In-Station Training

TM 26-09 Odor of Gas

Author

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Purpose

In many cases, response to an odor of gas inside a building is treated like a “routine incident” where no hazard is found. This can result in complacency, which can be deadly.

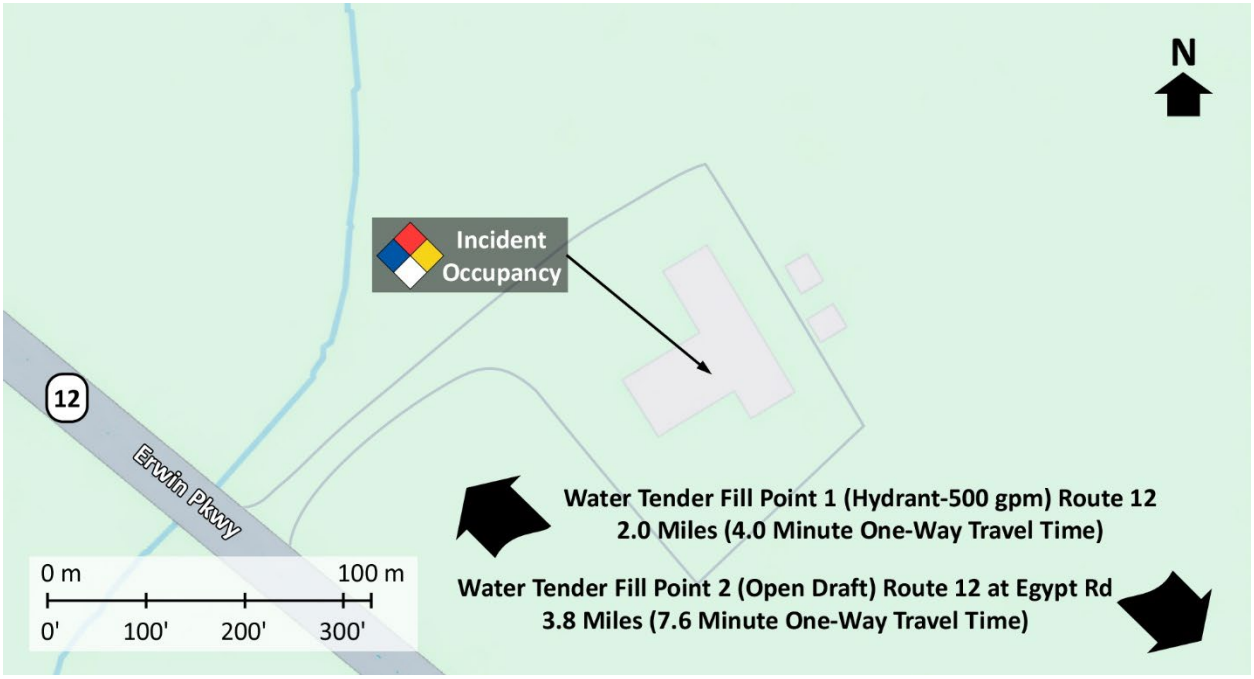
Learning Outcomes

Initial incident commanders perform an effective size-up, select an appropriate strategy, and implement tactics based on the strategic decision-making model.

Conducting the Drill

This incident involved an odor of gas and subsequent explosion at the Abundant Life Church, 12644 NY-12 in Boonville, New York on Tuesday, February 17, 2026, at 10:23 (News Channel 2, 2026; 7 News, 2026; Abundant Life, 2026; AP, 2026; & Broadcastify, 2026a, 2026b, & 2026c). Review the map and photos (Figures 1-4) to gain an understanding of the buildings and area involved.

