

WARNING LETTER

VIA ELECTRONIC MAIL TO: Brad.Barron@nustarenergy.com;
gary.koegeboehn@nustarenergy.com

January 24, 2024

Mr. Brad Barron
President and Chief Executive Officer
NuStar Pipeline Operating Partnership, L.P.
19003 IH-10 West
San Antonio, Texas 78257

CPF 3-2024-009-WL

Dear Mr. Barron:

From February 28, 2022, through June 15, 2023, representatives 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.), investigated an accident involving NuStar Pipeline Operating Partnership, L.P.'s (NuStar) 10-inch nominal diameter hazardous liquid pipeline system in Union County, Arkansas, southeast of El Dorado, Arkansas. The rupture of the pipeline on February 27, 2022, resulted in the release of a reported 2,278 barrels (bbls) of anhydrous ammonia in a high consequence area (HCA).

The affected 10-inch pipeline segment traverses from NuStar's Chatham pump station (Chatham) near Chatham, Louisiana, to Hampton pump station (Hampton), north of Hampton, Arkansas. On February 27, 2022, the pipeline was moving anhydrous ammonia northbound when the pipe ruptured at 3:45 a.m. Central Standard Time (CST) at Milepost (MP) 52.3 within Bear Creek. Bear Creek flows southward from the release point and flows into a swampy area, crossing under the Hibanks Road bridge approximately two miles from the release point. The pipeline was controlled and monitored remotely by NuStar personnel using a Supervisory Control and Data Acquisition (SCADA) system.

Upon occurrence of the pipeline rupture, the SCADA system detected pressure and flow deviations in the NuStar control center, triggering a leak alarm at the control center at 3:50 a.m. CST. The alarm alerted SCADA controllers to a potential leak between Spearsville Station and Motor-Operated Valve (MOV) 3-3. In addition, pressure logs from SCADA indicated that the

discharge pressure at Spearsville Station decreased from 1197 pounds per square inch (psi) at 3:30 a.m. CST to 836 psi at 4:30 a.m. CST. At 4:49 a.m. CST, the controllers closed the Spearsville Station suction MOV at MP 45.3, south of the leak location. At 4:53 a.m. CST, controllers closed MOV 3-3 at MP 62.2, north of the leak location, thereby isolating the pipeline segment 63 minutes after the initial leak alarm. Field technicians further isolated the pipeline segment by closing manual isolation valves 3-1 and 3-2, located at MP 49.2 and MP 56.2 respectively by 8:24 a.m. CST.

At 4:59 p.m. CST, following unsuccessful ground and aerial patrols to identify the release location, the Spearsville Station valve was opened to test the pipeline between the Spearsville Station and the downstream Valve 3-1. At 5:20 p.m. CST, with no leak indications between the Spearsville Station and Valve 3-1, field technicians opened Valve 3-1 to test the pipeline between the Spearsville Station and the subsequent downstream Valve 3-2. The pressure immediately dropped, confirming the leak's location between Valve 3-1 and Valve 3-2. Valve 3-1 was closed at 5:23 p.m. CST, and at 5:25 p.m. CST, the aerial patrol pilot identified the leak at Bear Creek, with the size of the anhydrous ammonia plume increasing due to the opening of Valve 3-1.

NuStar notified the National Response Center (NRC) of the accident at 6:30 p.m. CST (Report No. 1329850). At 6:40 p.m. CST, notification was made to local emergency responders.

The failed pipe was removed and sent for metallurgical analysis that determined that the release originated from circumferential stress corrosion cracking (SCC) located four to six inches from the nearest girth weld, spanning an area between approximately 8:30 and 11:00 positions. The apparent cause of the cracks was determined to be the result of bending stress on the pipeline, and the cracks did not involve the long seam weld.

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

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...

NuStar did not follow its established procedures for reporting the initial release to the National Response Center (NRC). In its initial report to the NRC (Report No. 1329850), NuStar estimated the initial release volume to be 100 pounds, which is less than half a bbl. However, the final reported release volume was determined to be 2,278 bbls. NuStar's Operations and Maintenance (O&M) Procedure 209 prescribed two methods for estimating the initial product release from a pipeline facility. Specifically, Sections 3 and 3.5 of Procedure 209 provided for the estimation of an initial anhydrous ammonia spill over time in the form of either a drip leak or a stream leak. PHMSA reviewed this procedure and found that for this accident the drip leak method yielded release estimates less than a bbl, and the stream leak method yielded significantly larger volumes. From the indications of a rapid loss of pressure continuing for more than 12 hours after

the leak alarm, it was evident that at the time of the rupture the anhydrous ammonia spill was not in the form of a drip leak and NuStar failed to use the appropriate method of the stream leak release. Therefore, it significantly underestimated the initial volume of the release in the NRC report. By failing to follow the appropriate procedures for estimating the volume of the release as the result of a pressurized stream, NuStar is therefore in violation of the regulation.

Under 49 U.S.C. § 60122 and 49 CFR § 190.223, you are subject to a civil penalty not to 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 \$2,391,142 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. For violation occurring on or after November 27, 2018 and before July 31, 2019, the maximum penalty may not exceed \$213,268 per violation per day, with a maximum penalty not to exceed \$2,132,679. For violation occurring on or after November 2, 2015 and before November 27, 2018, the maximum penalty may not exceed \$209,002 per violation per day, with a maximum penalty not to exceed \$2,090,022.

We have reviewed the circumstances and supporting documents involved in this case, and have decided not to conduct additional enforcement action or penalty assessment proceedings at this time. We advise you to correct the item(s) identified in this letter. Failure to do so will result in NuStar Pipeline Operating Partnership, L.P. being subject to additional enforcement action.

No reply to this letter is required. If you choose to reply, in your correspondence please refer to **3-2024-009-WL**. 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).

Sincerely,

Gregory A. Ochs
Director, Central Region, Office of Pipeline Safety
Pipeline and Hazardous Materials Safety Administration

cc: Gary Koegeboehn, Vice President of Pipeline Operations,
gary.koegeboehn@nustarenergy.com