteria, operating parameters and procedures, process equipment, monitoring equipment, and SCADA.

2. Integrity Verification and Remedial Work Plan. Item 5 of the Original CAO is amended by adding paragraphs (G)–(J) as follows:

- (G) The plan must include project plans and schedules for the repair of all remaining anomalies identified for action from the 2007 and 2009 in-line inspections and identified to PHMSA on September 16, 2010 in accordance with 49 C.F.R. Part 195, but no later than 180 days of restart. Specifically:
 - i. The 40 remaining 180-day conditions from the 2007 in-line inspection must be repaired within 180 days of restart beginning with the anomalies identified in Table 6, of the July 15, 2010, Long Term Pressure Reduction Notification.
 - ii. The 114 remaining 180-day conditions must be repaired within 180 days of restart.
- (H) The plan must include project plans and schedules for the repair of all other remaining pipe anomalies identified for action in the July 15, 2010 Notification to be completed in accordance with 49 C.F.R. Part 195 but no later than 180 days of restart.
- (I) The plan must include the performance of both a transverse field in-line inspection capable of identifying metal loss and an ultrasonic technology in-line inspection capable of detecting cracks on Line 6B. The in-line inspections must be performed according to the following schedule:
 - i. The in-line inspection tools must be run within 14 days of restart.
 - ii. The tool vendor's initial report on anomalies meeting immediate repair criteria shall be provided to PHMSA within 30 days of completion of the in-line inspections.

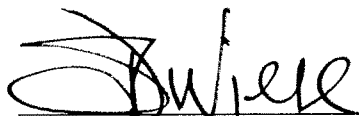
² Letter from David Barrett, Director, Central Region, PHMSA to Terry McGill, President, Enbridge Energy Partners, L.P. dated August 10, 2010.

³ Letter from David Barrett, Director, Central Region, PHMSA to Shaun Kavajecz, Manager, Pipeline Safety Compliance, Enbridge Pipelines (Lakehead) LLC dated September 3, 2010.

- iii. Immediate repairs as defined by 49 C.F.R. 195.452(h)(4) shall be made within 14 days of discovery regardless of whether such anomaly met a previous repair criterion.
 - iv. The tool vendor's final report on all anomalies shall be provided to PHMSA within 90 days of completion of the in-line inspections and anomalies requiring repair shall be repaired in accordance with 49 C.F.R. Part 195 but no later than 180 days of discovery.
 - v. The new in-line inspections results must be integrated into results of prior tool runs to reprioritize the focus and schedule of the integrity verification and remedial work plan as necessary.
- (J) The plan must include project plans and a schedule for the complete replacement of the pipe in the entire St. Clair River crossing to be completed within one year of restart. Provide such plans and schedules to both PHMSA and the National Energy Board of Canada. To the extent delays arise due to obtaining required permits, the Regional Director may grant an extension of time upon written request.

The actions required by this Amendment to the CAO are in addition to and do not waive any requirements that apply to Line 6B under the Original CAO or to Respondent's pipeline system under 49 C.F.R. Parts 190 through 199, as applicable, or 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.

After receiving and analyzing additional data in the course of this investigation, PHMSA may identify other corrective actions that need to be taken. In that event, Respondent will be notified of any additional measures required and further amendment of the CAO 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.



Jeffrey D. Wiese
Associate Administrator
for Pipeline Safety

SEP 22 2010

Date Issued