

VIA CERTIFIED MAIL AND FACSIMILE TO: (918) 574-7421

August 26, 2011

Mr. Michael Pearson
Vice President - Technical Services
Magellan Ammonia Pipeline, LP
One Williams Center
Mail Drop 27
Tulsa, Oklahoma 74172

Re: CPF No. 3-2011-5010H

Dear Mr. Pearson:

Enclosed is a Notice of Proposed Corrective Action Order (Notice) issued in the above-referenced case. The Notice proposes that you take certain measures with respect to your pipeline that is located in a right-of-way with an Enterprise Products Operating, LLC pipeline that failed on August 13, 2011. Service is being made by certified mail and facsimile. Your receipt of this Notice constitutes service of that document under 49 C.F.R. § 190.5.

We look forward to a successful resolution of concerns arising out of the recent pipeline failure to ensure pipeline safety. Please direct any questions on this matter to me at (816) 329-3800.

Sincerely,

David Barrett
Director, Central Region
Pipeline and Hazardous Materials Safety Administration

Enclosures: *Notice of Proposed Corrective Action Order*
49 C.F.R. § 190.233

**DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION
OFFICE OF PIPELINE SAFETY
CENTRAL REGION
KANSAS CITY, MO 64106-2641**

In the Matter of)	
)	
Magellan Ammonia Pipeline, LP,)	CPF No. 3-2011-5010H
)	
Respondent)	
)	

NOTICE OF PROPOSED CORRECTIVE ACTION ORDER

Background and Purpose

On August 13, 2011, a failure occurred on a hazardous liquids pipeline in the vicinity of Magellan Ammonia Pipeline's (Respondent) 8-inch anhydrous ammonia pipeline, hereafter referred to as the Green Line, that crosses underneath the Missouri River approximately 8 miles west of Onawa, Iowa in Monona County. The August 13 failure occurred on Enterprise Products Operating, LLC (Enterprise), West Leg Red pipeline, which is located in a common right-of-way (ROW) with Respondent's 8-inch Green Line. The pipelines in the ROW, which include the Enterprise West Leg Red, Blue and the Magellan Green Line, are shut down. The cause of the Failure is unknown. Pursuant to 49 U.S.C. § 60117, the Pipeline and Hazardous Materials Safety Administration (PHMSA) has initiated an investigation of the accident.

PHMSA issues this Notice of Proposed Corrective Action Order, in accordance with 49 U.S.C. § 60112, notifying Respondent of the preliminary findings of the investigation, and proposing that Respondent take corrective measures, with respect to the 8-inch Green Line, to protect the public, property, and the environment from potential hazards associated with the pipeline.

Preliminary Findings

- Magellan's 8-inch Green Line is in a common right-of-way with Enterprise's West Leg Red Line (Red Line). A release from Enterprise's 8-inch Red Line occurred at approximately 1:57 a.m. CDT, on August 13, 2011. The Red Line failure was approximately eight miles west of Onawa, Iowa in Monona County.

- The Failure was reported to the National Response Center at 4:23 a.m. CDT on August 13, 2011 (NRC Report No. 985803). Enterprise updated the initial report to the National Response Center at 8:14 a.m. CDT (Report No. 985813) on August 13, 2011.
- Following receipt of the NRC notice by Enterprise on August 13, 2011, PHMSA Central Region communicated to Magellan personnel that a sudden pressure drop was noted on Enterprise's Red Line, and per PHMSA's information, Magellan's Green Line was nearby.
- In response to PHMSA's notification, Magellan's Control Center in Tulsa, Oklahoma shut down the 8-inch Green Line on August 13, 2011 at 6:45 a.m.
- PHMSA issued a Corrective Action Order to Enterprise Product Operating, LLC on August 19, 2011, requiring corrective actions on Enterprise's Red and Blue pipelines crossing the Missouri River between Decatur, Nebraska and Onawa, Iowa.
- No fires, injuries, fatalities, or evacuations were reported in connection with Enterprise's pipeline failure. The Missouri River at the crossing of Enterprise's and Magellan's pipelines between Decatur, Nebraska and Onawa, Iowa has experienced ongoing flood conditions. The toll bridge across the Missouri River had been closed previously due to flooding.
- The cause of the Enterprise Red Line failure is unknown and the investigation is ongoing. Due to flooding conditions on the Missouri River, visual observation of the failure section was not possible.
- A sonar survey of the flooded river after Enterprise's Red Line failure indicated washout areas that have exposed Magellan's Green Line close to Highway 175 near Onawa, Iowa. Therefore, Magellan's Green Line faces a heightened risk of suffering the same type of failure as the one already experienced on Enterprise's Red line.
- There are Green Line block valve sites on either side of the Missouri River near Decatur, Nebraska Milepost (MP) 269 and near Onawa, Iowa at MP 271. Hereafter the Affected Pipeline is between MP 269 and MP 271 on Magellan's Green Line.
- Magellan's anhydrous ammonia pipeline system is approximately 1,090 miles in length. The pipeline system delivers anhydrous ammonia from production facilities in Oklahoma and Texas to terminals in the Midwest, and terminates near Mankato, Minnesota.

