National Transportation Safety Board

Office of Railroad, Pipeline and Hazardous Materials

Washington, DC 20594

PLD25FR001

EMERGENCY RESPONSE

Group Chair's Factual Report

July 23, 2025

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A. INCIDENT

Location: South Jordan, UT
Date: November 6, 2024
Time: 3:09 PM (Local)
Operator: Enbridge Gas Utah
System Type: Distribution
Commodity: Natural Gas

B. EMERGENCY RESPONSE GROUP

Group Chair	Scott Lavallee NTSB Kansas City, MO
Group Member	Reid Hess Enbridge Gas Utah Eagle Mountain, UT
Group Member	Jacob Jorgensen PHMSA Oklahoma City, OK
Group Member	Chris Dawson South Jordan Fire Department (Chief) South Jordan, UT

C. DETAILS OF THE INVESTIGATION

The Emergency Response Factual Report documents the circumstances of the response of Enbridge Gas Utah, and local authorities to the natural gas explosion that occurred on November 6, 2024, in South Jordan, UT. Following the event chronology for each of these organizations, the applicable procedures and corresponding regulations and codes are documented. Natural gas/methane detection is also discussed within the context of Enbridge Gas Utah's risk management perspective, and NTSB's history of recommendations. Finally, post-accident actions are described.

D. ACCIDENT SUMMARY

For a summary of the accident, refer to the "Accident Summary" document within the investigation docket.

E. OPERATOR

Enbridge Inc., headquartered in Calgary, Alberta, Canada is a Canadian-based publicly held energy transportation and distribution company incorporated on April 13th, 1970. Enbridge Inc. is comprised of 4 core businesses: liquids pipelines, natural gas pipelines, gas utilities and storage and renewable energy. Enbridge reports to have a workforce of about 16,000 people.[1]

Enbridge's gas utility business, Enbridge Gas Inc. was formed on Jan. 1, 2019. As of Oct 1, 2024, Enbridge Gas reports to have a network of 110,606 miles of gas transmission, transportation and distribution mainlines and 64,453 miles of service lines[2] serving 7 million customers in Canada and the US.

On May 31, 2024, Enbridge Inc acquired Questar Gas Company, a public natural gas utility providing distribution, storage and transmission services to residential, commercial and industrial customers in Utah, southwestern Wyoming and southeastern Idaho. Questar conducts business as Enbridge Gas Utah, Enbridge Gas Wyoming and Enbridge Gas Idaho in those respective states.[3] The Questar Gas Company had been doing business as Dominion Energy Utah, Dominion Energy Wyoming and Dominion Energy Idaho in these areas prior to acquisition by Enbridge Inc.[4]

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[1] Refer to About Us - Enbridge Inc.

[2] Refer to Gas utilities and storage - Enbridge Inc.

[3] Refer to Enbridge Inc 2024 Q3 10-Q SEC filing ending 9/30/24 in the PLD25FR001 public docket.

[4] Refer to Dominion Energy Inc 10-K SEC filing ending 12/31/23 in the PLD25FR001 public docket.

F. FACTUAL INFORMATION

1.0 Site Description

On November 6, 2024, at 3:09 PM, local time, a natural gas fueled explosion and fire occurred at 10593 S 3210 W Street in South Jordan, UT. South Jordan is part of the Salt Lake City metropolitan area along the Jordan River between the Oquirrh and Wasatch Mountains.

The residence at 10593 S 3210 W Street was a single-family home of 2,592 square feet built in 2013. The family of 5 residing at this address had occupied the home since the completion of construction.

The home was described as a 3-bedroom, 2.5 bathroom, 2 story home on a .33-acre lot with an attached garage and a partially finished basement. The construction of the house and attached garage consisted of National Fire Protection Association *"Type 5"* light weight wood frame construction.[5]

Gas service to the property was via gas service line from the main and connected to the residential gas meter on the north side of the home. The home's furnace and water heater were both verified by State of Utah Deputy Fire Marshal to have been the only home appliances fueled by natural gas.

[5] National Fire Protection Association Standard 220, Standards on Types of Building Construction, defines types of building construction based on the combustibility and the fire resistance rating of a building's structural elements. NFPA Type 5 construction is a wood-frame construction type that is highly flammable. It is the most combustible construction type and is characterized by the use of traditional wood framing techniques and other combustible materials like plywood or drywall.

