

**APR 20 2011**

**VIA CERTIFIED MAIL [7005 1160 0001 0075 9015] AND FAX TO: (610) 904-4558**

Mr. Jeremiah Ashcroft  
Vice President, Field Operations  
West Shore Pipeline Company  
5 Tek Park  
9999 Hamilton Blvd.  
Breinigsville, PA 18031

**Re: CPF No. 3-2011-5004H**

Dear Mr. Ashcroft:

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 your hazardous liquid pipeline designated as Line FX-999-A1 in connection with the April 12, 2011 failure in Green Bay, Wisconsin. Service is being made by certified mail and facsimile. Your receipt of this Corrective Action Order constitutes service of that document under 49 C.F.R. § 190.5. The terms and conditions of this Order are effective upon receipt.

Sincerely,

Jeffrey D. Wiese  
Associate Administrator  
for Pipeline Safety

Enclosure: Corrective Action Order and Copy of 49 C.F.R. §190.233

cc: Mr. David Barrett, Director, Central Region, PHMSA

**PHC-20:LWhite/\_\_\_\_\_:ab:x69093:04/20/2011**  
**G:/CPF 3-2011-5004H West Shore Pipeline Company**

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

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<b>In the Matter of</b>	)	
	)	
<b>West Shore Pipeline Company,</b>	)	<b>CPF No. 3-2011-5004H</b>
	)	
<b>Respondent</b>	)	
_____	)	

**CORRECTIVE ACTION ORDER**

**Purpose and Background**

This Corrective Action Order is being issued, under authority of 49 U.S.C. § 60112, to require West Shore Pipeline Company (“West Shore” or “Respondent”), to take the necessary corrective action to protect the public, property, and the environment from potential hazards associated with a hazardous liquid pipeline failure involving West Shore’s Line FX-999-A1 pipeline.

On April 12, 2011, a failure occurred on the 10-inch diameter Line FX-999-A1 pipeline which transports gasoline approximately 1300 feet from the Fox River Junction to the U.S. Oil Terminal along the Fox River within the city limits of Green Bay, Wisconsin. The failure resulted in the release of unleaded gasoline from the pipeline which entered the city sewer system. 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 5:06 p.m. CDT, on April 12, 2011, a failure occurred on Respondent’s Line FX-999-A1 hazardous liquid pipeline, resulting in the release of approximately five hundred gallons of unleaded gasoline. The failure occurred within the city limits of Green Bay, Wisconsin at Station Number 9+64, immediately adjacent to the Fox River. The incident was reported to the National Response Center (NRC Report No. 972765).
- The pipeline is located in a high consequence area (HCA) due to the population density and the proximity of the Fox River and of Green Bay itself. The released gasoline entered the city sewer system and migrated south from the leak site. A local business and City personnel noted the gasoline odor from the sewer. City personnel assisted with

containing the movement of gasoline through the sewer system. West Shore was not aware that its pipeline was leaking gasoline until the public notification was received.

- 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 the presence of external corrosion at the failure site. Corrosion pitting was visually observed at the 6 o'clock position approximately 6.5 inches upstream of a girth weld. The pipeline currently remains out of service.
- The Line FX-999-A1 pipeline was constructed in 1961 of 10-inch x 0.203-inch wall thickness, grade X52, low frequency electric resistance welded (ERW) pipe of unknown manufacture. It has a coal tar enamel coating and an impressed current cathodic protection system.
- The pipeline is in a right of way that includes other pipelines and is located in the vicinity of several electrical transmission lines creating the potential for stray currents that could interact with the pipeline's cathodic protection system.
- At the time of the incident, the pipeline was temporarily not running and the pipe pressure at the time of the failure is estimated to have been 50 psig. The maximum operating pressure (MOP) of the pipeline is 275 psig.
- Respondent performed a hydrostatic test of the pipeline in 2009 to a minimum test pressure of 397 psig. A leak occurred on the pipeline during the hydrostatic test and was repaired.
- Line FX-999-A1 experienced a previous failure on February 14, 2009. Metallurgical analysis revealed that external corrosion was the cause of this failure with indications of morphology consistent with DC stray current interference.
- It appears that Line FX-999-A1 is not monitored in such a manner as to routinely check for line balance or otherwise regularly determine the possibility of leaks. On Jan 26th, 2010, PHMSA issued Advisory Bulletin ADB-10-01 reminding operators of the importance of prompt and effective leak detection capability in protecting public safety and the environment. The Advisory Bulletin recommends an engineering review of the pipeline system regarding leak detection applicability, regular line balance activities, and the implementation of CPM leak detection systems where feasible.

