National Transportation Safety Board

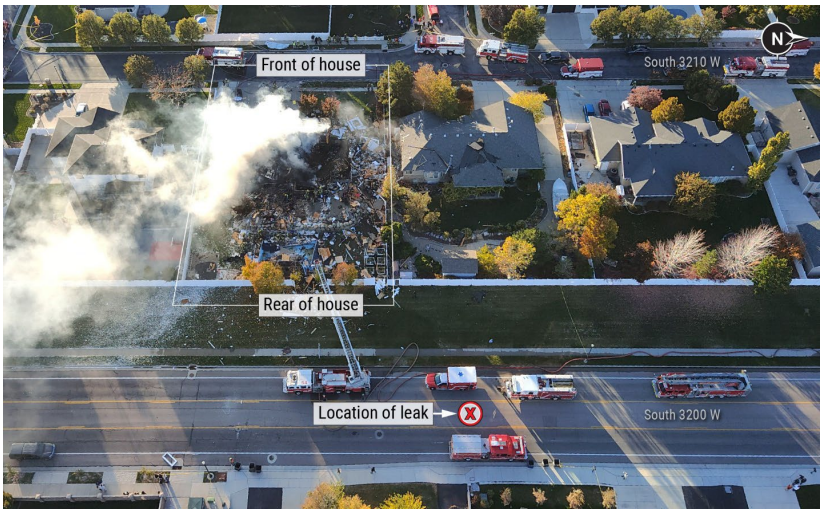
Washington, D.C. 20594

Office of Railroad, Pipeline and Hazardous Materials Investigations

Investigator-in-Charge's Accident Summary

NTSB Accident #PLD25FR0001
Natural Gas Fueled Residential Home Explosion
November 6, 2024, South Jordan, Utah

On November 6, 2024, about 3:09 p.m., a natural gas-fueled explosion fatally injured one person and destroyed a home in South Jordan, Utah.[1] There were no other injuries reported. Several nearby residences were damaged, and families were displaced. (See figure.) The South Jordan Fire Department responded and arrived on scene in about 6 minutes after the explosion. Enbridge Inc subsidiary, Enbridge Gas Utah (Enbridge), provided natural gas service to the home.[2] Enbridge responded and arrived on scene about 3:45 p.m. and worked continuously to find and isolated the leak about 12:16 p.m. on November 7, 2024. At the time of the explosion, conditions were daylight and clear; the temperature was 41°F with no precipitation.



[1] All times in this report are local times.

[2] In June 2024, Canada-based Enbridge purchased local gas distribution company Questar Gas from Dominion Energy, Inc. and renamed it Enbridge Gas Utah, Enbridge Gas Wyoming, and Enbridge Gas Idaho.

Figure 1 The scene on the day of the accident. (Drone photography courtesy of the South Jordan Police Department)

After the accident, Enbridge found a leak about 150 feet northeast of the accident home on a 4-inch diameter Aldyl A natural gas main it owned and operated.[3] A rock impingement and crack were found at the 6 o'clock position of the 4-inch gas main. The Aldyl A main was manufactured and installed in 1976 and operated at a pressure of about 45 psig, below the maximum allowable operating pressure of 60 psig. Upon investigation, Enbridge detected subsurface gas between the gas main the accident home and the home immediately to the north. The subsurface gas extended from the main to the backyard and front yard of each home, reaching as far as about 250 feet from the leak. Enbridge also detected gas in the atmosphere of the neighboring home after the accident.

Before the National Transportation Safety Board (NTSB) investigators arrived, Enbridge conducted pressure testing of the gas mains west of the accident home and gas service to the home, completed leak surveys, and removed, retained, and repaired the failed gas main. After NTSB investigators arrived, Enbridge continued testing for gas in the area surrounding the exploded home.

While on scene, NTSB investigators examined the site where the explosion occurred, reviewed Enbridge's operational procedures, gathered documentation, conducted interviews, and recovered physical evidence for examination by the NTSB Materials Laboratory. Preliminary information indicates that none of the five residents reported smelling gas before the explosion and there was not a natural gas alarm in the accident home.[4]

Parties to this NTSB investigation include the Pipeline and Hazardous Materials Safety Administration; the Utah Department of Public Safety, Office of the State Fire Marshal; the Utah Department of Commerce, Division of Public Utilities, Pipeline Safety Section; the City of South Jordan; and Enbridge.

[3] *Aldyl A* is the trademarked name of a polyethylene plastic gas pipeline product that was manufactured by the DuPont chemical company using a proprietary polymer resin. It is no longer manufactured or used in new pipelines.

[4] Natural gas alarms, or methane detectors, are not required in residential structures but are recommended by the NTSB. See: data.ntsb.gov/carol-main-public/sr-details/P-19-006, data.ntsb.gov/carol-main-public/sr-details/P-19-007, and data.ntsb.gov/carol-main-public/sr-details/P-19-008.