



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

1100 Main Street, Suite 800
Kansas City, MO 64105
(816) 329-3800

**NOTICE OF PROBABLE VIOLATION
PROPOSED CIVIL PENALTY
and
PROPOSED COMPLIANCE ORDER**

VIA ELECTRONIC MAIL TO: francis.murphy@fhr.com

July 1, 2026

Francis Murphy
President and CEO
Flint Hills Resources, LC
4111 East 37th Street North
Wichita, KS 67220

CPF 3-2026-010-NOPV

Dear Mr. Murphy:

From April 25, 2024 to May 3, 2024, and from June 10 to 12, 2024, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS), pursuant to Chapter 601 of 49 United States Code (U.S.C.), conducted an accident investigation at the Clearbrook, Minnesota, Breakout Tank terminal of Flint Hills Resources, LC ("FHR").

On Thursday, April 25, 2024, at 8:24 a.m. Central Daylight Time (CDT), an explosion occurred at FHR's Clearbrook, Minnesota, Breakout Tank terminal, approximately 150 feet upstream of Tank 3, within an excavation in FHR's Tank 8 diked area. The explosion occurred during maintenance activity to replace a 26-inch diameter buried bolted flanged tee on Line 151. The explosion resulted from a release of crude oil vapor from an inadequately sealed pipe plug installed at the open end of Line 151. The crude oil vapor was then ignited by the heat of an acetylene torch used to trim the pipe and prepare for welding a replacement tee. The explosion resulted in one injury that did not require overnight hospitalization.

As a result of the investigation, it is alleged that FHR has committed probable violations of the Pipeline Safety Regulations, Title 49, Code of Federal Regulations (CFR). The probable violations are:

1. **§ 195.402 Procedural manual for operations, maintenance, and emergencies.**
 - (a) ***General.* Each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies...**

FHR failed to follow its manual of written procedures when conducting maintenance activities on the 26-inch Line 151 pipeline at the Clearbrook Terminal, in violation of § 195.402(a). Specifically, on April 23, 2024, two days prior to the accident, FHR personnel failed to properly execute the pressure hold test prescribed by its “*Execution Plan for the Line 151 tee removal and replacement*” (Execution Plan). From a review of the FHR’s procedures, PHMSA found that the Execution Plan was required to be followed pursuant to the requirements in FHR’s O&M Hazardous Liquids Manual M1410.100. FHR’s approved Execution Plan required technicians to “Monitor pressure gauge for 30 minutes to determine if there is any increase in pressure.” The pressure hold test was conducted on the morning of April 23 to prepare for draining and cold cutting and removal of the bolted flanged tee section of Line 151. However, PHMSA found from its investigation that FHR personnel failed to follow the procedure’s required test duration. Based on witness interviews conducted by PHMSA, as well as a documented third-party failure analysis, FHR personnel terminated the observation and ended the test after only 10 minutes. Therefore, by not following its Execution Plan to conduct the pressure hold for 30 minutes, as required by its manual of written procedures, FHR is in violation of § 195.402(a).

2. **§ 195.402 Procedural manual for operations, maintenance, and emergencies.**
 - (a) ...
 - (c) ***Maintenance and normal operations.* The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:**
 - (1) ...
 - (11) **Minimizing the likelihood of accidental ignition of vapors in areas near facilities identified under paragraph (c)(4) of this section where the potential exists for the presence of flammable liquids or gases.**

FHR’s manual of written procedures for maintenance and normal operations failed to include procedures required by § 195.402(c)(11) to minimize the likelihood of accidental ignition of vapors in areas near certain facilities where the potential exists for the presence of flammable liquids or gas. Specifically, FHR’s manual of written procedures failed to include procedures to minimize the likelihood of accidental ignition when preparing to perform hot work (for example, torch cutting and welding) in the presence of flammable crude oil gases.

Due to the likelihood of accidental ignition when performing hot work in the presence of flammable crude oil gases, § 195.402(c)(11) requires operators to have procedures to minimize accidental ignition, including procedures for isolating flammable vapors from a potential ignition source and for monitoring for the presence of flammable vapors. *See, e.g.,* ONEOK NGL Pipeline, LLC, Final Order, CPF No. 4-2021-048-NOPV, 2022 WL 1539237 (PHMSA Apr. 25, 2022)

(finding that the operator failed to develop and follow written procedures utilizing and installing mud plugs as vapor barriers and monitoring the lower explosive limit of flammable vapors to minimize the likelihood of accidental ignition).

