

OCTOBER 17, 2014

VIA CERTIFIED MAIL AND FAX TO: (866) 547-7490

Mr. Charles E. Maser
President
Mid-Valley Pipeline Company
1818 Market Street, Suite 1500
Philadelphia, PA 19103

Re: CPF No. 4-2014-5026H

Dear Mr. Maser:

Enclosed is a Corrective Action Order issued by the Pipeline and Hazardous Materials Safety Administration in the above-referenced case. It requires Mid-Valley Pipeline Company to take certain corrective actions with respect to its 20-inch diameter crude oil pipeline that failed on October 13, 2014, near the town of Mooringsport, Louisiana. Service is being made by certified mail and facsimile. Service of this Corrective Action Order by facsimile or other electronic means is complete upon receipt, as provided under 49 C.F.R. § 190.5. The terms and conditions of this Order are effective immediately upon service.

Thank you for your cooperation in this matter.

Sincerely,

Jeffrey D. Wiese
Associate Administrator
for Pipeline Safety

Enclosure

cc: Mr. Rod Seeley, Director, Southwest Region, PHMSA, Office of Pipeline Safety
Mr. David Chalson, Vice President, Operations, Sunoco Logistics Partners, L.P.,
4041 Market Street, Aston, PA 19014
Mr. Todd Nardoizzi, DOT Compliance Manager, Sunoco Logistics Partners, L.P.

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

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

In the Matter of

Mid-Valley Pipeline Company,

Respondent.

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CPF No. 4-2014-5026H

CORRECTIVE ACTION ORDER

Purpose and Background

This Corrective Action Order (Order) is being issued, under the authority of 49 U.S.C. § 60112 and 49 C.F.R. § 190.233, to require Mid-Valley Pipeline Company (Mid-Valley or Respondent), to take the necessary corrective action to protect the public, property, and the environment from potential hazards associated with a recent failure involving Respondent's 20-inch diameter hazardous liquid pipeline transporting crude oil from Longview, Texas, to Samaria, Michigan (Mid-Valley Pipeline).

On October 13, 2014, a failure occurred on Respondent's Mid-Valley Pipeline near the town of Mooringsport in Caddo Parish, Louisiana, resulting in the release of up to 4,000 barrels of crude oil into the environment. 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. The preliminary findings of the ongoing investigation are set forth below.

Preliminary Findings

- The Mid-Valley Pipeline extends approximately 1,000 miles from Longview, Texas, to Samaria, Michigan, and has a stated capacity of approximately 238,000 barrels per day in transporting crude oil from the Gulf of Mexico region to Midwest refineries.
- Sunoco Logistics Partners, LP (Sunoco Logistics), holds a majority interest in the Mid-Valley Pipeline. Sunoco Logistics' pipeline facilities include approximately 4,900 miles of crude-oil trunk lines and 500 miles of crude-oil gathering lines in the Southwest and

Midwest regions of the United States. Sunoco Logistics' general partner is owned by Energy Transfer Partners, LP.¹

- Based on the sudden pressure drop indications in Respondent's control room, the Mid-Valley Pipeline failed on October 13, 2014, at approximately 8:00 a.m. CDT downstream of the Karnack Pump Station. Respondent dispatched personnel to the area and identified the failure site to be near Mile Post (MP) 51.5, approximately three miles southwest of Mooringsport, Louisiana, and approximately one mile west of State Highway 169.
- As a result of the failure, crude oil was released into the Tete Bayou, a tributary to Caddo Lake, and migrated at least four miles from the source. The failure occurred in a High Consequence Area (HCA) based on environmental sensitivity and proximity to drinking water intakes.
- The pump units were shut down at 8:02 a.m., CDT, and the failed section was isolated by closure of the nearest upstream and downstream main line valves at MP 37.2 and 55, respectively. Respondent reported the failure to the National Response Center at 2:17 p.m. CDT, on October 13, 2014 (NRC Report No. 1098151). Respondent submitted an updated report to the NRC on October 15, 2014, at 9:19 p.m. CDT (NRC Report No. 1098153).
- Various federal, state and local agencies, including PHMSA, responded to the scene of the failure. Booms were deployed in an effort to keep the oil from reaching Caddo Lake and Respondent stationed vacuum trucks to collect oil from two roadway stream crossings to begin skimming operations. Three residences were evacuated due to the potential for highly flammable vapor levels.
- The portion of the Mid-Valley Pipeline on which the failure occurred, and which runs from the Longview Pump Station (MP 10.6) to the Haynesville Pump Station (MP 103.6), was originally constructed in 1950. It consists of Grade X52 flash-welded seam pipe manufactured by A.O. Smith, has a wall thickness of 0.250," and has a coal-tar coating. The control center for the pipeline is located in Sugarland, Texas.
- The maximum operating pressure (MOP) of the segment on which the failure occurred is 936 psig. At the time of the failure, the discharge pressure of the Karnack Pump Station was 802 psig and the actual operating pressure of the pipeline at the failure site was approximately 750 psig.
- Following the failure, Respondent took the portion of the Mid-Valley Pipeline running from Longview, Texas, to Lima, Ohio, out of service. Respondent intends to remove a portion of the pipeline, including the failure origin, and transport it to a metallurgical lab for failure analysis. Pipeline operations north of the Haynesville Pump Station are expected to resume and will be operated at a reduced pressure.