The segment of the Green Line that crosses the Missouri River traverses from Conway, Kansas to Whiting, Iowa. Product originates at Conway into this segment from the Magellan South Leg. Delivery points on this segment of the system are located at Conway, Clay Center, Beatrice, Greenwood, Blair, and Whiting. Pump stations and terminals are located as follows: Conway Station MP 0; Abilene Station MP 52.4; Clay Center MP 87.5; Linn Station MP 98.4; Beatrice Station MP 147.1; Greenwood

Terminal MP 194.9; Herman Station MP 247; Whiting Station MP 280.8. An 11.6 mile lateral going to Blair, Nebraska is also located on this segment. The total length of the Green Line segment from Conway to Whiting is 280.8 miles, excluding the Blair Lateral.

Respondent's 8-inch Green Line and Enterprise's 8-inch Red and Blue Lines are parallel lines that run beneath the Missouri River approximately 270 pipeline miles from Conway, KS.

- The affected pipeline in the area of the failure consists of 8-inch diameter, 0.277 inch wall thickness, Grade X-42 line pipe manufactured by Lone Star Steel in 1992. The pipe is coated with fusion bonded epoxy, and cathodic protection is provided by an impressed current cathodic protection system.
- According to Magellan, the established maximum operating pressure of the Green Line at the Missouri River crossing is 1198 psig. Respondent has calculated that the actual operating pressure at the time of shut down on August 13, 2011 was 598 psig.

The Green Line was most recently hydrostatically tested with water in October 2010. The test pressure was 1520 psig for 8 hours, including a spike test to 1673 psig.

- There were two previous failures, one in 2004 and one in 2006, for which PHMSA issued Corrective Action Orders to the previous operator of the Green Line.
 - 1) CPF No. 3-2004-5032H following a failure near Kingman, KS.
 - 2) CPF No. 3-2006-5044H following a failure near Clay Center, KS.

A third significant failure occurred near Pawnee, Oklahoma on January 10, 2010.

- Respondent has reported that an inline inspection of the affected pipeline was performed in 2006 using geometry and magnetic flux leakage (MFL) technology.
- The Affected Pipeline impacts one or more "High Consequence Areas" as defined under 49 C.F.R. 195.450, and the site of the exposed pipeline along the Missouri River is located adjacent to State Route 175 in Monona County, Iowa.
- OPS issued an Advisory Bulletin ADB-11-04 in the Federal Register on July 27, 2011 on the "Potential for Damage to Pipeline Facilities Caused by Flooding," cautioning operators to take appropriate action to minimize the risk of damage to pipelines due to flooding. The Advisory was also posted on PHMSA's website:

<http://phmsa.dot.gov/staticfiles/PHMSA/WebArticles/Pipeline%20topics/Advisory%20Bulletins/Flooding%20Advisory.pdf>

Allegation of Hazardous Condition 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.

After evaluating the foregoing preliminary findings of fact and considering the age of the pipe, the unknown circumstances surrounding this failure, the proximity of the pipeline to populated areas, public roadways, navigable waterways and high consequence areas, the hazardous nature of the product transported, the pressure required for transporting such product, and the ongoing investigation to determine the cause of the failure, it appears that the continued operation of the affected pipeline without corrective measures would be hazardous to life, property, and the environment.

Accordingly, PHMSA issues this Notice of Proposed Corrective Action Order to notify Respondent of the agency's intent to issue a corrective action order and to propose that Respondent take measures specified herein to protect the public, property, and the environment.

Response to this Notice

Respondent may request a hearing on this Notice, to be held as soon as practicable, by notifying the Director, Central Region, PHMSA, 901 Locust Street, Suite 462, Kansas City, MO 64106-2641, in writing within 10 days of service of this notice. Failure to submit such written notification waives the opportunity for a hearing and allows the Associate Administrator for Pipeline Safety to proceed to determine whether or not a corrective action order is required in accordance with 49 C.F.R. § 190.233. If a hearing is requested, it will be held telephonically or in-person in Kansas City, MO, on a date that is mutually convenient to Respondent and PHMSA.