FHR's O&M Hazardous Liquids Manual M1410.100 required a written procedure (Execution Plan) for the repair to be followed. PHMSA's investigation found that neither the O&M manual nor the Execution Plan included the specific procedures required for minimizing the likelihood of accidental ignition of vapors. PHMSA investigation found that the O&M manual and Execution Plan lacked the following or comparable procedures to prevent accidental ignition of flammable gases:

- (1) FHR's manual of written procedures failed to include procedures to minimize the likelihood of accidental ignition by sealing the pipe to isolate flammable vapors from an ignition source. The pipe at issue was manufactured with a double submerged arc weld (DSAW) longitudinal seam. FHR's O&M manual and Execution Plan did not contain procedures for sealing DSAW pipe. As a result, FHR followed procedures that allowed for the use of a Maloney Foreman Nite Cap (foreman's plug).¹ The plug could not form a complete seal over the DSAW internal longitudinal weld seam that protruded from the interior surface of the pipe. The inability of the foreman plug to completely seal within the pipe resulted in the hazardous vapors entering the work area during hot work, creating the explosive atmosphere that resulted in the accident. By not including procedures in its O&M manual or Execution Plan for sealing pipe manufactured with a DSAW longitudinal seam, FHR failed to include procedures to minimize the likelihood of accidental ignition of vapors in areas near facilities identified under § 195.402(c)(4)² where the potential exists for the presence of flammable liquids or gases.
- (2) FHR's manual of written procedures failed to include procedures to minimize the likelihood of accidental ignition by detecting the presence of flammable vapors. Specifically, the O&M procedures included procedures for using a gas monitor, but the procedures did not prescribe the use of an extension wand ("sniffer") for the MX6 gas monitor to allow reaching the face of the foreman plug with the gas detector to verify it was sealed to isolate flammable vapors. FHR's repair involved the attachment of a temporary tac-welded pipe pup to Line 151 for line-up purposes. The pup extension obstructed workers from directly accessing the foreman plug to check it for leaks. The three-foot pup extended the distance from the foreman plug to the open end of the pipe (Line 151) from 22 inches to 57 inches. Due to the extended distance, workers could

¹ A foreman plug is a temporary, non-structural mechanical expansion plug inserted into the open end of a pipeline during construction or maintenance to serve as a physical barrier to prevent dirt, water, debris, and wildlife from entering the pipe interior.

² I.e., pipeline facilities in areas that would require an immediate response by the operator to prevent hazards to the public, property, or the environment if the facilities failed or malfunctioned, including segments that could affect high-consequence areas (HCS) or are in HCAs, and valves specified in 195.418 or 195.452(i)(4). The Clearbrook facility is a critical, large-diameter operational hub of a major jurisdictional hazardous liquid pipeline system in an HCA area. If the breakout tank terminal facilities failed or malfunctioned, an immediate response by the operator would be necessary to prevent a hazard in the area that affects the public, property, or the environment.

not access the interface of the foreman plug to test the seal as required by FHR's Execution Plan. Based on witness statements as documented in FHR's post-accident investigation, immediately prior to torch cutting, workers put a gas monitor at arm's length into the pipe, short of the face of the plug. FHR's procedures did not require the use of an extension wand necessary to sample the air at the face of the plug to detect failure of the seal and the active flammable vapor leak with the gas monitor. By failing to have procedures requiring the use of gas detection equipment, such as a sniffer, to detect flammable vapors in the particular configuration during the repair, FHR failed to comply with the requirement to have procedures that minimized the likelihood of accidental ignition of vapors in areas near facilities identified under § 195.402(c)(2) where the potential exists for the presence of flammable liquids or gases.