¹ See <http://www.sunocologistics.com/investors/fag/41/> question 2. *Who owns Sunoco Logistics?* and http://www.energytransfer.com/overview_sunl.aspx (last accessed October 16, 2014).

- The cause of the failure is still undetermined and the investigation is ongoing. Pipe manufactured prior to 1970 with flash-welded seams have a known history of seam integrity concerns under certain conditions. PHMSA has issued multiple Advisory Bulletins on the subject of low-frequency electric resistance welded and flash welded pipe. A. O. Smith pipe of that vintage also has a known history of hard spots in the pipe body.
- While metallurgical testing of the failed pipe has not yet been completed, the Mid-Valley Pipeline has some history of internal corrosion failures, a known concern that cannot yet be ruled out as a possible cause. In addition, no records of a hydrotest subsequent to original construction are available.
- This is the second failure on the Mid-Valley Pipeline in the past seven months. On March 18, 2014, a failure occurred on the pipeline in a nature preserve in Hamilton, County, Ohio, caused by cracking of pipe material, although this failure involved pipe of a different type (seamless) manufacture.²

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 likely result in 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 continued operation of the pipeline without corrective measures would be hazardous to life, property, and the environment. Additionally, having considered the manufacture of the pipeline and seam type; the unknown cause of the failure; the location of the failure; the proximity of the pipeline to HCAs including environmentally sensitive areas and drinking water intakes; the history of the pipeline, and the nature of the product being transported; I find that a failure to issue this Order expeditiously to require immediate corrective action would result in the likelihood of serious harm to life, property, or 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.

² See *In the Matter of Mid-Valley Pipeline Company*, Corrective Action Order, CPF No. 3-2014-5002H (March 25, 2014). The pipe that failed in the March 18, 2014 release event was seamless pipe manufactured by National Tube.

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, with a copy to the Director, Southwest Region, PHMSA (Director). If a hearing is requested, it will be held telephonically or in-person in Houston, Texas, or Washington, D.C.

After receiving and analyzing additional data in the course of this investigation, PHMSA 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 Actions

Pursuant to 49 U.S.C. § 60112, I hereby order Mid-Valley Pipeline Company to immediately take the following corrective actions with respect to the Mid-Valley Pipeline:

1. **Operating Restriction.** Respondent must not operate the 25.8-mile pipeline segment running from the Karnack Pump Station (MP 37.2) to the Benton Pump Station (MP 63) (Karnack to Benton Segment) until authorized in writing to do so by the Director pursuant to Item 4.
2. **Operating Pressure Restriction.** Respondent must reduce and maintain a twenty percent (20%) pressure reduction in the actual operating pressure along the entire length of the Longview Pump Station to Haynesville Pump Station Segment (Longview to Haynesville Segment) such that the operating pressure on this segment will not exceed eighty percent (80%) of the actual operating pressure in effect immediately prior to the failure on October 13, 2014.
 - a. This pressure restriction is to 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.
 - b. This pressure restriction requires that any relevant remote or local alarm limits, software programming set-points or control points, and mechanical over-pressure devices be adjusted accordingly.
3. **Restart Plan.** Prior to resuming operation of the Karnack to Benton Segment, develop and submit a written Restart Plan to the Director for approval.
 - a. The Director may approve the Restart Plan incrementally without approving the entire plan, but the Karnack to Benton Segment cannot resume operation until the Restart Plan is approved in its entirety.
 - b. Once approved by the Director, the Restart Plan will be incorporated by reference into this Order.

