U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue SE
Washington, DC 20590

Mr. Michael J. Hennigan
President and Chief Executive Officer
Sunoco Logistics Partners L.P.F
1818 Market Street, Suite 1500
Philadelphia, Pennsylvania 19103

SEP 14 2016

Re: CPF No. 4-2016-5030H

Dear Mr. Hennigan:

Enclosed is a Corrective Action Order issued in the above-referenced case. It requires Sunoco Pipeline Company, LP, to take certain corrective actions with respect to the Permian Express II Pipeline that failed on September 10, 2016, near Sweetwater, Texas. Service is being made by certified mail and facsimile. Service of the Corrective Action Order 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.

Thank you for your cooperation in this matter.

Sincerely,

Alan K. Mayberry
Acting Associate Administrator
for Pipeline Safety

Enclosure

cc: Ms. Linda Daugherty, Acting Deputy Associate Administrator for Field Operations, OPS
Mr. Rodrick Seeley, Regional Director, Southwest Region, OPS

VIA CERTIFIED MAIL AND FAX

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

In the Matter of	)	
Sunoco Logistics Partners, LP,	)	**CPF No. 4-2016-5030H**
Respondent.	)	

CORRECTIVE ACTION ORDER

Purpose and Background:

This Corrective Action Order (Order) is being issued, under the authority of 49 U.S.C. § 60112, to require Sunoco Logistics Partners, LP (Sunoco or Respondent), to take the necessary corrective action to protect the public, property, and environment from potential hazards associated with the recent failure on Sunoco's Permian Express II crude oil pipeline.[1]

On September 10, 2016, a reportable accident occurred on the Permian Express II pipeline, resulting in the release of approximately 800 barrels of crude oil (the Failure). The Permian Express II Pipeline is a 24-inch diameter crude oil pipeline that runs from Colorado City, Texas to Corsicana, Texas, a total of 279 miles (Permian Express II). 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 accident. The preliminary findings of the ongoing investigation are as follows.

[1] Sunoco is a master limited partnership that owns and operates a broad portfolio of crude oil, natural gas liquids, and refined products pipeline, terminalling and acquisition assets. Sunoco operates approximately 5,900 miles of crude oil pipelines, approximately 900 miles of natural gas pipelines and approximately 14 million barrels of refined products storage capacity. *See* http://www.sunocologistics.com/Customers/Business-Lines/252/ (current as of 9/12/2016).

Preliminary Findings:

- The Permian Express II Pipeline is a 24-inch diameter crude oil pipeline that runs from Colorado City, Texas to Corsicana, Texas, a total of 279 miles (Affected Segment). The Failure occurred near milepost 30.2, approximately 1.8 miles southeast of Sweetwater, Texas (Failure Site).

- The Affected Segment was manufactured in 2014, is 24-inches in nominal diameter, Grade X-65, and has .406 inch wall thickness. The pipe is coated in Fusion bonded epoxy coating (FBE), has an Electric Resistance Welded (ERW) seam, and was manufactured by Stupp Brothers. The Permian Express II pipeline was constructed in 2014-2015, and transports West Texas Intermediate crude oil from west to east, ending at the Corsicana station. The Failure occurred at mile post 30.2 in rural Nolan County, Texas. The area where the leak occurred is a low spot and product is draining from the pipeline (gravity) for the 12.2 mile isolated section. Sunoco closed the block valve at milepost 21.8 west of Sweetwater, as well as the block valve at milepost 34, near Lake Sweetwater.

- The maximum operating pressure (MOP) of the Permian Express II pipeline is 1480 psig, as established by hydrostatic test in 2015. At the time of the Failure, the actual operating pressure of the pipeline was 1060 psig.

- Beginning August 30, 2016, the Sunoco Control Center identified meter imbalances on the Control Center Over/Short Report and began investigating the imbalances. The results of the investigation did not indicate a release occurred until September 10, 2016, the time of the last static pressure test and land patrol. On September 10, 2016, at 5:15 p.m. (CST), Sunoco's field personnel confirmed a failure on the affected segment, and the release of an estimated 800 barrels of crude oil. The failure happened in a remote location. There were no reported injuries, fatalities, or ignition of the product. Additionally, there were no affected water ways or other environmental concerns reported. The Failure was reported to the National Response Center (NRC Report No. 981503) on September 10, 2016, at approximately 7:15 PM CST.

- The initial indication of a possible leak occurred on August 30, 2016 at approximately 10:00 PM CST. At that time, the discharge pressure from the Colorado City pump station was 1127 psig, with the estimated pressure at the leak site of 1060 psig. While field personnel were responding to the site on September 10, 2016, the pipeline control center isolated the suspected leak area by closing the valve at milepost 21.8 downstream of Colorado City, as well as the Eastland mainline valve at milepost 34, near Lake Sweetwater.