Figure 1: Pre-accident property photograph (Google Maps photo, August 2022)

Figure 2: Post-accident property photograph (South Jordan Police Department drone).

2.0 Natural Gas Characteristics

Natural gas is flammable, lighter than air and is colorless and odorless. An odorant, Mercaptan, is added to natural gas to help indicate its presence and has an odor similar to rotten eggs. The flammable range of natural gas is 5% gas in air (Lower Explosive Limit or LEL) to 15% gas in air (Upper Explosive Limit or UEL) by volume. Combustible gas indicators are used to sample the atmosphere to monitor for the concentration of natural gas in air to determine if a flammable mixture is present. Combustible gas indicators are calibrated to verify accurate readings.

3.0 South Jordan Fire Department Response Actions

3.1 South Jordan Fire Department Operations Division

The South Jordan Fire Department Operations Division consists of one Deputy Chief and three Battalion Chiefs who are responsible for the daily oversight of over 95 sworn members who serve a population of approximately 90,000 people within 22 square miles. South Jordan City is located in the rapidly growing southwest corner of the Salt Lake Valley.[6]

3.2 South Jordan Fire Department Event Chronology

The Emergency Response group developed the following timeline of South Jordan Fire Department response using Salt Lake Valley Fire emergency dispatch records and supplemental information from the SJFD Chief. The Salt Lake Valley Emergency Communications Center [7] (SLVECC) fire dispatch records for call number JS24-6321 (the designated call number for this incident) are available in the docket.

South Jordan Fire Department Incident Timeline

[6] Annual Report | South Jordan, UT

[7] The municipal districts of Murray City, Salt Lake County, South Jordan City, South Salt Lake City, West Jordan City and West Valley City share a joint enterprise in the Salt Lake Valley Emergency Communications Center (SLVECC) handling 911, police, fire and medical dispatching. Resources – SLVECC

11-6-2024

- 3:09:20 PM Initial 911 call reporting explosion just occurred. Multiple additional calls follow.
- 3:10:10 PM Generation of alarm assignment.
    - Call came in as a 1-alarm house fire
    - House fire type: Explosion
- 3:11:00 PM First fire unit enroute.
    - South Jordan Battalion Chief 61 and Medic Engine 62, West Jordan Battalion Chief 51, Ladder 53, Medic Ambulance 62, Medic Engine 63 and Engine 52 were assigned to the call.
- 3:14:13 PM South Jordan FD reports event as a "working fire" and adds two additional engines and one heavy rescue unit to the assignment.
    - Battalion Chief reports seeing debris on 3200 West Street on the way to the site.
- 3:15:15 PM Call upgraded to a 2-alarm house fire during initial arrival report.
    - SJFD Captain confirms explosion and struck second alarm for additional firefighting resources.
- 3:15:16 PM Engine 62 reports onsite.
- 3:18:41 PM Third alarm initiated; additional heavy rescue resources requested.

- 3:23 PM Brother of victim arrives and reports there is a juvenile male in the house.
- 3:32 PM Mother of the victim (homeowner) returns home.
- 5:00 PM Requested additional equipment arrives:
    - Excavator
    - Loader
    - Vac truck
    - Light plant
- 6:00 PM Operational pause, shift from rescue to recovery efforts.
- 9:25-9:30 PM Victim found in basement area at the front of the house.
- 10:26 PM Representatives of the Office Medical Examiner arrive onsite.
- ~11:00 PM Victim transported by OME to the State Crime Lab in Taylorsville, UT.

11-7-2024

- 12:30 AM Active firefighting operations end.
    - Arrangements made to begin fencing the perimeter of the property.
    - SJFD personnel remain onsite overnight in shifts watching the site until fencing is in place, monitoring for any additional fire activity. SJFD personnel remained on-scene until morning when perimeter fencing was completed.
    - Scene held by State Fire Marshal's Office for Investigation.

3.3 Injuries

At the time of the explosion, one juvenile male family member was alone in the home. His body was discovered at approximately 9:30 PM on the evening of the incident. Several neighbors reported being knocked to the ground by the blast, but no other injuries were reported as a result of the explosion, rescue or recovery efforts.

