



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

8701 S. Gessner, Suite 630
Houston, TX 77074

VIA E-MAIL TO: richard.voliva@hollyenergy.com

August 12, 2022

Richard Voliva
President
Holly Energy Partners, L.P.
2828 North Harwood Street, Suite 1300
Dallas, Texas 75201

CPF 4-2022-055-NOPSO

Dear Mr. Voliva:

Enclosed is a Notice of Proposed Safety Order (Notice) issued by the Pipeline and Hazardous Materials Safety Administration (PHMSA) in the above-referenced case. The Notice proposes that Osage Pipe Line Company, LLC take certain measures with respect to its 20-inch crude oil Osage pipeline. The options for responding are set forth in the Notice. Service of this Notice by electronic mail is deemed effective upon the date of transmission, or as otherwise provided under 49 C.F.R. § 190.5.

We look forward to a successful resolution to ensure pipeline safety. Please direct any questions on this matter to me at 713-272-2847.

Sincerely,

Mary L. McDaniel, P.E.
Director, Southwest Region
Pipeline and Hazardous Materials Safety Administration

Enclosures: *Notice of Proposed Safety Order*
Copy of 49 C.F.R. § 190.239

cc: Ms. Linda Daugherty, Deputy Associate Administrator for Field Operations, PHMSA
Ms. Lori Coupland, Vice President, Compliance and EHS, Holly Energy Partners, LP,
lori.coupland@hollyenergy.com

**U.S. DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION
OFFICE OF PIPELINE SAFETY
SOUTHWEST REGION
HOUSTON, TX 77074**

In the Matter of	)	
	)	
	)	
Osage Pipe Line Company, LLC,	)	CPF No. 4-2022-055-NOPSO
a subsidiary of Holly Energy Partners, LP	)	
	)	
Respondent.	)	
	)	

NOTICE OF PROPOSED SAFETY ORDER

Background and Purpose:

Pursuant to Chapter 601 of Title 49, United States Code, the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS), initiated an investigation of the safety of Osage Pipe Line Company, LLC's (Osage) 136-mile, 20-inch crude oil pipeline (Osage Pipeline) that originates in Cushing, Oklahoma, and terminates in El Dorado, Kansas following an accident that occurred on July 8, 2022.

At approximately 12:29 a.m. CDT on July 8, 2022, Osage's control room reported a loss of suction on the 20-inch crude oil Osage pipeline. At 12:30 a.m., the control room received a leak alarm, however both the shift foreman and controller were on a break and did not notice the alarm. At 12:40 a.m., the controller attempted to restart the pipeline, and the control center received a third leak alarm. At 12:43 am, the line was shut down and block valves were closed. Control room personnel blocked in the pig trap at the Cushing pump station and closed the South Cimarron valve, contacted the manager of pipeline operations, then blocked in all river crossings on the Osage pipeline.

Osage dispatched a technician to the Cushing pump station who reported no sign of a release at 2:26 a.m. An hour later, the technician reported signs of hydrocarbon on the ground and in and around Skull Creek, a tributary of the Cimarron River, and the operator confirmed discovery of the accident. Osage originally estimated a release of 1,001-barrels (bbls) of crude oil. As of August 3, 2022, Osage has recovered approximately 5,700 bbls of crude oil and 12,020 bbls of water and oil. The crude oil released onto land and reached Skull Creek. The release migrated about 0.75 miles northeast of the accident location.

As a result of the preliminary investigation, it appears that conditions exist on the Osage Pipeline that pose an integrity risk to public safety, property, or the environment. Accordingly, pursuant to

49 U.S.C. § 60117, PHMSA OPS issues this Notice of Proposed Safety Order (Notice), notifying you of the preliminary findings of the investigation, and proposing that you take certain measures to ensure that the public, property, and the environment are protected from this integrity risk.

Preliminary Findings:

The preliminary findings of PHMSA's ongoing investigation are as follows:

