

July 16, 2019

VIA CERTIFIED MAIL AND EMAIL TO:

Todd Denton
President
Phillips 66 Pipeline, LLC
2331 CityWest Blvd.
Houston, Texas 77042

CPF No. 4-2019-5015H

Dear Mr. Denton:

Enclosed please find a Corrective Action Order (CAO) issued by the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS), in the above-referenced case. It requires Phillips 66 Pipeline, LLC, to take certain corrective actions with respect to a crude oil release north of Wichita Falls, Texas, on July 10, 2019, from its 12.75-inch OK-01 pipeline.

Service of this CAO is being made by certified mail and facsimile. Service of the CAO by electronic transmission is deemed complete upon transmission and acknowledgement of receipt, or as otherwise provided under 49 C.F.R. § 190.5. The terms and conditions of this Order are effective upon completion of service.

Sincerely,

Alan K. Mayberry
Associate Administrator
for Pipeline Safety

Enclosure: CAO

cc: Ms. Linda Daugherty, Deputy Associate Administrator for Field Operations, OPS
Ms. Mary McDaniel, Director, Southwestern Region, OPS

- P66, a wholly-owned subsidiary of Phillips 66, operates more than 12,000 miles of pipeline and associated facilities in the United States that transport both crude oil and

refined petroleum products.¹

- The OK-01 crude oil system is a 12.75-inch pipeline running from Wichita Falls, Texas, to South Tank Farm in Ponca City, Oklahoma. The line is 217.24 miles in length and was built in 1955. The pipeline is part of a larger P66 unit with a total of 452.57 miles.

Upon discovery of the potential release, P66 shut the system in and held pressure on the pipeline north of the Red River, indicating the potential release was located somewhere between Wichita Falls, Texas, and the Texas/Oklahoma state line. P66 dispatched a patrol plane and confirmed the Failure Site as being located at approximately MP 204.5, roughly two miles east of Thornberry, Texas. P66 mobilized its Oil Spill Removal Organization and company staff to respond to the Failure Site. It also placed booms in the landowner stock pond to contain the spilled oil and began recovery operations.

- It is estimated that 1200 barrels of crude oil was released.
- Line OK-01, between Wichita Falls, Texas, and Ponca City, Oklahoma, was constructed of 12.75-inch OD x 0.250-inch wall thickness, low-frequency electric resistance welded (LF ERW) pipe manufactured in 1955 by an unknown manufacturer. Pipes manufactured prior to 1970 with LF ERW longitudinal seams are a known threat to pipeline integrity under certain conditions. A visual inspection of the failed pipe by the PHMSA personnel on-site appeared to show longitudinal seam failure as a probable cause of the failure.
- On July 13, 2019, the Director approved P66's written restart plan, and operation was restarted on July 14, 2019.
- The rupture opening appears to be a longitudinal seam failure 7 feet long by 1 inch at the widest point. The failure appears to be in the middle of a 47-foot section of pipeline (between girth welds).
- The Maximum Operating Pressure is 1168 pounds per square inch (psig) at the leak location. The discharge at the Wichita Falls Pump Station (MP 217) was recorded at 865 psig. The pump station is located approximately 13 miles upstream of the point of failure.
- There are portions of the approximate 217-mile OK-01 pipeline that traverse High Consequence Areas that could potentially affect the life and property of those

¹ See <https://www.phillips66.com/about/> (last accessed July 15, 2019).

surrounded by the pipeline. The pipeline originates in the city of Wichita Falls, Texas. The nature of the LF ERW pipeline may make a release more likely prior to additional testing and evaluation.

- The pipeline crosses environmentally sensitive areas as the crude oil is shipped from Wichita Falls, Texas, to Ponca City, Oklahoma. Some of the areas could affect areas and drinking water sources. Approximately 6.8 miles downstream of the Failure Site, the pipeline crosses the Red River and there is a drinking water source between Thornberry and the Failure Site to the southwest.
- There have been two reportable accidents on this pipeline between 2002 and the present. The first was in September 2011 in Temple, Oklahoma, which was the result of an unknown cause as it was 25 feet under the Red River. P66 replaced the river crossing in 2011. The second was in December 2013 in Ponca City, Oklahoma, which was caused by third-party damage. The only reported seam failure was during a hydrotest performed in 2004.
- The operator reported that it performed an UT-CD (Crack Detection Tool) in-line inspection (ILI) run in July 2018 and an MFL/DEF ILI in March 2016. The closest anomalies that were previously investigated in 2010 and 2011 were due to external corrosion.
- PHMSA has issued Advisory Bulletins on the heightened safety risks of Low-Frequency Welded ERW and Flash-Welded Pipe manufactured prior to 1970. It also issued Alert Notice, ALN-88-01, in January 1988, advising owners and operators of natural gas and hazardous liquids pipelines to consider the threat from ERW pipe manufactured prior to 1970. Operators were advised to determine whether their pipelines were susceptible to ERW seam failures and address the potential impact on pipeline integrity.

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 and requiring corrective action is set forth both in the above-referenced statute and 49 C.F.R. § 190.233.

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.

P66 is governed by Section 60101 of Title 49, United States Code, as detailed in 49 C.F.R. Section 195.