3.4 Previous SJFD Gas Incident Responses in Surrounding Area

A review of fire department emergency dispatch records for the previous year do not show any emergency calls made regarding a gas leak or odor within a two-block area on 3200 W St. or 3210 W St.

3.5 South Jordan Fire Department Emergency Response Procedures

South Jordan Fire Department provided copies of their Incident Management, Emergency Response, Hazardous Materials Response and Fireground Accountability policies and are available in the docket. No specific policy or plan is currently in place for a natural gas explosion for the South Jordan City Fire Department.

3.6 Interviews of South Jordan Fire Department Personnel

The investigative group interviewed two of the responding members of the South Jordan Fire Department on 11/11/24 at SJFD Station 63. The following notes were taken.

3.6.1 SJFD Captain, Station 62

The fire captain outlined his experience and training received in his career in fire protection, then described the events of the day of the explosion. He stated that the call went out at roughly 3:30 pm on November 6th over the radio for an explosion / fire and described the station 62 assets that responded.

The captain described seeing a column of black smoke from a distance and debris in the street and noted the extent of damage to the incident residence upon arrival. Assessing the scene, the captain reported initiating the request for a second alarm to request additional fire resources to the scene. He described the initial actions of fire department personnel as he took the role of incident commander briefly before the battalion chief arrived.

The fire captain was asked about the odor of natural gas on scene and stated that he did not recall any. He went on to describe rejoining his firefighters in the initial defensive posture taken against the fire which later turned into an attack. He stated that he did in fact see representatives from utility companies on scene during the response, but had little direct interaction with them as his focus was on the fire. He did note that the north side of the structure had quite a bit of debris in that area and did not initially recognize it as the gas utility connection point. The north side of the home was later confirmed to be where the gas meter was located.

In his testimony, the captain stated that he was not initially aware of a missing person in the residence but became aware later through the incident commander.

3.6.2 SJFD Battalion Chief

The battalion chief outlined his 19-year career and training with the South Jordan Fire Department. The battalion chief reported receiving notification while in his office at Station 61 via radio and that the call type was an explosion. While

responding, the battalion chief reported observing a large column of smoke at which point he confirmed the fire and requested two additional engines to respond.

In his testimony, the battalion chief described debris on the road on both 3200 West and 3210 West streets while driving to the scene. He arrived at the scene just after Engine 62. Face to face communication was made with the captain regarding the assessment to the scene and the battalion chief assumed incident command.

The battalion chief reported the home was structurally compromised with collapse hazards in addition to the active fire. After initial firefighting operations were started, the battalion chief sent crews to neighboring homes to the north and south to ensure evacuations were made. In addition, he requested the South Jordan Police to establish a safety perimeter for bystanders. The battalion chief stated that he did not recall smelling natural gas odor while on-scene.

The battalion chief stated that both gas and electrical utility technicians arrived promptly, and electrical service was cut to the incident address and the neighboring house to the north. The battalion chief stated that reports of flare-ups in the fire prompted him to request that the gas service to the incident address be cutoff. The battalion chief stated that he communicated with a gas company representative that the debris on the north (bravo) side of the house had limited fire department access to where they believed the gas meter be, to affect a shut-off. He went on to state that the representative told him that service would be shut off by digging up the service connection in the front yard once additional personnel arrived. The battalion chief reported that there were no issues or obstacles with communications and coordination with Enbridge responders on scene.

Upon learning of a potential victim, the battalion chief stated that additional personnel were assigned to start removing debris from the site as well as the utilization of the South Jordan Police drone and thermal cameras to assist in the search. The battalion chief described that the active fire with significant structural damage and exterior wall collapse risk initially precluded committing personnel into the basement of the structure into which much of the home had settled. After the suppression of the active fire, the battalion chief described a tactical pause in activity

to shift personnel into work cycles of clearing debris from the basement of the structure in efforts to recover the victim. The victim was discovered at approximately 9:30 pm in a basement alcove.