- Osage operates a 136-mile, 20-inch crude oil pipeline (Osage Pipeline) that originates at a pump station in Cushing, Oklahoma, and terminates in El Dorado, Kansas. There are three intermediate pump stations along the pipeline (Ralston, Hardy, and Wilmont). At the termination point, the pipeline connects with a tank farm owned by Holly Energy Partners - Operating, L.P. This 11-tank farm has a total capacity of 1.1 million barrels.
- On July 8, 2022, at 12:29 a.m. CDT, Osage's control room reported a loss of suction on the Osage Pipeline. Osage confirmed discovery of the leak at 3:26 am after observing hydrocarbons on the ground in and around Skull Creek. As of August 8, 2022, Osage estimated a release of 5,700 bbls of crude oil and 12,020 bbls of water and oil. There were no injuries or fatalities.
- The Osage Pipeline released crude oil onto land and into a creek in a remote area of Cushing, Oklahoma on the tribal land of the Sac and Fox Nation. Additionally, the oil reached Skull Creek, a tributary of Cimmaron River. The release migrated about 0.75 miles northeast of the accident location.
- After the accident, Osage voluntarily provided a restart and repair plan to the Southwest Region, OPS. After review and approval by the SWR, the pipeline resumed operation under a 20% pressure reduction restriction (660 psi) on July 17, 2022.
- Although the root cause of the failure has yet to be confirmed, preliminary evidence suggests that longitudinal seam failure is the probable cause of the failure. During the repair process, Osage had to dig back and expose more pipe to find an area acceptable to perform the cut to install a pipe replacement segment due to crack-like features in the weld. At this time, Osage is performing additional testing and analysis to identify the potential threats to the safe operations of its pipeline.
- The 20-inch crude oil steel pipeline was installed in 1975. Its maximum operating pressure (MOP) is 1,080 psi. At the time of the accident, the operating pressure was 825 psi. The Osage Pipeline is coated with coal tar enamel and has an impressed current cathodic protection system.
- The pipeline has experienced four previous releases on this unit since 2002. Two were caused by internal corrosion and two were caused by material failures.

- In 2014, Magellan Midstream Partners, L.P. (Magellan), the previous operator, conducted an In-Line Inspection (ILI) using a T.D. Williamson (TDW) Magnetic Flux Leakage Circumferential (MFL-C) tool. The ILI reported 85 seam variation anomalies. TDW classified the 85 seam variations as “Other anomalies” in the final report and described them as “[n]on-detrimental irregularit[ies] due to the manufacturing of the seam weld.” In 2016, Osage purchased the pipeline from Magellan. In 2018, Osage performed an ILI of the pipeline using an Enduro tool. Osage determined during the post-accident examination that one of the reported seam variation anomalies was in the area of the failure location.
- Osage contacted the previous ILI vendor, TDW, to request a reassessment of the 2014 data to find defects similar to those of the accident site. TDW claims, that with the benefit of an improved analysis process, they have reclassified 54 of the original 85 anomalies as “Axial Planar” features with depths ranging from 10-36% wall thickness.
- On July 15, 2022, Osage received the reassessment from TDW. Based upon proximity to upstream pump stations (ten miles or less), and percent of anomaly depth (greater than twenty percent wall thickness), Osage chose to do validation digs at six locations for nine axial planar anomalies. On July 25, 2022, Osage began the validation digs.
- On August 5, 2022, Osage completed an ILI run using a Xylem smart ball ILI tool along the Osage Pipeline route to assist Osage in obtaining pressure and temperature data for the entire line to confirm the absence of small leaks and improve their hydraulic modeling.
- Osage plans to perform two additional inspections with Baker Hughes (BH) ILI tools starting mid to late August 2022 with an Ultra Sonic crack tool, followed by High Resolution MFL/Caliper/Inertial Measuring Unit combination tool.
- Osage sent the failed joint of pipe and a contiguous joint to a Quest Integrity metallurgical laboratory for further analysis.

Proposed Issuance of Safety Order:

Section 60117(m) of Title 49, United States Code, provides for the issuance of a Safety Order (Order), after reasonable notice and the opportunity for a hearing, requiring corrective action, which may include physical inspection, testing, repair, replacement, or other action, as appropriate. The basis for making the determination that a pipeline facility has a condition or conditions that pose a pipeline integrity risk to public safety, property, or the environment is set forth both in the above-referenced statute and 49 C.F.R. § 190.239, a copy of which is enclosed.

After evaluating the foregoing preliminary findings of fact and considering the hazardous nature of the product, the unknown cause of the failure, the identification of additional anomalies that

may be similar to the failed anomaly, the characteristics of the geographical area of the pipeline, including its proximity to Tribal lands, and the likelihood that the additional weld issues exist throughout the 136-mile pipeline, it appears that continued operation of the Osage Pipeline without corrective measures may pose an integrity risk to public safety, property, or the environment.

Accordingly, PHMSA issues this Notice to notify Osage of the proposed issuance of an Order and to propose that Osage take measures specified herein to address the potential risks identified in the Preliminary Findings and other risks that may be determined as a result of the proposed corrective measures.