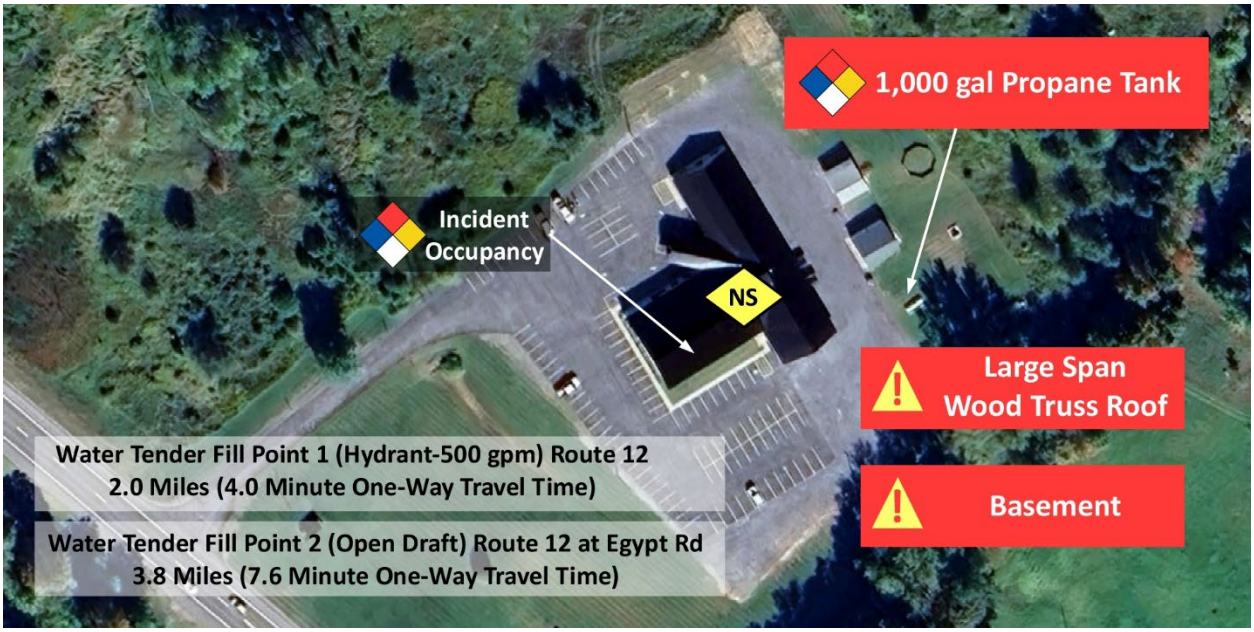
Figure 1. Map of the Incident Area



Note: Adapted from Google. (2026a). [Map, 12644 NY-12, Boonville, NY]. Map data ©2026 Google. https://bit.ly/4kNYsXL.

The closest hydrant is located 2.0 miles to the northwest on Route 12 and an open draft site is located to the southeast on Route 12 at Egypt Road as illustrated in Figures 1 and 2.

Figure 2. Aerial View



Note: Adapted from Google. (2026b). [Aerial view 12644 NY-12, Boonville, NY]. Imagery © Google, Imagery © Airbus Maxar Technologies, Map Data © 2026. https://bit.ly/4s0P7ya.

Figure 3. Alpha/Delta Corner

Note: Adapted from Google. (2023a). [Street view 12644 NY-12, Boonville, NY]. ©2026 Google. https://bit.ly/4qNjsQ0.

Figure 4. Side Alpha

Note: Adapted from Google. (2023b). [Street view 12644 NY-12, Boonville, NY]. ©2026 Google. https://bit.ly/40nne7O.

The incident address is in a rural highway corridor in the Town of Boonville (Oneida County), New York, characterized by low-density development along New York Highway 12 with interspersed open land, small commercial uses, and scattered residences outside the village core. (Open AI, 2026). The frequency of fire and emergency medical incidents in this area is low and typical of rural areas.

The temperature is currently 34° F with no appreciable wind from the north. (Weather Underground, 2026). **You are the officer of the first arriving engine company**. It is Tuesday, February 17th and you are dispatched for an inside odor of gas at Abundant Life Church, 12644 Highway 12 along with two other engines, a ladder company, and a command officer at 10:23. The engines and ladder have four-person staffing[1].

Time starts now! Answer the first nine questions within the next 10 minutes. Save discussion for after answering these questions.

While responding, you hear the other engines, ladder, medic unit, and command officer go enroute and dispatch provides an update that the reporting party states that they have a strong odor of gas inside the church and that when they went to turn off the gas, they heard a hissing sound.

[1] If your first alarm deployment is different, use your own resource assignment and staffing.

1. What critical factors would you consider when dispatched and during response? What conversations would you have with your crew during response?

