



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

Deputy Administrator

1200 New Jersey Avenue, SE
Washington, DC 20590

November 25, 2022

The Honorable Jennifer Homendy
Chair
National Transportation Safety Board
490 L'Enfant Plaza East, SW
Washington, DC 20594

Dear Chair Homendy:

I am writing to provide Pipeline and Hazardous Materials Safety Administration's (PHMSA) intended actions to address the recommendations contained in the National Transportation Safety Board's (NTSB) recently released report, *Enbridge Inc. Natural Gas Transmission Pipeline Rupture and Fire, Danville, Kentucky, August 1, 2019*, NTSB/PIR-22/02.

PHMSA shares the NTSB's commitment to preventing pipeline accidents. PHMSA has a long history of cooperating and collaborating with the NTSB as we take our responsibility to address all of the NTSB's recommendations seriously. PHMSA strives to continue our important work to help ensure the safe, reliable, and environmentally sound operation of the nation's pipeline transportation system. While PHMSA's oversight of pipeline transportation safety continues to advance an improving safety trend, pipeline failures like the subject of the aforementioned NTSB report are not acceptable.

The NTSB's report on the Danville, Kentucky accident identified "the probable cause of the August 1, 2019, rupture of an Enbridge Inc. natural gas transmission pipeline and resulting fire was the combination of a pre-existing hard spot (a manufacturing defect), degraded coating, and ineffective cathodic protection applied following a 2014 gas flow reversal project, which resulted in hydrogen-induced cracking at the outer surface of Line 15 and the subsequent failure of the pipeline. Contributing to the accident was the 2014 gas flow reversal project that increased external corrosion and hydrogen evolution. Also contributing to this accident was Enbridge's integrity management program, which did not accurately assess the integrity of the pipeline or estimate the risk from interacting threats."¹

This letter provides a planned course of action by PHMSA to address NTSB Recommendations P-22-1, P-22-2, and P-22-3.

¹ <https://www.nts.gov/investigations/Pages/PLD19FR002.aspx>

RESPONSES TO THE NTSB SAFETY REPORT RECOMMENDATIONS:

Safety Recommendation P-22-1

Recommendation P-22-1: *Revise the calculation methodology used in your regulations to determine the potential impact radius of a pipeline rupture based on the accident data and human response data discussed in this report.*

Response to P-22-1: Strongly Consider.

PHMSA established a team to review the current potential impact radius (PIR) calculation methodology, the available accident data, and the human response data to determine if revisions to the pipeline safety regulations are required. Additionally, PHMSA will hold a public meeting in Houston, Texas during the week of December 11, 2022, at which time PHMSA intends to discuss the NTSB Recommendation P-22-1 and receive input from stakeholders on revising the PIR calculation methodology in the regulations.

Safety Recommendation P-22-2

Recommendation P-22-2: *Advise natural gas transmission pipeline operators on (a) the circumstances of this accident; (b) the need to evaluate the risks associated with flow reversal projects; and (c) the impacts of such projects on hydrogen-induced cracking.*

Response to P-22-2: Concur.

PHMSA will update the advisory bulletin for flow reversal (ADB-2014-04) to include any lessons learned since the advisory bulletin was published in September 2014 and provide additional considerations regarding the potential impacts of flow reversals on hydrogen-induced cracking. PHMSA also plans to present and discuss the circumstances of this accident at the December public meeting in Houston, Texas.

Safety Recommendation P-22-3

Recommendation P-22-3: *Advise natural gas transmission pipeline operators of the possible data limitations associated with hard spot magnetic flux leakage in-line inspection tools and analyses used in hard spot management programs and reinforce the need to follow industry best practices when conducting in-line inspection data analysis.*

Response to P-22-3: Concur.

PHMSA will review accident data and information regarding hard spots and the appropriate methodologies/technologies for detecting hard spots and communicate to operators the results of the data analysis and discuss appropriate in-line inspection technologies for different anomalies including hard spot detection.

CONCLUSION

PHMSA continually seeks to use and evolve its oversight program, including changes to pipeline safety policies and inspection and enforcement approaches. A major tenet of PHMSA's oversight program is that pipeline operators must know and understand their pipeline systems and use appropriate technologies and procedures to address risk to prevent pipeline failures while considering the inherent limitations of technology. PHMSA prescribes factors that must be addressed to mitigate risk and conducts inspections to ensure adequate measures are carried out effectively. PHMSA also invests in research and development that advances the best expertise in the world to help improve technology, especially detection methods relevant to pipeline failures.

PHMSA is fully committed to carrying out its pipeline safety oversight authority to improve safety and protect Americans while addressing all of the NTSB safety recommendations. PHMSA also values the role of the NTSB and our collective pipeline safety partnership. We believe the planned actions described above will adequately address the safety recommendations and we look forward to working with you and the dedicated staff at the NTSB as we continue our important work to help ensure the safe, reliable, and environmentally sound operation of the nation's pipeline transportation system.

Thank you for your consideration regarding the plan to address Recommendations P-22-1, P-22-2, and P-22-3. Should you require further information or assistance, please feel free to call me or have your staff contact Mary McDaniel, Sr. Technical Advisor in the Office of Pipeline Safety, by phone at (713) 272-2847 or by email at mary.mcdaniel@dot.gov.

Sincerely,



Tristan H. Brown
Deputy Administrator

P.S. I hope you and the entire agency had a safe and happy Thanksgiving!