Proposed Corrective Actions:

Pursuant to 49 U.S.C. § 60117(m) and 49 C.F.R. § 190.239, PHMSA proposes to issue to Osage Pipe Line Company, LLC a Safety Order incorporating the following remedial requirements with respect to its Osage Pipeline that originates in Cushing, Oklahoma and terminates in El Dorado, Kansas:

Note: For the purposes of this Notice, “Director” means the Director, Southwest Region, Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety, 8701 S. Gessner, Suite 630, Houston, Texas, 77074.

Definitions:

Affected Pipeline – The “*Affected Pipeline*” means Osage’s entire 136 mile 20-inch pipeline that originates in Lincoln County, Oklahoma and terminates in El Dorado, Kansas, where it connects with Holly Energy Partners – Operating, L.P.

1. ***Operating Pressure Restriction.*** Osage must maintain a twenty percent (20%) pressure reduction in the actual operating pressure along the entire length of the *Affected Pipeline* such that the *Affected Pipeline* will not exceed eighty percent (80%) of the actual operating pressure in effect at the failure location immediately prior to the failure on July 8, 2022.
 - a. 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.
 - b. Within 15 days of receipt of this Order, Osage must provide the Director the actual operating pressures of the Cushing, Ralston, Hardy, and Wilmont pump stations at the time of failure and the reduced pressure restriction set-points at these same locations.
 - c. This pressure restriction requires any relevant remote or local alarm limits, software programming set-points or control points, and mechanical over-pressure devices to be adjusted accordingly.
 - d. When determining the pressure restriction set-points, Osage must consider any in-

line inspection (ILI) features or anomalies present in the *Affected Pipeline* to provide for continued safe operation while further corrective actions are completed.

- e. Osage must review the pressure restriction monthly by analyzing the operating pressure data, taking into account any ILI features or anomalies present in the *Affected Pipeline*. Osage must immediately reduce the operating pressure further to maintain the safe operations of the *Affected Pipeline*, if warranted by the monthly review.
 - f. The Director may allow the temporary removal or modification of the pressure restriction upon a written request from Osage 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 available information, including the failure cause and evidence that preventative and mitigative actions taken by the operator provide for the safe operation of the *Affected Pipeline* 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.
2. ***Review of Prior In-line Inspection (ILI) Results.*** Within 30 days of receipt of this Order, Osage must conduct a review of any previous ILI results of the *Affected Pipeline*. In its review, Osage must re-evaluate all ILI results from the past 10 calendar years, including a review of the ILI vendors' raw data and analysis. Osage must determine whether prior ILI runs indicated any anomalies at the failure location. Also, Osage must determine if any features with similar characteristics are present elsewhere on the *Affected Pipeline*. Osage must submit documentation of this ILI review to the Director within 45 days of receipt of this Order as follows:
 - a. List all ILI tool runs, tool types, and the calendar years of the tool runs.
 - b. List, describe (type, size, wall loss, etc.), and identify the specific location of all ILI features present in the failed joint and other pipe removed.
 - c. List, describe (type, size, wall loss, etc.), and identify the specific location of all ILI features with similar characteristics present elsewhere on the *Affected Pipeline*.
 - d. Explain the process used to review the ILI results and the results of the reevaluation.
 3. ***Mechanical and Metallurgical Testing.*** Within 45 days of receipt of this Order, Osage must complete mechanical and metallurgical testing and failure analysis of the failed pipe, including an analysis of soil samples and any foreign materials. Mechanical and metallurgical testing must be conducted by the previously approved independent third-party. Osage must complete the testing and analysis and 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 Osage.
 4. ***Root Cause Failure Analysis.*** Within 90 days following receipt of this Order, Osage must complete a root cause failure analysis (RCFA) and submit a final report of this RCFA to the Director. The RCFA must be supplemented or facilitated by an independent third-party approved by the Director. The RCFA must document the decision-making process and all factors contributing to the failure. The final report

must include findings and any lessons learned and whether the findings and lessons learned are applicable to other locations within Osage's pipeline system.