Following extinguishing the fire and recovery of the victim, the evacuation order for the neighboring homes was lifted but the battalion chief was aware that Enbridge was monitoring gas readings in the neighboring home to the north and was holding an evacuation order on that home. Calls were made to secure the site, and the battalion chief began releasing the assets from the scene shortly after midnight. Through the night, SJFD assets rotated to maintain watch over the scene and monitor hot spots for any reignition until barricading was completed the following morning.

4.0 Enbridge Response Actions

4.1 Enbridge Gas Utah Incident Response Chronology

11/6/24

- 3:13 PM Notification of event made to Enbridge from SLVECC.
- 3:16 PM Radio dispatch of service representative to incident.
- 3:18 PM Enbridge dispatcher called operations supervisor to notify him that a service representative was assigned the call and communicated the event as a fire and possible explosion.
- 3:45 PM Service representative arrived onsite.
- 4:08 PM Operations Manager notified.
- 4:45 PM Operations Manager arrived onsite. Operations supervisor and service representative are already on scene excavating the service tap for the incident address.
    - Service valve to the incident address is observed to be shut off to building at this time.
    - Dug-up service line tapping tee on top of the main. Took the cap off and ran the perforator down to shut off flow.

    - With service to incident address shut off, gas continues to flow to neighbors.
    - Main was observed to be approximately 3 feet deep.
- 5:45 PM Isolated the service line to incident address, pressure tested and passed.
- 6:00 PM Barhole testing continues at 10583 (neighbor to the North) and 10593 (incident) addresses. 99.9% gas reading at riser for 10583.
- 7:30-9:00 PM Excavating and testing gas service line at 10583.
    - Tested at 45 psi for 15 min. Pressure did not hold.
    - Pressure drop was small but indicated as a failed test. It was determined that the gauge being used was malfunctioning and was later re-tested and passed at 10:30 AM the following morning with a different gauge.
- 9:00 -11:00 PM started digging up the gas main in front of the incident address.
    - SJFD takes an operational pause to pass information. Enbridge crews take a break to facilitate this pause.
- 11:59 PM Gas main isolated in front of 10593, squeeze-bars used.

<u>11/7/2024</u>

- 12:04-12:34 AM Gas main in front of 10593 tested and passed.
- 12:45- 4:05 AM Excavation and testing 1-1/4 inch gas main feed to cull-de-sac to the west.
    - Delay (1.5 hours) waiting for CNG trailer arrival on site to maintain cul-de-sac feed for test.
    - Test of 1-1/4 cul-de-sac gas main passed.
- 4:30 AM Barhole testing of side yard (south) and back yard (east) at 10583. Elevated readings are found in the back yard of house vs. side yard.
- 4:45 AM Barhole testing of city-owned grassy area behind houses near 3200 W street.
- 5:00-600 AM Locating and drilling holes in center lane of 3200 W street.

- 6:10 AM- Barhole testing of 3200 W Street holes indicated 99.9% gas.
- 6:30 AM Operations foreman arrives. Bar holing indicates main on 3200 W Street is likely source.
- 7:15 AM 3200 W Street excavation crew arrives.
- 8:00 AM Traffic control in place, excavation on 3200 W Street begins.
- 10:15 AM Gas service line for 10583(home north of incident) retested with new test equipment.
- 10:30 AM 10583 gas service line passes pressure test using a different gauge.
- 12:16 PM Pipeline leak on 3200 W Street secured.
- 5:16 PM Service re-established to 3200 W Street pipeline after repairs made.

Figure 3: Area of leak discovered in median of 3200 W.

Figure 4: Enbridge service map showing location of residence vs. location of leak.

4.1.1 Enbridge Gas Utah Reports of Odor

4.1.1.1 Odor Reports at Incident Address

Enbridge Gas Utah provided a field activity report for the incident address that showed no complaints of odor or suspected leak in the previous year.

4.1.1.1 Odor Reports for the Surrounding Neighborhood

Enbridge Gas Utah provided a report of calls for gas odor complaints in the surrounding two blocks for the previous year. Of the 149 homes included in the survey, there were 3 reports. All of reports were for gas complaints inside buildings. One report indicated a small leak found in a home .1 miles away 3 months prior to the accident. Another report 4 months prior to the accident at a residence .3 miles away states that a gas range was likely left on finding no additional gas after ventilation of the structure. A third report captured in the provided data was made 2 days after the accident 4 houses south of the incident address revealed no gas was detected in the residence.