- The estimated volume of product released was initially reported as 800 barrels based on a 120 by 70 feet area. The revised area was considered at a 70 by 20 foot area. The on-site personnel continued the on-ground assessment of the extent of the release. The Oil Spill Response Organization (OSRO) was contacted by the operator on September 10, 2016.

- There was no federal or local emergency response. The Railroad Commission of Texas was onsite for a limited time on September 11, 2016.

- The cause of the Failure is unknown at this time, and an investigation is ongoing. Excavation of the site is limited to product removal due to safety and environmental concerns.

- The Permian Express II line began operation in June 2015, and there have been no significant previous failures on this pipeline. During a PHMSA construction inspection, however, PHMSA identified issues regarding the welding of the pipe, and there is an open NOPV, issued by the Southwest Region, related to this construction project (CPF No. 4-2016-5011). While a visual examination of the pipe has not been completed, the initial observation appears to show the leak site is in the vicinity of a girth weld.

- The crude oil released visually appears to be contained within a 70 by 20 area. The operator has vacuum trucks available to remove product as soon as it is drained from the pipe, and is monitoring the Affected Segment. While the Failure is not in a high consequence area (HCA), the area is considered a "could affect" area with regard to the Drinking Water Unusually Sensitive Areas (USAs)[2] criteria. Continued operation of the pipeline poses potential risks to municipal drinking water intakes along the pipeline route. The route is relatively rural, but other populated areas could be affected along the pipeline route, and continued operation of the pipeline poses a risk to the environment. The Permian Express II line runs 279.5 total miles, 93.2 miles of which are in an HCA.

- While metallurgical testing of the failed pipe has not yet been completed, the Permian Express II pipeline will need additional integrity verification to ensure continued safe operation of the pipeline.

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 or would be 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 notice and opportunity for hearing, upon a finding that failure to issue the Order expeditiously would result in the likelihood of serious harm to life, property, or the environment. In such cases, an opportunity for a hearing and expedited review 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 is or would be hazardous to life, property, or the environment. Additionally, having considered the uncertainties as to the cause of the failure; the location of the Failure; the proximity of the pipeline to populated areas, public water intake

[2] Drinking Water USAs are used by pipeline operators in formulating their Integrity Management plans, and are part of PHMSA's National Pipeline Mapping System. (*See* https://www.npms.phmsa.dot.gov/USADWData.aspx).

systems, or other high consequence areas; the young age of the pipeline and the history of known problems or failures on this pipeline, including during construction of the line, 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.

Within 10 days of receipt of this Order, Respondent may contest its issuance obtain expedited review either by answering in writing or requesting a hearing under 49 C.F.R. § 190.211, to be held as soon as practicable under the terms of such regulation, by notifying the Associate Administrator for Pipeline Safety in writing, with a copy to the Director, Southwest Region, PHMSA (Director). If Respondent requests a hearing, it will be held telephonically or in-person in Southwest Region office 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, PHMSA will notify Respondent of any additional measures that are required and an amended Order issued, if necessary. 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:

The "*Affected Segment*" means approximately 279.5 miles of the Permian Express II pipeline from the Colorado City Pump Station to the Corsicana Delivery Station.

The "*Isolated Segment*" means approximately 12.2 mile segment from milepost (MP) 21.8 west of Sweetwater, Texas to MP 34 near Lake Sweetwater.

Pursuant to 49 U.S.C. § 60112, I hereby order Sunoco to immediately take the following corrective actions for the *Affected Segment* and *Isolated Segment*:

1. ***Operating Restriction.*** Respondent must not operate the *Isolated Segment* until authorized in writing to do so by the Director pursuant to Item 4.

2. ***Operating Pressure Restriction.*** Respondent must maintain a twenty percent (20%) pressure reduction in the actual operating pressure of the *Affected 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.

   a. This pressure restriction must remain in effect until the Respondent obtains written approval from the Director to increase the pressure or return the pipeline to its pre-failure operating pressure.

   b. 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.

3. ***Restart Plan.*** Prior to resuming operation of the *Isolated Segment*, the Respondent must 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 *Isolated 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 *Affected and Isolated Segments* 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 include sufficient surveillance of the pipeline during each pressure increment to ensure that no leaks are present when operation of the line resumes.

e. The *Restart Plan* must specify a day-light restart and include advance communications with local emergency response officials.

f. The *Restart Plan* must provide for a review of the *Isolated* and *Affected Segments* for conditions similar to those of the Failure, including a review of construction, operating and maintenance (O&M) and integrity management records, such 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. The operator must address any findings that require remedial measures to be implemented prior to restart.

g. 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 Sunoco's operations and maintenance procedures manual.

h. The *Restart Plan* must provide for hydrostatic pressure testing of the *Affected Segment.*

4. ***Return to Service.*** After the Director approves the *Restart Plan*, Respondent may return the *Isolated Segment* to service, but the operating pressure must not exceed eighty percent (80%) of the actual operating pressure in effect immediately prior to the Failure, in accordance with Item 2 above.

