

**TRANSMITTED VIA EMAIL &  
CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

Mr. Rick D. Weyen, Vice President, Logistics  
Tesoro High Plains Pipeline Company LLC  
19100 Ridgewood Parkway  
San Antonio, Texas 78259

**RE: CPF 3-2013-5032S**

Dear Mr. Weyen:

Enclosed please find the Safety Order issued in the above-referenced case. It makes a finding that Tesoro High Plains Pipeline Company LLC's pipeline system has a condition or conditions that pose a pipeline integrity risk and specifies actions that must be taken by THPP to ensure that the public, property, and the environment are protected from the risk. When the terms of the order have been completed, as determined by the Director, Central Region, this enforcement action will be closed. Your receipt of the Safety Order constitutes service of the document as provided under 49 C.F.R. § 190.5.

Thank you for your cooperation in this matter.

Sincerely,

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Jeffrey D. Wiese  
Associate Administrator  
for Pipeline Safety

Enclosure: Safety Order

cc: Ms. Linda Daugherty, Director, Central Region, PHMSA  
Mr. Greg Henderson, Vice President, Mid-Continent Operations

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

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<b>In the Matter of</b>	)	
	)	
<b>Tesoro High Plains Pipeline Company, LLC</b>	)	<b>CPF No. 3-2013-5032S</b>
	)	
<b>Respondent</b>	)	
	)	

**SAFETY ORDER**

Pursuant to 49 U.S.C. § 60117, the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS), conducted an investigation of the safety of Tesoro High Plains Pipeline Company, LLC's (THPP or Respondent) pipeline system, including an accident that was discovered on September 29, 2013. THPP operates the Tesoro High Plains System (THPP System), which consists of approximately 700 miles of mainline and gathering pipelines, both regulated and unregulated.

As a result of the investigation, the Director, Central Region, OPS (Director), issued to Respondent, by letter dated October 31, 2013, a Notice of Proposed Safety Order (Notice). In accordance with 49 C.F.R. § 190.239, the Notice proposed finding that conditions exist on the pipeline system that pose a pipeline integrity risk to public safety, property or the environment, and proposed that Respondent take certain measures to ensure that the public, property, and the environment are protected from the potential risk.

THPP responded to the Notice by letter dated October 31, 2013. In its letter, Respondent did not contest the Notice and expressed its intent to comply with its proposed terms, authorizing the entry of this Safety Order. Respondent did not request a hearing, and therefore has waived its right to one.

**FINDINGS**

Respondent did not contest the proposed findings in the Notice that THPP has a condition or conditions that pose a pipeline integrity risk. Accordingly, pursuant to 49 U.S.C. § 60117(1) and 49 C.F.R. § 190.239, I find as follows:

- The THPP System includes different segments with the mainline extending from Stampede to Mandan, North Dakota, and a western gathering loop which extends into Montana. This Safety Order applies to the regulated portions of the THPP System.

- THPP's Tioga to Black Slough 35 mile line segment (hereinafter referred to as the "Line") is part of an interstate crude oil system that transports crude oil from local crude production in North Dakota.
- On September 29, 2013, at approximately 10:35 p.m. local time, a failure was discovered on the Line eight miles north of Tioga, North Dakota (reported specific GPS location is Latitude N48 31.45, and Longitude W102 51.42). A farmer in the area, while harvesting his crops, noticed oil seeping from the ground. It is a rural location with no surface waters in the vicinity.
- The failure was reported to the National Response Center (NRC) on September 30, 2013 at 1:16 a.m. (NRC Report Number 1061615) EDT. PHMSA initiated an investigation of the accident, which involved an on-site investigation at the failure location and a review of control room operations, in San Antonio, Texas.
- The pipeline section on which the failure occurred is a six-inch pipeline that was installed in 1993. It was manufactured by IPSCO with a 0.219 wall, ERW, X42, and has Pri-tec coating. The failed pipe joint has since been removed and sent for mechanical and metallurgical testing. A preliminary report has been provided to PHMSA.
- THPP performed an inline inspection (ILI) of the Line on September 10-11, 2013. The ILI identified a metal loss anomaly 76% deep, 0.590" long by 0.579" wide, which corresponds with the leak site. The anomaly was reported to Tesoro subsequent to discovery of the leak.
- The Line was carrying crude oil from the Bakken field area at the time of the leak. THPP identified that the Maximum Operating Pressure (MOP) of the Line was 1390 psig at the location of the failure. The operating pressure at the failure location was approximately 350 psig at the time of the reported release.
- A leak clamp was installed on September 30, 2013, once the leak source was discovered. Based on the impacted area of the release, the estimated spill volume is about 20,000 barrels of crude oil as reported by THPP in NRC Report Number 1062440 on October 8, 2013.
- A preliminary mechanical and metallurgical analysis report has been provided. The preliminary report points to a strong electrical discharge as the cause of the failure, but a final determination as to the exact cause has not been made.