- c. The Restart Plan must provide for adequate patrolling of the Karnack to Benton Segment during the restart process and must include incremental pressure increases during start-up, with each increment to be held for at least one hour.
 - d. The Restart Plan must specify a day-light restart and include advance communications with local emergency response officials.
 - e. The Restart Plan must provide for a review of the Karnack to Benton Segment for conditions similar to those of the failure, including a review of construction, operating and maintenance (O&M) and integrity management records. These would include such records as in-line inspection (ILI) results, hydrostatic tests, root-cause failure analysis of prior failures, aerial and ground patrols, corrosion, cathodic protection, excavations and pipe replacements. Respondent must address any findings that require remedial measures to be implemented **prior to restart**.
 - f. The Restart Plan must also include documentation of the completion of all mandated actions, and a management of change plan to ensure that all procedural modifications are incorporated into Mid-Valley's operations and maintenance procedures manual.
 - g. The Restart Plan must provide for hydrostatic pressure testing of the Karnack to Benton Segment.
4. **Return to Service.** After the Director approves the Restart Plan, Respondent may return the Karnack to Benton Segment to service, but the operating pressure on the Longview to Haynesville Segment must not exceed eighty percent (80%) of the actual operating pressure in effect immediately prior to the failure on October 13, 2014, in accordance with Item 2 above.
5. **Removal of Pressure Restriction.**
- a. The Director may allow the removal or modification of the pressure restriction upon a written request from Respondent demonstrating 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.
 - b. The Director may allow the temporary removal or modification of the pressure restrictions upon a written request from Respondent demonstrating that temporary mitigative and preventive measures are implemented prior to and during the temporary removal or modification of the pressure restriction. The Director's determination will be based on the failure cause and provision of evidence that preventative and mitigative actions taken by the operator provide for the safe operation of the Longview to Haynesville Segment during the temporary removal or modification of the pressure restriction. Appeals to determinations of the Director in this regard will be decided by the Associate Administrator for Pipeline Safety.

6. **Mechanical and Metallurgical Testing.** Within 45 days of receipt of this Order, Mid-Valley must complete mechanical and metallurgical testing and failure analysis of the failed pipe, including an analysis of soil samples and any foreign materials. The company must 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. Within 10 days of receipt of this Order, develop and submit the testing protocol and the proposed testing laboratory to the Director for prior approval;
 - c. Prior to beginning the mechanical and metallurgical testing, provide the Director with the scheduled date, time, and location of the testing to allow for an OPS representative to witness the testing; and
 - d. Ensure the testing laboratory distributes all reports, whether draft or final, in their entirety to the Director at the same time they are made available to Respondent.

7. **Integrity Verification and Remediation Plan (IVRP).**

- a. Within 45 days following receipt of the final report from the metallurgical testing laboratory, Respondent must submit an Integrity Verification and Remediation Plan (IVRP) for the Longview to Haynesville Segment to the Director for approval.
- b. The Director may approve the IVRP incrementally without approving the entire IVRP.
- c. Once approved by the Director, the IVRP will be incorporated by reference into this Order.
- d. The IVRP must specify the tests, inspections, assessments, evaluations, and remedial measures Respondent will use to verify the integrity of the Longview to Haynesville Segment. It must address all known or suspected factors and causes of the October 13, 2014 failure. Respondent should consider both the risk of another failure and the consequence of another failure to develop a prioritized schedule for IVRP related work.
- e. The IVRP must include a procedure or process to:
 - i. Gather all data necessary to review the failure history (in service and pressure test failures) of the Longview to Haynesville Segment and to prepare a written summary containing all the available information such as the locations, dates, and causes of leaks and failures;
 - ii. Integrate the results of the metallurgical testing, root cause failure analysis, and other corrective actions required by this Order with all

relevant pre-existing operational and assessment data for the Longview to Haynesville Segment. Pre-existing operational data includes, but is not limited to, construction, operations, maintenance, testing, repairs, prior metallurgical analyses, and any third party consultation information. Pre-existing assessment data includes, but is not limited to, ILI tool runs, hydrostatic pressure testing, direct assessments, close interval surveys, and DCVG/ACVG surveys;