4.2 Enbridge Gas Utah's Underground Gas Leak Procedures

The investigative group was provided with a copy of Enbridge Gas Utah's Underground Gas Leak Procedure SP 3-75-01 revision 12 dated 10/24/24.

4.3 Interviews of Enbridge Gas Utah Responders

The Investigative group interviewed 3 incident responders from Enbridge Gas Utah on 11/10/24. The following are summaries of their interviews.

4.3.1 Enbridge Operations Representative III

The representative outlined his work history and training with Enbridge and the general duties of his current position including the geographic area which he was covering on the day of the accident. He described the assigned work and on-call schedules of his work group as well as the technical resources available to determine the location of gas lines in his assigned area.

The representative stated that he was dispatched to the incident by the company's Salt Lake office via telephone around 3:20 pm with a report of an explosion at the incident address and arrived between 3:30 and 3:50 pm. The representative was the first employee to arrive on scene out of a group of 8 Enbridge responders.

In his testimony, he stated that the fire department was already on scene when he arrived. He went on to state that there was already an established perimeter and incident command in place at that time and that he checked-in with the incident command upon arrival. During the initial on-scene phase, the representative stated that the Enbridge responders were instructed by incident command to stand-by. During the interview, the responder was asked if the odorant smell of natural gas was present at the scene. He stated that there was no odorant smell present during his time on scene which was surprising to him given the gas readings being recorded once their work began. The representative stated that the neighbors to the north of

the incident address had requested that Enbridge check the house for gas due to believing that they had smelled gas, but the house was cleared.

After a brief stand-by order from the fire department, the representative stated that he and the other Enbridge responders began taking gas readings in the soil, excavating isolating and testing the gas service lines and gas main that supplied gas to the incident address and neighboring homes as well as the gas main running across the street to the cul-de-sac to the west. In his testimony, the representative indicated that the service lines and main that fed the incident address and neighboring houses all tested as good indicating that no leaks were detected. The representative described the main as 1 ¼ to 2-inch polyethylene that was yellow in color and was aware that different colors of main can indicate different material or age of the main.

The representative testified that at some point the following morning, gas was discovered closer to 3200 West Street (the street behind the incident address) and a shift in focus was made to this area before he was released from the scene at 7:00 am.

4.3.2 Enbridge Operations Foreman

The foreman outlined his 22 years of career experience and training while working for the local gas company including work schedule and rotating on-call coverage. In his testimony, he stated that he had received a call at 6:45 am on November 7th (the morning following the explosion) from his supervisor to respond to the accident scene. He stated that on arrival, he was informed that there had been gas detected in the roadway of 3200 West and that he was to dig to find the source of the leak.

Regarding the excavation on 3200 West Street, the foreman outlined where and why the initial dig was planned, where it was started and how it progressed to include the marking of other utility structures in the planned excavation area prior to breaking ground. He went on to state that excavation started at a known junction in the gas

main and continued south from that location. The foreman indicated that when he started excavating, the odorant smell was faint and not consistent with the high gas readings being obtained in his opinion. When following the main to the south did not reveal evidence of a leak, efforts were shifted to the north of the junction following higher readings of gas concentrations in the ground from holes cored in the asphalt until finding an area of abnormally dry soil around the gas main which can be an indication of a gas leak. The foreman stated that when the dry area was found, the crew also received an alarm from their combustible gas indicator (CGI).

The foreman went on to describe the soil conditions in the area where the leak was discovered and described it as sandy with cobble rock, similar to a riverbed compared to the clay-based soils in the initial excavation areas. He also stated that the depth of the main around the discovered leak was 34 inches from the surface and identified the leaking main to be tan colored Aldyl-A pipe 4 inches in diameter.

After finding the leak, the foreman described the process of verifying the leak with soap and isolating the main around 12:16 pm. After isolation, the damaged section of gas main was removed. The foreman described the leak as a crack three to six inches long and stated that the section of pipe was cut out for replacement with yellow pipe. The foreman also described the process of backfilling the site, continued sampling and the vacuuming of residual natural gas from the surrounding soil with air moving equipment.