As soon as practicable after the conclusion of a hearing, or if no hearing is requested, the Associate Administrator for Pipeline Safety will determine whether or not a corrective action order is required. If the Associate Administrator finds the facility is or would be hazardous to life, property, or the environment, the Associate Administrator shall issue a corrective action order in accordance with 49 C.F.R. § 190.233. If the Associate Administrator does not find the facility is or would be hazardous to life, property, or the environment, the Associate Administrator shall withdraw the allegation of the existence of a hazardous condition contained in this Notice, and promptly notify Respondent in writing.

Proposed Corrective Action

Pursuant to 49 U.S.C. § 60112 and 49 C.F.R. § 190.233, PHMSA proposes to issue to Magellan Ammonia Pipeline, LP, a corrective action order incorporating the following remedial requirements with respect to the affected pipeline:

1. Magellan's 8-inch Green Line crossing the Missouri River is to remain shutdown between MP 269 near Decatur, Nebraska and MP 271 near Onawa, Iowa.
2. Within 30 days following service of this Order, and prior to restart of the 8-inch Green Line, develop and submit a written repair plan ("Repair Plan") for approval to the Director, Central Region, OPS ("Director"), Pipeline and Hazardous Materials Safety Administration, 901 Locust Street, Suite 462, Kansas City, MO 64106-2641. The terms of that Repair Plan, at a minimum, must include the following provisions:
 - a. Any testing, assessments, or evaluations necessary to understand the condition of the 8-inch Green Line in the area of the pipeline crossing of the Missouri River between Decatur, Nebraska and Onawa, Iowa affected by flooding, and submit a written report of findings.
 - b. Replacement, if appropriate, of the 8-inch Green Line crossing the Missouri River between Decatur, Nebraska and Onawa, Iowa to fully remediate any risks identified by evaluations required by Item 2(a).
 - c. The design basis for the replacement of the pipelines, including but not limited to; anticipated internal and external loads, pipeline operating conditions, and anticipated Missouri River flooding conditions impacting the replaced crossing.
 - d. Relocate block valve sites and/or add protective measures to existing block valve sites, as necessary to maintain continuous remote control operation of the valves in the event of flooding.
3. Within 30 days following service of this Order, develop and submit to the Director for prior approval a written "Restart Plan" for the 8-inch Green Line. The terms of the Restart Plan must, at a minimum, include the following provisions:
 - a. Specify a daylight restart.
 - b. Aerial patrolling of the 8-inch Ammonia line during the restart process.
 - c. Advance communications with local emergency response officials.
 - d. A contingency plan to operate and monitor the 8-inch Ammonia lines during flooding conditions, including enhanced patrolling and remote monitoring.
4. Within 90 days following service of this Order, submit to the Director a Root Cause Analysis (RCA) for the washout and exposure of the Affected Pipeline. Magellan must take the following actions:
 - a. Submit a proposal, for the Director's prior approval, to utilize a third party to perform and/or facilitate the RCA;
 - b. The RCA must evaluate the 1992 crossing design and any assumptions utilized in developing the design, and the actions taken by Magellan since the advent of the 2011 flooding to reduce the risk of scouring and possible failure of the Green Line;
 - c. Elements of the RCA must include, but not limited to: a scoping document for the RCA; procedures associated with the RCA; multiple methods used for the RCA analysis and updates on each method as it progresses; documentation of the

- decision-making process; and a final report of the RCA results, including any lessons learned and whether the findings are applicable to other segments, processes, or programs across Respondent's pipeline system; and
- d. Develop and submit a plan with identified timelines to apply the lessons learned to other segments, processes or programs across the Respondent's pipeline system.
5. The Repair Plan shall be incorporated into this Order and 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 investigation and remedial activities. Submit any such plan revisions to the Director for prior approval. The Director may approve plan elements incrementally.
 6. Implement the Repair Plan as approved by the Director, including any revisions to the plan. Any actions taken by Magellan to meet the requirements of the Repair Plan must be in accordance with the terms of such plan, as approved by the Director, unless the actions have prior written approval from the Director before the actions are initiated. Make the results of all actions taken in accordance with the approved plan available to PHMSA or its representative.
 7. Submit monthly reports to the Director that: (1) include available data and results of the testing and evaluations required by this Order; and (2) describe the progress of the repairs and other remedial actions being undertaken. The first monthly report shall be due September 30, 2011.
 8. It is requested that Magellan maintain documentation of the costs associated with implementation of this Corrective Action Order. It is requested that Magellan include in each monthly report submitted pursuant to Item 7 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.
 9. 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.
 10. 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 the 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. In the event that 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. In the event that a resubmitted item is disapproved in whole or in part, the Director may again

require Respondent to correct the deficiencies in accordance with the foregoing procedure, and/or the Director may otherwise proceed to enforce the terms of this Order.

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

The actions proposed by this Notice of Proposed 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. Parts 190 through 199, 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.

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 the corrective action 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.

David Barrett
Director
Central Region, PHMSA

August 26, 2011
Date Issued