- iii. Determine if conditions similar to those contributing to the failure on October 13, 2014, are likely to exist elsewhere on the Longview to Haynesville Segment.
- iv. Conduct additional field tests, inspections, assessments, and/or evaluations to determine whether, and to what extent, the conditions associated with the failure on October 13, 2014, and other failures from the failure history (see [(e)(ii)] above) or any other integrity threats are present elsewhere on the Longview to Haynesville Segment. At a minimum, this process must consider all failure causes and specify the use of one or more of the following:
 - 1. Inline inspection (ILI) tools that are technically appropriate for assessing the pipeline system based on the cause of failure on October 13, 2014 and that can reliably detect and identify anomalies;
 - 2. Hydrostatic pressure testing;
 - 3. Close-interval surveys;
 - 4. Cathodic protection surveys, to include interference surveys in coordination with other utilities (e.g. underground utilities, overhead power lines, etc.) in the area;
 - 5. Coating surveys;
 - 6. Stress corrosion cracking surveys;
 - 7. Selective seam corrosion surveys; and
 - 8. Other tests, inspections, assessments, and evaluations appropriate for the failure causes.

Note: Respondent may use the results of previous tests, inspections, assessments, and evaluations, if approved by the Director, provided the results of the tests, inspections, assessments, and evaluations are analyzed with regard to the factors known or suspected to have caused the October 13, 2014 failure.

- f. Mid-Valley must describe the inspection and repair criteria Respondent will use to prioritize, excavate, evaluate, and repair anomalies, imperfections, and other identified integrity threats. Include a description of how any defects will be graded and a schedule for repairs or replacement.
 - g. Based on the known history and condition of the Longview to Haynesville Segment, Respondent must describe the methods it will use to repair, replace, or take other corrective measures to remediate the conditions associated with the pipeline failure on October 13, 2014, and to address other known integrity threats along the Longview to Haynesville Segment.
 - h. Mid-Valley must implement continuing long-term periodic testing and integrity verification measures to ensure the ongoing safe operation of the Longview to Haynesville Segment, considering the results of the analyses, inspections, evaluations, and corrective measures undertaken pursuant to the Order.
 - i. Respondent must include a proposed schedule for completion of the IVRP.
 - j. Respondent must revise the IVRP as necessary to incorporate new information obtained during the failure investigation and remedial activities, to incorporate the results of actions undertaken pursuant to this Order, and/or to incorporate modifications required by the Director.
 - k. Mid-Valley must submit any plan revisions to the Director for prior approval.
 - l. The Director may approve plan revisions incrementally.
 - m. Mid-Valley must implement the IVRP as it is approved by the Director, including any revisions to the plan.
8. **Record Keeping.** Respondent must maintain records demonstrating its progress in completing all requirements of this Order, make them available to the Director, and retain them for a period of at least five years following completion of all work to be performed. When Respondent believes it has concluded all the items in this Order, it will submit a proposed completion report to the Director.

Documentation of the Costs. It is requested but not required that Respondent maintain documentation of the costs associated with implementation of this 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 facilities, including repairs, replacements and other modifications; and (3) environmental remediation, if applicable.

Approvals. With respect to each submission that under this Order requires the approval of the 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 with 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.

Extensions of Time. 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 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.

Be advised that all material you submit in response to this enforcement action is subject to being made publicly available. If you believe that any portion of your responsive material qualifies for confidential treatment under 5 U.S.C. 552(b), along with the complete original document you must provide a second copy of the document with the portions you believe qualify for confidential treatment redacted and an explanation of why you believe the redacted information qualifies for confidential treatment under 5 U.S.C. 552(b).

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.

In your correspondence on this matter, please refer to CPF No. 4-2014-5026H and for each document you submit, please provide a copy in electronic format whenever possible.

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

Jeffrey D. Wiese
Associate Administrator
for Pipeline Safety

Date Issued