### **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 the pipeline without corrective measures would be hazardous to life, property and the environment. Additionally, after considering the age of the pipe, circumstances surrounding this failure, the proximity of the pipeline to populated areas, water bodies, public roadways and high consequence areas, the hazardous nature of the product the pipeline transports, 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 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 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 West Shore Pipeline Company to immediately take the following corrective actions with respect to Line FX-999-A1:

1. Prior to resuming operation of the pipeline, develop and submit a written re-start plan for prior approval of the Director, Central Region, OPS (Regional Director), Pipeline and Hazardous Materials Safety Administration, 901 Locust Street, Suite 462, Kansas City, MO 64106-2641.
2. The restart plan must provide for hydrostatic testing of the pipeline. The proposed plan for hydrostatic testing must be at a pressure sufficient to strength test the pipeline considering the size of flaws that would survive the pressure test, and conform to the requirements of 49 CFR Part 195, Subpart E. Upon approval of the Director of the hydrostatic test plan, complete this testing within 30 days of approval. Any failures on the pipe during the testing must be removed and sent for metallurgical testing.

Respondent must provide continuous patrolling of the pipeline at all times until hydrostatic testing is completed and the restart plan must provide for adequate patrolling of the pipeline segment during the restart process. The restart plan must also specify a daylight restart and detail advance communications with local emergency response officials. Obtain written approval of the hydrostatic testing plan from the Regional Director prior to testing and written approval to resume operation of the line prior to resuming operation.

3. After receiving approval from the Regional Director to restart the pipeline, the pressure is not to exceed 100 psig. This pressure restriction will remain in effect until 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.
4. Within 45 days of receipt of this Order, complete mechanical and metallurgical testing and failure analysis of the failed pipe, including analysis of soil samples and any foreign materials. Complete the testing and analysis 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, Central Region;
  - C. Prior to commencing the mechanical and metallurgical testing, provide the Regional 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 Regional Director at the same time as they are made available to Respondent.
5. Within 60 days following receipt of this Order, complete a root cause failure analysis for the April 12, 2011, and February 14, 2009 accidents that is supplemented and facilitated by an independent third-party acceptable to the Regional Director. Elements of the root cause analysis must include but are not limited to: a scoping document of the root cause analysis; procedures associated with root cause analysis; multiple methods used for the analysis and updates on each method as it progresses. The root cause analysis must document all contributory factors and the decision making process. Submit a final report of the root cause process results to the Regional Director including any lessons learned and whether the findings are applicable to other locations within the Respondent's West Shore system.
6. Within 90 days following receipt of this Order, submit a remedial work plan ("Work Plan") to the Regional Director for approval. The Work Plan must provide for the

verification of the integrity of the pipeline and must address all factors known or suspected in the April 12, 2011 failure, including, but not limited to the following:

- A. If the root cause analysis determines that AC or DC stray or interference currents or other cathodic protection deficiencies are a contributory or root cause of the failure, the Work Plan must provide for the engagement of a consultant specializing in remediation of these conditions and a schedule for implementation of recommended mitigative measures to remediate these threats;
- B. The integration of the results of the failure analyses and other actions required by this Order with all relevant operating data including all historical repair information, construction, operating, maintenance, testing, metallurgical analysis or other third party consultation information, and assessment data for the delivery line. Data gathering activities must include a review of the failure history (in service and pressure test failures) of the pipeline and development of a written report containing all available information regarding locations, dates, and causes of leaks and failures;
- C. The performance of additional field testing, inspections, and evaluations to determine whether and to what extent the conditions associated with the failures, or any other integrity-threatening conditions are present elsewhere on the pipeline. At a minimum, the inspections and evaluations must consider use of in-line inspection that can reliably detect and identify anomalies, close-interval surveys, and cathodic protection surveys in coordination with other utilities (e.g. other underground utilities, overhead power lines, etc.) in the area. Include a detailed description of the criteria to be used for the evaluation and prioritization of any integrity threats and anomalies that are identified;
- D. The performance of repairs or other corrective measures that fully remediate the condition(s) associated with the pipeline failures and any other integrity-threatening condition everywhere along Line FX-999-A1. Based on the known history and condition of the pipeline, the plans for repairs must include consideration of: (1) removal of coating and associated inspection and re-coating; and (2) replacement the entire pipeline segment (or technical justification for not doing so). Include a detailed description of the criteria and method(s) to be used in undertaking any repairs, replacements, or other remedial actions;
- E. The implementation of continuing long-term periodic testing and integrity verification measures to ensure the ongoing safe operation of Line FX-999-A1 considering the results of the analyses, inspections, and corrective measures undertaken pursuant to the Order. Include a plan to review leak detection practices and procedures on the pipeline such as line balance intervals and verify capability to detect leaks in all operational states (e.g. while line is shutdown, steady state line, and transient operations); and

F. A schedule for completion of the Items A–E.

7. The Work Plan becomes incorporated into this Order. Respondent must revise the work plan 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 such plan revisions to the Regional Director for prior approval. The Director may approve plan elements incrementally.
8. Implement the Work Plan as it is approved by the Regional Director, including any revisions to the plan.
9. Submit quarterly reports to the Regional 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 quarterly report for the period from April 12 through June 30, 2011 shall be due by July 31, 2011.
10. It is requested but not required that Respondent 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 must correct all deficiencies within the time specified by the Director, and resubmit it for approval.
12. The Regional 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.

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Jeffrey D. Wiese  
Associate Administrator  
for Pipeline Safety

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Date Issued