4.3.3 Enbridge Operations Supervisor

The supervisor gave a summary of his work history and experience in the gas industry since starting in 2007. He went on to state that he had received initial notification of the event from Enbridge Gas dispatch around 3:15 pm on November 6th. In the initial notification, he was made aware that there was an explosion / fire and that an Enbridge technician had been dispatched to the scene. After contacting the technician, the supervisor also started towards the scene and notified the operations manager.

In his testimony, the supervisor reported arriving on-scene around 4:15 pm. He stated the fire department had requested the gas service to be cut off to the incident address around 4:10 pm as relayed to him by the on-scene technician. Shortly after arriving, he reports identifying the gas lines in the area with the technician and coordinating with the fire department to begin the task of shutting off gas to the incident address. After cutting off the gas supply to the incident address, the supervisor reported that the service line was then pressure tested and held pressure. He also noted the general lack of natural gas odorant smell in the incident area, until they began cutting off and testing the gas main and service lines.

The supervisor described the Enbridge responders taking gas samples around the incident address leading them to the north side of the address and testing both the gas main and service line for the house to the north. Additionally, the supervisor stated that a faulty gauge was used to test the service line to the neighboring house which indicated a failed pressure test. The service was later retested and passed a pressure test with a different gauge.

Into the morning hours of the following day, the supervisor described the process of expanding the ground testing in attempts to identify the source of the gas after finding no source in front of the incident address and neighboring houses. The supervisor explained that the expansion of sampling included the areas between the incident address and the neighboring house and behind the properties east towards 3200 W where the readings began to increase.

The supervisor reported having been released from the scene between 1:30 and 2:30 am the morning following the incident after assisting with the recovery of the gas meter from the incident address. The supervisor indicated that the meter was not a “smart meter”[8]. He stated that at the time he left, the origin of the gas was determined to be the main under 3200 West Street.

[8] A “smart meter” is a term used to describe a meter that tracks and communicates usage in real time electronically rather than relying on periodic readings.

5.0 Federal and State Pipeline Regulations

5.1 PHMSA

The Pipeline and Hazardous Materials Administration (PHMSA) under the U.S. Department of Transportation issues regulations for the safe and secure movement of hazardous materials to industry and consumers by all modes of transportation, including pipelines. The regulations under 49 CFR Part 192 provide minimum safety standards that pipeline operators must comply with if they are transporting natural gas by pipeline. States assume safety authority over intrastate gas pipelines, hazardous liquid pipelines and underground natural gas storage through certifications and agreements with PHMSA under 49 U.S.C. §§ 60105- 60106. [9]

5.2 Emergency Response

Under 49 CFR 192.615 "Emergency Plans", PHMSA requires that each natural gas operator have "established written procedures to minimize the hazard resulting from a gas pipeline emergency." At a minimum the procedures must address notification, identification and classification of emergency events that require immediate response by the operator, as well as adequate means of communication between local emergency response authorities.

5.3 Public Awareness Program

The Pipeline Safety Improvement Act of 2002 required gas companies to educate the public through information programs on the hazards of natural gas and specifically outline steps for public safety in the event of a pipeline release. The public includes residents and places of congregation, such as businesses, schools, hospitals, prisons, and other places where people gather. PHMSA promulgated the rule in 2005 under 49 CFR 192.616, "Public awareness", for a natural gas operator to develop and

[9] See "State Programs Overview", https://www.phmsa.dot.gov/working-phmsa/state-programs/state-programs-overview.

implement a written continuing public education program that following the American Petroleum Institute's Recommended Practice 1162, 1st edition.

5.4 Odorant Requirements

Under 49 CFR 192.625 PHMSA regulation requires that natural gas in distribution systems must be odorized to allow gas leaks to be readily detected. Natural gas is odorless until odorant is added. This regulation has been in place since 1970. Enbridge Gas Utah provided odorant test results conducted using an Odorator[10] on 11-6-24. The tests were performed at 3 separate addresses in the vicinity of the incident. Readings from those samples were found to be in compliance with federal regulation.