## **Completed Corrective Measures**

Through coordination with PHMSA, THPP has:

1. Removed the failed pipe joint, and sent it to a third party laboratory for mechanical and metallurgical analysis per PHMSA protocols.
2. Submitted a repair plan for PHMSA approval.
3. Received and provided the preliminary mechanical and metallurgical analysis report.
4. Removed approximately 1200 feet of existing 6 inch pipeline.
5. Installed and rerouted approximately 1500 feet of new 6 inch, 0.281 wall, seamless, FBE coated pipeline.
6. Submitted a restart plan for PHMSA approval.
7. Notified local and State emergency responders and officials of its potential restart actions.
8. Installed and made operational leak detection equipment, to be compliant with API 1130, for the Tioga to Stampede segment.
9. Started a close interval survey on the Line.
10. Filled the pipeline and performed a tightness test.
11. Added high-high alarms on pressure and flow on available instrumentation.
12. Modified controller screen displays to reflect the new leak detection equipment.
13. Performed controller training as necessary for the new system modifications.
14. Reviewed pressure history from various points on the THPP system.
15. Reviewed shift reports, In-Line-Inspection (ILI) data, communication outage and weather data.
16. Started a root cause failure analysis, facilitated and supported by an independent third party.
17. Performed additional integrity testing on the system, including dynamic flow balance tests, and static pressure tests.

18. Performed acoustic leak testing on portions of the mainline system, including both crossings at Lake Sakakawea.

### **ISSUANCE OF SAFETY ORDER**

Section 60117(1) of Title 49, United States Code, provides for the issuance of a safety order, after reasonable notice and the opportunity for a hearing, requiring corrective measures, which may include physical inspection, testing, repair, 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.

After evaluating the foregoing findings and considering the age of the pipe involved, the manufacturer, the hazardous nature of the product transported and the pressure required for transporting such product, the characteristics of the geographical areas where the pipeline is located, and the likelihood that the conditions could develop on other areas of the pipeline and potentially impact its serviceability, PHMSA finds that Respondent's THPP Pipeline has a condition or conditions that pose a pipeline integrity risk to public safety, property, or the environment. Accordingly, PHMSA issues this Safety Order, which requires that Respondent take measures specified below to address the risk.

### **Corrective Measures**

Pursuant to 49 U.S.C. § 60117(l) and 49 C.F.R. § 190.239, THPP must take the following remedial requirements:

1. Provide for adequate aerial patrol of the pipeline during the restart process and first 72 hours thereafter. After this time, provide weekly aerial patrols for 1 year, weather and safety conditions permitting.
2. Implement ground patrols for Tioga to Black Slough pipeline segment on a daily basis the first 3 days following restart, and on a weekly basis thereafter, weather and safety conditions permitting, for 30 days after restart or until leak detection equipment has established final thresholds.
3. Improve process and associated documentation to ensure adequate communication of changes with the control room regarding operation, construction, or maintenance activities.
4. Install and implement leak detection equipment compliant with 49 CFR §195.444 and 195.134 according to API 1130 requirements for all remaining THPP system (all regulated pipelines). Installation of devices should be completed within 12 months in accordance with a risk based schedule provided to PHMSA.