5. ***Removal of Pressure Restriction.*** The Director may allow the removal or modification of the pressure restrictions 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. The Director may also consider a demonstration 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 cause of the Failure and evidence of the analyses and measures taken, discussed above.

a. 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, Sunoco must complete mechanical and metallurgical testing and failure analysis of the failed pipe, including an analysis of soil samples and any foreign materials. Testing and analysis requirements are 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.

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. ***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 this 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 Sunoco's pipeline system.

8. ***Remedial Work Plan.*** Within 45 days following receipt of the final report from the metallurgical testing laboratory, Respondent must submit a *Remedial Work Plan* (RWP) to the Director for approval. The Director may approve the RWP incrementally without approving the entire RWP. Once approved by the Director, the RWP will be incorporated by reference in this Order.

a. The RWP must specify the tests, inspections, assessments, evaluations, and remedial measures Respondent will use to verify the integrity of the *Affected Segment*. It must address all known or suspected factors and causes of the Failure. Respondent should consider both the risk of another failure and the consequence of another failure to develop a prioritized schedule for RWP related work along the *Affected Segment*.

b. The RWP 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 *Affected 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 *Affected 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, in-line inspection (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 are likely to exist elsewhere on the *Affected Segment.*

iv. Conduct additional field tests, inspections, assessments, and/or evaluations to determine whether, and to what extent, the conditions associated with the Failure, and other failures from the failure history (see (8)(b)(ii) above), or any other integrity threats are present elsewhere on the *Affected Segment.*[3] 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 the Failure 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.

c. 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.

d. Based on the known history and condition of the *Affected Segment*, describe the methods Respondent will use to repair, replace, or take other corrective measures to remediate the conditions associated with the Failure, and to address other known integrity threats along the *Affected Segment.*

e. Implement continuing long-term periodic testing and integrity verification measures to ensure the ongoing safe operation of the *Affected Segment* 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.

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[3] 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 September 10, 2016 failure.

g. Respondent 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/or to incorporate modifications required by the Director.

h. Submit any plan revisions to the Director for prior approval.

i. The Director may approve plan revisions incrementally.

j. Sunoco must implement the RWP as it is approved by the Director, including any revisions to the plan.

9. ***CAO Documentation Report.*** Sunoco must create and revise, as necessary, a *CAO Documentation Report* (CDR). When Sunoco has completed all the items in this Order, it will submit the final CDR in its entirety to the Director. This will allow the Director to complete a thorough review of all actions taken by Sunoco with regards to this Order prior to approving the closure of this Order. The intent is for the CDR to summarize all activities and documentation associated with this Order in one document.

a. The Director may approve the CDR incrementally without approving the entire CDR.

b. Once approved by the Director, the CDR will be incorporated by reference into this Order.

c. The CDR must include but not be limited to:

i. Table of Contents;

ii. Summary of the Failure and the response activities;

iii. Summary of pipe data/properties and all prior assessments of the *Affected Segment*;

iv. Summary of all tests, inspections, assessments, evaluations, and analysis required by the Order;

v. Summary of the mechanical and metallurgical testing as required by the Order;

vi. Summary of the RCFA with all root causes as required by the Order;

vii. Documentation of all actions taken by Sunoco to implement the RWP, the results of those actions, and the inspection and repair criteria used;

viii. Documentation of any revisions to the RWP including those 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;

ix. Lessons learned while completing this Order;

x. A path forward describing specific actions Sunoco will take on its entire pipeline system as a result of the lessons learned from work on this Order; and Appendices (if required).

10. ***Reporting***. Submit monthly 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 **December 31, 2016.** The Director may change the interval for the submission of these reports.

11. ***Documentation of 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 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.

12. ***Approvals***. With respect to each submission requiring the approval of the Director, the Director may: (a) approve the submission in whole or in part; (b) approve the submission on specified conditions; (c) modify the submission to cure any deficiencies; (d) disapprove the submission in whole or in part and direct Respondent to 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 a submission, Respondent must correct all deficiencies within the time specified by the Director and resubmit it for approval.

13. ***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 and 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.

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. 4-2016-5030H 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.

SEP 14 2016

Alan K. Mayberry
Acting Associate Administrator
for Pipeline Safety

Date Issued