5.5 Utah Department of Commerce Division of Public Utilities Pipeline Safety Section

Utah state regulatory authority is established by Utah Administrative Code title R746 and reportable incidents are defined in section M of R746-409-2. A copy of this authority is available in the docket. No state of Utah regulations regarding pipeline operations are more stringent than federal regulations under PHMSA.

6.0 Natural Gas Alarms/Methane Detection

The Utah Deputy State Fire Marshal reported that five residents of the home were living in and occupying the home regularly the week prior to the accident, but only one family member was home at the time of the explosion. A few family members experienced cold and flu symptoms prior to the explosion. All five family members were aware of what natural gas smells like, but none smelled gas in the past week. They had CO alarms and smoke alarms which were reported to be functional. No natural gas alarm or methane detector was present in the home. The family was unaware that natural gas alarms exist.

[10] An Odorator is a tool commonly used to measure odorant intensity in flammable gas.

Methane or gas detectors are commercially available technology that can detect the presence of a natural gas leak and alert those nearby allowing for evacuation to a safe area. Methane detectors are not required in federal regulations for commercial businesses or residences. On a state or local level, Maine was the first state to require in 2022 fuel-gas detectors for specific building occupancies that have fuel-gas appliances.[11] New York City also passed an ordinance in 2016 to require "natural gas detecting devices" for specific dwellings.[12] Some gas distribution companies are currently piloting programs to introduce gas detection devices in buildings.[13]

The NTSB has issued recommendations over the years to require gas detectors for both commercial and residential buildings. Currently, there are two open recommendations to the National Fire Protection Association (NFPA) and the International Code Council, which are standards development organizations in the U.S. The recommendations were issued to require methane detection systems for all types of residential occupancies with gas service in both the National Fuel Gas Code (NFPA 54) and the International Fuel Gas Code (IFGC). These two codes are widely adopted across the nation and incorporated either in state or local regulations. These recommendations were issued after the NTSB investigated a building explosion and fire of an apartment building in Silver Spring, Maryland on August 10, 2016, killing 7 residents and transporting 65 others to the hospital.[14] Both recommendations remain open and not yet implemented.

[11] See Maine Revised Statutes, Title 25 § 2469.

[12] See NYC Administrative Code § 28-312 and § 28-701.2 (BC 908.10 and BC 918). New York City requires the installation of natural gas alarms only after the city has adopted an industry standard governing the installation and location of natural gas alarms.

[13] See 3 – Residential Methane Detection Programs.

[14] See NTSB Investigation "Building Explosion and Fire", Silver Spring, Maryland, August 10, 2016 (NTSB/PAR-19/01). See Recommendation No. P-19-006 and P-19-007.

6.1.1 Natural Gas Alarms/Methane Detection Industry Standards

6.1.2 NFPA 715, Standard for the Installation of Gases Detection and Warning Equipment

The NFPA 715 is a standard that covers the selection, design, application, installation, location, performance, inspection, testing and maintenance of fuel gas detection and warning equipment in buildings and structures. The first edition of this standard was issued in 2023.

6.1.3 ANSI/UL 1484, Safety for Residential Gas Detectors

The Underwriter Laboratories issued ANSI/UL 1484, "Safety for Residential Gas Detectors," which covers electrically operated gas detectors that detect both propane and methane in residential occupancies and recreational vehicles. The most recent edition (5th ed.) was published in 2022.

7.0 Post Accident Actions

7.1 City of South Jordan

On November 6th, The City of South Jordan issued an immediate release to the public and local media regarding the explosion and subsequent fire. Two additional notifications were made on November 7th regarding a gas leak being the suspected cause of the event and the confirmed juvenile fatality.

On November 13th, the public information officer of the City of South Jordan appeared in a KSL TV5 news segment in which she informed the viewing audience of the commercial availability of home gas detectors.[15]

[15] South Jordan encouraging homeowners to purchase gas detectors after deadly blast

7.2 Enbridge Gas Utah

On November 8th through November 20th, Enbridge Gas performed multiple leak surveys in the area surrounding the incident site including several city block and did not detect any below ground natural gas leaks.

On November 14th through November 20th, Enbridge Gas Utah replaced the existing segment (approximately 1,000 feet) of Aldyl A main (including 4 services) under 3200 West Street.