5. Remedial Work Plan (RWP).

- a. Within 90 days following receipt of this Order, Osage must submit a remedial work plan (RWP) to the Director for approval.
- b. The Director may approve the RWP incrementally without approving the entire RWP.
- c. Once approved by the Director, the RWP will be incorporated by reference into this Order.
- d. The RWP must specify the tests, inspections, assessments, evaluations, and remedial measures Osage will use to verify the integrity of the *Affected Pipeline*. It must address all known or suspected factors and causes of the July 8, 2022, failure. Osage must consider the risks and consequences of another failure to develop a prioritized schedule for RWP-related work along the *Affected Pipeline*.
- e. The RWP must include a procedure or process to:
 - i. Identify pipe in the *Affected Pipeline* with characteristics similar to the contributing factors identified for the July 8, 2022, failure.
 - ii. Gather all data necessary to review the failure history (in service and pressure test failures) of the *Affected Pipeline* and to prepare a written report containing all the available information such as the locations, dates, and causes of leaks and failures.
 - iii. 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 *Affected Pipeline*. Pre-existing operational data includes, but is not limited to, design, 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.
 - iv. Determine if conditions similar to those contributing to the failure on July 8, 2022, are likely to exist elsewhere on the *Affected Pipeline*.
 - v. Conduct additional field tests, inspections, assessments, and evaluations to determine whether, and to what extent, the conditions associated with the failure on July 8, 2022, and other failures from the failure history (see (e)(ii) above) or any other integrity threats are present elsewhere on the *Affected Pipeline*. At a minimum, this process must consider all failure causes and specify the use of one or more of the following:
 - 1) ILI tools that are technically appropriate for assessing the pipeline system based on the cause of failure on July 8, 2022, 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: Osage 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 July 8, 2022, failure.

- vi. Describe the inspection and repair criteria Osage 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.
 - vii. Based on the known history and condition of the *Affected Pipeline*, describe the methods Osage will use to repair, replace, or take other corrective measures to remediate the conditions associated with the pipeline failure on July 8, 2022, and to address other known integrity threats along the *Affected Pipeline*. The repair, replacement, or other corrective measures must meet the criteria specified in (e)(vi) above.
 - viii. Implement continuing long-term periodic testing and integrity verification measures to ensure the ongoing safe operation of the *Affected Pipeline* considering the results of the analyses, inspections, evaluations, and corrective measures undertaken pursuant to the Order.
- f. Include a proposed schedule for completion of the RWP.
 - g. Osage must revise the RWP 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 to incorporate modifications required by the Director.
 - h. Submit any plan revisions to the Director for prior approval, the Director may approve plan revisions incrementally as needed.
 - i. Implement the RWP as it is approved by the Director, including any revisions to the plan.

Other Requirements:

6. **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 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.

7. ***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.
8. ***Reporting.*** Submit quarterly reports to 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 quarterly report is due on September 30, 2022. The Director may change the interval for the submission of these reports.
9. ***Documentation of the Costs.*** It is requested that Respondent maintain documentation of the costs associated with implementation of this Notice of Proposed Safety 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.

The actions proposed by this Notice are in addition to, and do not waive, any requirements that apply to Osage's pipeline facilities under 49 C.F.R. Parts 190 through 199, under any other order issued to Osage under the 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 proceeding, PHMSA may identify other corrective measures that the Osage must perform. In that event, Osage will be notified of any additional measures required and any amendments to the final Safety Order. To the extent consistent with safety, Osage will be afforded notice and an opportunity for a hearing prior to the imposition of any additional corrective measures.

Response to this Notice:

In accordance with § 190.239, you have 30 days following receipt of this Notice to submit a written response to the Director. If you do not respond within 30 days, this constitutes a waiver of your rights to contest this Notice and authorizes the Associate Administrator for Pipeline Safety to find facts as alleged in this Notice without further notice to you and to issue a final Safety Order. In your response, you may indicate that you intend to comply with the terms of the Notice as proposed, or you may request that an informal consultation be scheduled (you will also have the opportunity to request an administrative hearing before a final Safety Order is issued). Informal consultation provides you with an opportunity to explain the circumstances associated with the

risk conditions alleged in the Notice and, as appropriate, to present a proposal for a work plan or other remedial measures without prejudice to your position in any subsequent hearing.

If you and PHMSA agree within 30 days of the informal consultation on a plan and schedule for you to address each identified risk condition, the parties may enter into a written consent agreement, in which case PHMSA would then issue an administrative Consent Order incorporating the terms of the agreement. If a consent agreement is not reached, or if you have elected not to request informal consultation, you may request an administrative hearing in writing within 30 days following receipt of the Notice or within 10 days following the conclusion of an informal consultation that did not result in a consent agreement, as applicable. Following a hearing, if the Associate Administrator finds the facility to have a condition that poses a pipeline integrity risk to the public, property, or the environment in accordance with § 190.239, the Associate Administrator may issue a final Safety Order.

Be advised that all material submitted in response to this enforcement action is subject to public availability. 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).

In your correspondence on this matter, please refer to **CPF 4-2022-055-NOPSO**, and for each document you submit, please provide a copy in electronic format whenever possible.

Mary L. McDaniel, P.E.
Director, Southwest Region, Office of Pipeline Safety
Pipeline and Hazardous Materials Safety Administration

Date Issued