- (3) FHR's manual of written procedures failed to include procedures to minimize the likelihood of accidental ignition by recognizing and accommodating for gas detection capabilities relevant to the specific heavy hydrocarbon hazard present during the repair process. FHR's written O&M procedures relied entirely on the Lower Explosive Limit (LEL) sensor to detect flammable vapors. The procedures failed to include any requirement to monitor or respond to the highly sensitive Photo Ionization Detector (PID) sensor available on the MX6 gas monitor that FHR used. Standard LEL sensors have far less sensitivity to leak detection of heavy crude oil vapors, rendering them functionally inadequate, whereas the PID sensor measures Volatile Organic Compounds (VOCs) in parts per million (ppm) and is 10,000 times more sensitive than the LEL sensor. Because the procedures failed to recognize and accommodate for the detection capabilities relevant to the heavy hydrocarbon hazard present, the procedures did not prescribe the use of the PID sensor. As a result, workers did not recognize the hazard of a high alarm of 20.5 ppm triggered by the PID sensor 29 minutes prior to the accident, while the mandated LEL sensor simultaneously read zero. The procedures therefore left workers unprepared to properly interpret the environment and remained unaware of the active flammable vapor leak. The omission of PID sensor monitoring in the procedures was a critical deficiency that prevented the detection of the isolation failure and contributed to the cause of the accident. By failing to include procedures addressing gas detection capabilities for the specific heavy hydrocarbon hazard present during the repair process in its O&M manual, FHR failed to include procedures to minimize the likelihood of accidental ignition of vapors in areas near facilities identified under § 195.402(c)(2) where the potential exists for the presence of flammable liquids or gases.

3. § 195.422 Pipeline Repairs.

- (a) Each operator shall, in repairing its pipeline systems, insure that the repairs are made in a safe manner and are made so as to prevent damage to persons or property.**

FHR failed to insure that repairs to its pipeline system were made in a safe manner and so as to prevent damage to persons and property. Specifically, on April 25, 2024, during hot work operations on the 26-inch Line 151 pipeline at the Clearbrook Terminal, FHR unsafely executed a

torch cutting operation without venting a vaporizing source of accumulating crude oil, resulting in an explosion and subsequent injury to personnel.

PHMSA's investigation revealed that FHR failed to insure repairs were made in a safe manner by not properly planning and executing the venting of hazardous vapors in advance of cutting the pipe with an acetylene torch. The torch cutting operation was planned and executed with awareness that crude oil was accumulating in the pipe and gradually leaking into the work area, which necessitated the use of absorbent pads. Awareness of the leak was evident by FHR utilizing absorbent pads to attempt to slow or absorb the crude oil, then removing the absorbent pads shortly before installing the Maloney Foreman Nite Cap intended to isolate hazardous vapors evaporating from the crude oil within the pipe.

As documented in the PHMSA failure investigation, prior to beveling the end of the pipe (cutting an angled edge for welding) with an acetylene torch, FHR did not follow the Maloney Foreman Night Cap's manufacturer installation instructions, which stated "you must remove the pipe plug" so as to "relieve the pipe of any naturally occurring pressure build up." FHR installed the Nite Cap without removing the vent plug to help control the release of any pressure build up in the pipe behind the foreman plug. By not removing the vent plug, vaporizing crude oil was trapped causing pressure build-up behind the Night Cap.

FHR also failed to follow its own guidance in its Construction Standard CS1506.300 - Pipeline Plugging. CS1506.300 states in the Section 4.2, "Execution of the work" that "All plugs should be properly vented to prevent vapor and or pressure build up that could affect the integrity of the plug."

The improper venting of vaporizing crude oil behind the Nite Cap contributed to the mixture of flammable crude oil vapor and air escaping through the plug's unsealed air gap at the pipeline's longitudinal weld seam on the interior surface of the pipeline, directly toward the hot work zone. The vapors ignited after the torch cutting had progressed about 1¼ inches along the circumference of the pipe, which projected flame and sparks into the pipe.

The ignition of the improperly managed vapors resulted in an explosion with a fireball over 20 feet in diameter and caused injury to a worker. Accordingly, FHR failed to insure that the repairs were made in a safe manner and made so as to prevent damage to persons or property, in violation of § 195.422(a).