- a. High priority for leak detection implementation shall be placed on areas associated with Lake Sakakawea, Little Missouri River, Yellowstone River, and other water crossings over 100 feet wide.
5. Within 90 days implement instrumentation maintenance and repair tracking system such that all control room instruments remain functional and receive a high priority regarding maintenance response.
6. Within 1 year, implement and/or provide adequate documentation of a tank monitoring program that prevents and detects leaks on regulated tanks.
  - a. High priority shall be placed on those tanks of larger volume, located near rivers or other water bodies, and unusually sensitive areas.
7. Within 6 months, update and distribute a mapping system such that map overlays for the entire THPP System are available; identifying high consequence areas (HCA), could affect HCA areas, water bodies, and all commodity receipt and delivery points.
8. Within 30 days, provide the final mechanical and metallurgical testing report of the failed pipe.
9. Within 30 days, conduct an evaluation of previous in-line inspection (ILI) results, of the THPP System where results are available to determine whether any features with similar characteristics to the feature at the failure site are present elsewhere.
10. Within 6 months provide documentation of all enhanced Supervisory Control And Data Acquisition (SCADA) and control room activities. This shall include but not be limited to display reviews for consistency with API RP1165 application and added instrumentation, point to point completed checkouts for leak detection and associated instrumentation such as flow and pressure monitoring, low-low alarm pressure limits for those points that do not operate in slack line condition, verification of the accuracy of all points while running in reverse flow, pressure cycle monitoring, implementation of "Pressmon" or similar application where possible, manual leak calculations to be performed by controllers in the control room where possible and the impact to controller training. Leak detection and monitoring system enhancements identified per this Safety order must also be employed if the control room or monitoring location changes. A change to control room monitoring or operation locations may not result in decreased operations monitoring or leak detection performance. If third parties are utilized for operations and monitoring control room activities, contracts shall be kept current and performance of the third party periodically audited.
11. Within 90 days complete a root cause failure analysis for the Line that contains a detailed timeline of events. A detailed review associated with the timeline development must include, but not be limited to all information sources that could help identify the likely date of the failure (shift logs, pressure and flow information, controller logs, maintenance activities, communication outages, aerial patrols, ILI data runs, initial public

notifications, reversal, etc.). A review of any known failure history (in-service and pressure test failures) should be included as part of the root cause failure analysis. In addition, any lessons learned must be identified and reviewed for applicability to other locations within the THPP System. The report should provide a specific summary regarding whether or not the controllers had adequate information to recognize an abnormal operating condition. If adequate information did not exist to recognize these conditions, identify enhancements for the SCADA activities that could provide the necessary data and allow for controller recognition should this not be covered by other items in the order.

12. Within 6 months, evaluate and implement, as appropriate, cathodic protection improvements as identified by any previous reports.
13. Develop and implement a risk based plan for additional testing and surveys of the THPP System to identify and mitigate potential coating, cathodic protection and interference issues. Tesoro must show measurable progress and commitment to full implementation on this multi-year plan before PHMSA will close out this action as acceptable. PHMSA will monitor long term completion of this item as part of its normal safety inspection program. This plan must be submitted to the Director for review and approval within 6 months.
14. Perform a detailed evaluation of the THPP System to identify potential preventative and mitigative measures designed to minimize the consequence of spills near Lake Sakakawea, Little Missouri River, Yellowstone River, and other water crossings over 100 feet wide. This must include a review of the existing and potential locations for Emergency Flow Restricting Devices (EFRD) as a way to minimize the consequence of spills to Lake Sakakawea, Little Missouri River, Yellowstone River, and other water crossings over 100 feet wide. This evaluation must be submitted to the Director for review and approval within 6 months.
15. The work identified in this Safety Order shall be referred to collectively as a “work plan” which shall automatically be incorporated by reference into this order including any amendments. The work plan must be revised as necessary to incorporate the results of actions undertaken pursuant to the Order and whenever necessary to incorporate new information obtained during the failure investigations and remedial activities.
16. Submit any proposed work plan revisions to the Director for prior approval. The Director may approve, disapprove, approve with conditions, or approve elements of the plan incrementally.
17. Implement the conditions of the Safety Order as approved by the Director. The results of all actions taken in accordance with the approved plan must be available for review by PHMSA or its representative.
18. Submit monthly reports to the Director on the status of individual Safety Order items. The first monthly report is due on the 15th day of the month following receipt of the

Order. The regular intervals for submitting reports may be adjusted with prior approval of the Director.

19. It is requested that THPP maintain documentation of the costs associated with implementation of the Safety Order, and include in each report submitted pursuant to Item 14, 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.
20. The Director may grant an extension of time for compliance with any of the terms of the Safety Order upon a written request timely submitted demonstrating good cause for an extension.
21. THPP may appeal any decision of the Director to the Associate Administrator for Pipeline Safety. Decisions of the Associate Administrator are final.

In your correspondence on this matter, please refer to **CPF No. 3-2013-5032S** and for each document you submit, please provide a copy in electronic format whenever possible.

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).

The actions taken pursuant to this Safety 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.

After receiving and analyzing additional data in the course of this proceeding and implementation of the required tests and analysis, PHMSA may identify other safety measures that need to be taken. In that event, Respondent will be notified of any proposed additional measures and, if necessary, amendments to the Safety Order.

The terms and conditions of this Safety Order are effective upon service in accordance with 49 C.F.R. § 190.5.

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Jeffrey D. Wiese  
Associate Administrator  
for Pipeline Safety

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Date Issued