After evaluating the foregoing preliminary findings of fact and considering the ongoing investigation of the Accident, I find that the continued operation of the Affected Segment without corrective measures is or would be hazardous to life, property and the environment. Given the increased likelihood that there are other locations along the pipe that are subject to the same operational cycles and fatigue, and given that this is a pre-1970 ERW pipe, there is a heightened risk of imminent failures along the pipe. Additionally, after considering the facts and the ongoing investigation of the Accident, 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, 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, unless a different location is expressly agreed to in writing by the Director.

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, if appropriate, PHMSA will consider amending this Order. 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:

Definitions:

Affected Segment – Means the approximately 217 miles of P66’s 12.75-inch line OK-01 from Wichita Falls, Texas, to Ponca City, Oklahoma.

Isolated Segment- Means approximately the 33-mile segment of P66’s 12.75-inch line OK-01 from Waurika Lake (MP 184) and Wichita Falls (MP 217). It is the portion of the “Affected Segment” that was shut-in after the Accident on July 10, 2019, by closing main line valves (upstream and downstream of the Failure Site) and that remained shut-in until the restart plan was approved by the Director.

Director – Means the Director, Southwest Region, PHMSA, Office of Pipeline Safety.

Pursuant to 49 U.S.C. 60112, I hereby order P66 to immediately take the following corrective actions for the Affected Segment:

1. *Return to Service.* P66 obtained approval from the Director to resume operation.
2. *Restart Plan.* P66 developed and submitted a written restart plan, and received approval from the Director, Southwest Region. The Restart Plan provided for adequate patrolling of the Isolated Segment during the restart process and included measures to confirm the integrity of the pipeline facilities that were damaged or are suspected of being damaged as a result of the Accident. The Restart Plan specified a daylight restart and provided for advance communications with local emergency response officials.
3. *Metallurgical Testing.* Within 45 days of receipt of this Order, complete mechanical and metallurgical testing and failure analysis of the failed pipe by an independent testing laboratory. 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 to the Director the testing protocol, including selection of the testing laboratory, for prior approval;
 - C. Prior to commencing the mechanical and metallurgical testing, provide the 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 Director at the same time as they are made available to Respondent.
4. *Root Cause Failure Analysis.* Within 90 days following receipt of this Order, complete a root cause failure analysis (RCFA) and submit a final report of the RCFA to the Director. The RCFA must be supplemented/facilitated by an independent third-party acceptable to the Director and must document the decision-making process and all factors contributing to the failure. The final report must include findings and lessons learned. The RCFA must also include a discussion of whether the findings and lessons learned are applicable to other locations within P66's pipeline system.
5. *Remedial Work Plan.* Within 90 days after completing the metallurgical testing and analysis, submit a remedial work plan (Remedial Work Plan) to the Director for approval. The Remedial Work Plan must provide for the verification of the integrity of the Affected Segment and must address all factors known or suspected in the Accident, including, but

not limited to, the following:

- A. 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, results of past in-line inspections, construction, operating, maintenance, testing, metallurgical analysis or other third-party consultation information, and assessment data for the Affected Segment;
 - B. The performance of additional field testing, inspections, and evaluations to determine whether and to what extent the conditions associated with the Accident or any other integrity-threatening conditions are present elsewhere on the Affected Segment. The results of the inspections, field excavations, and evaluations must be made available to PHMSA or its representative;
 - C. The performance of repairs or other corrective measures that fully remediate the identified risk conditions associated with the Accident and any other integrity-threatening condition everywhere along the Affected Segment. Based on the known history and condition of the pipeline, the plans for repairs must include continuing long-term periodic testing and integrity verification measures to ensure the ongoing safe operation of the pipeline, considering the results of the analyses, inspections, and corrective measures undertaken pursuant to the Order; and
 - D. A proposed schedule for completion of Items A–C.
- 6. The Remedial Work Plan will be incorporated by reference into this Order. Respondent must revise the Remedial Work Plan as necessary to incorporate the results of actions undertaken pursuant to this Order and whenever necessary to incorporate new information obtained during P66's failure investigation and remedial activities. Submit any such plan revisions to the Director for prior approval. The Director may approve plan elements incrementally.
 - 7. Implement the Remedial Work Plan as approved by the Director, including any revisions to the plan.
 - 8. *Pressure Restriction.* After receiving approval from the Director to restart the Affected and Isolated Segments, the pressure for both segments is not to exceed 80% of the actual operating pressure in effect immediately prior to the Accident. P66 provided data to support the pressure derating from each of their stations along the pipeline. This pressure reduction requires that any relevant remote or local alarm limits, software programming set-points or control points, and mechanical over-pressure devices be adjusted accordingly. 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.

9. *Removal of Pressure Restriction.* The Director may allow the removal or modification of the pressure restriction upon a written request from Respondent demonstrating that restoring the Affected Segment 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.

Other Requirements:

1. *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, 2019. The Director may change the interval for the submission of these reports.
2. *Documentation of the Costs.* 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.
3. *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.
4. *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.
5. 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).

In your correspondence on this matter, please refer to “CPF No. 4-2019-5015H” and for each

document you submit, please provide a copy in electronic format whenever possible. 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. Parts 190 through 199, under any other order issued to Respondent under authority of 49 U.S.C. Chapter 601, 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 Order are effective upon service in accordance with 49 C.F.R. § 190.5.

July 16, 2019

Alan K. Mayberry
Associate Administrator
for Pipeline Safety

Date Issued