Proposed Civil Penalty

Under 49 U.S.C. § 60122 and 49 CFR § 190.223, you are subject to a civil penalty not to exceed \$272,926 per violation per day the violation persists, up to a maximum of \$2,729,245 for a related series of violations. For violation occurring on or after December 28, 2023 and before December 30, 2024 the maximum penalty may not exceed \$266,015 per violation per day the violation persists, up to a maximum of \$2,660,135 for a related series of violations. For violation occurring on or after January 6, 2023 and before December 28, 2023 the maximum penalty may not exceed \$257,664 per violation per day the violation persists, up to a maximum of \$2,576,627 for a related series of violations. For violation occurring on or after March 21, 2022 and before January 6, 2023

the maximum penalty may not exceed \$239,142 per violation per day the violation persists, up to a maximum of \$2,391,412 for a related series of violations. For violation occurring on or after May 3, 2021 and before March 21, 2022 the maximum penalty may not exceed \$225,134 per violation per day the violation persists, up to a maximum of \$2,251,334 for a related series of violations. For violation occurring on or after January 11, 2021 and before May 3, 2021 the maximum penalty may not exceed \$222,504 per violation per day the violation persists, up to a maximum of \$2,225,034 for a related series of violations. For violation occurring on or after July 31, 2019, and before January 11, 2021 the maximum penalty may not exceed \$218,647 per violation per day the violation persists, up to a maximum of \$2,186,465 for a related series of violations.

We have reviewed the circumstances and supporting documentation involved for the above probable violations and recommend that you be preliminarily assessed a civil penalty of \$585,930 as follows:

<u>Item number</u>	<u>PENALTY</u>
1	\$ 53,900
2	\$ 266,015
3	\$ 266,015

Proposed Compliance Order

With respect to Item 2, pursuant to 49 U.S.C. § 60118, the Pipeline and Hazardous Materials Safety Administration proposes to issue a Compliance Order to FHR. Please refer to the *Proposed Compliance Order*, which is enclosed and made a part of this Notice.

Response to this Notice

Enclosed as part of this Notice is a document entitled *Response Options for Pipeline Operators in Enforcement Proceedings*. Please refer to this document and note the response options. All material you submit in response to this enforcement action may be 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).

Following your receipt of this Notice, you have 30 days to respond as described in the enclosed *Response Options*. If you do not respond within 30 days of receipt of this Notice, this constitutes a waiver of your right to contest the allegations in 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 Order. If you are responding to this Notice, we propose that you submit your correspondence to my office within 30 days from receipt of this Notice. The Region Director may extend the period for responding upon a written request timely submitted demonstrating good cause for an extension.

In your correspondence on this matter, please refer to **CPF 3-2026-010-NOPV** and, for each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,

AJ McKean
Director, Central Region, Office of Pipeline Safety
Pipeline and Hazardous Materials Safety Administration

cc: Kelley Cabrera, Sr. Compliance Specialist, FHR, kelley.cabrera@fhr.com
Matt McCauley, Compliance Director, FHR, matt.mccauley@fhr.com

Enclosures: *Proposed Compliance Order*
Response Options for Pipeline Operators in Enforcement Proceedings

PROPOSED COMPLIANCE ORDER

Pursuant to 49 United States Code § 60118, the Pipeline and Hazardous Materials Safety Administration (PHMSA) propose to issue to Flint Hills Resources, LC (FHR) a Compliance Order incorporating the following remedial requirements to ensure the protection of the public, property, and the environment.

- A. Regarding Item 2, for FHR's procedural deficiencies identified during the investigation of the April 25, 2024 Clearbrook Terminal accident, FHR must develop procedures that address safety during hot work maintenance activity, specifically procedures that enhance requirements to ensure proper execution and safety during hot work near hazardous vapors. The procedures should address pipe isolation (vapor isolation), pipe plugging, pipe venting, and gas monitoring. FHR must submit the procedures to the Region Director, PHMSA Central Region, for review and approval within **60** days of receipt of the Final Order.
- B. It is requested (not mandated) that FHR maintain documentation of the safety improvement costs associated with fulfilling this Compliance Order and submit the total to the Region Director, PHMSA Central Region. It is requested that these costs be reported in two categories: 1) total cost associated with preparation/revision of plans, procedures, studies and analyses, and 2) total cost associated with replacements, additions and other changes to pipeline infrastructure.