Use the following reference resources as needed to inform your decision making: *Emergency Response Guidebook* (US DOT, 2024), *Pocket Guide to Hazardous Chemical Hazards*, and *CAMEO Chemicals* (NOAA, 2024)

Important! Answer questions two through nine in the form of communication you would have with your crew, dispatch, other companies, and the first arriving command officer. State the communications exactly as you would say them face-to-face or over the radio. Save explanation or discussion until after you have completed these questions.

You anticipate the ladder company will arrive shortly after you, followed by the second arriving engine several minutes later followed by the command officer. All other first alarm resources will arrive after the command officer. There is no video for this incident. Examine Figure 5 illustrating conditions on arrival.

Figure 5. Conditions on Arrival

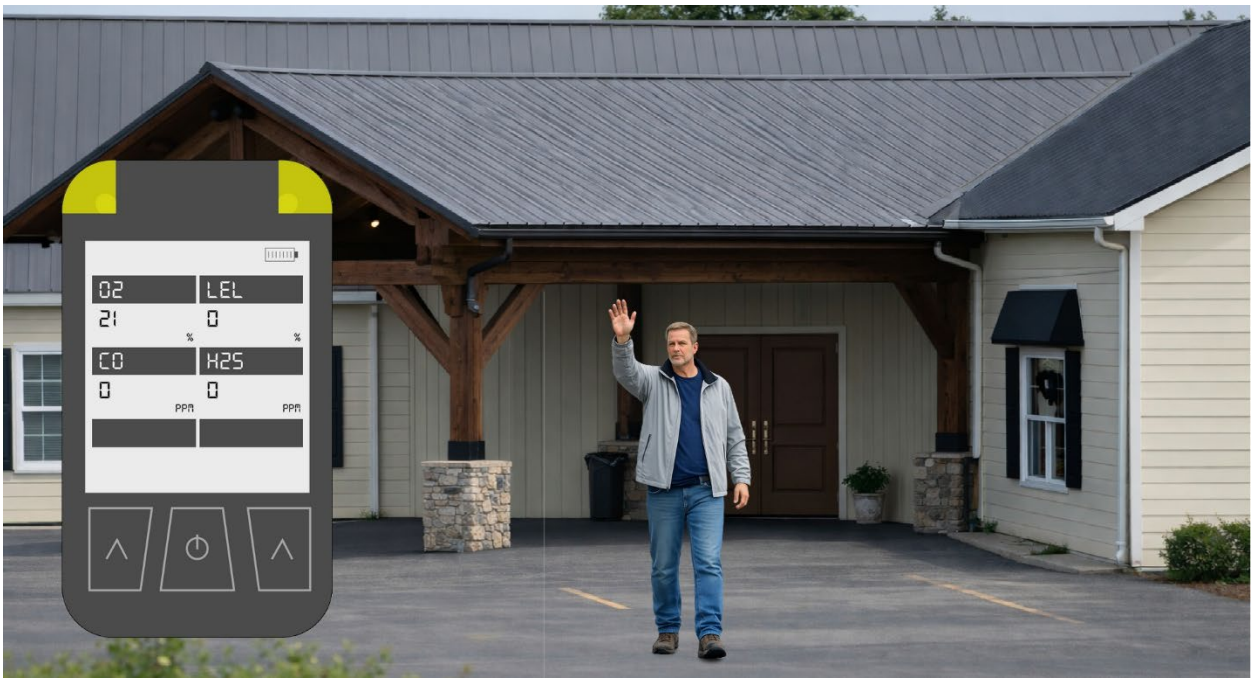
Note: Adapted from Google. (2023c). [Street view 12644 NY-12, Boonville, NY]. ©2026 Google. https://bit.ly/4avZswt,

2. State your initial radio report (IRR) exactly as you would transmit it to dispatch.

3. What specific actions would you take (as the company officer) immediately upon arrival and exiting the apparatus and what task orders would you give your crew?

Approaching the church, you encounter the pastor who advises that when he arrived this morning, he smelled gas inside the church and when he went to shut off the gas, he heard a hissing sound. As illustrated in Figure 6, you have a reading[2] of 0% of the lower explosive limit (LEL) on your four gas monitor. The pastor states that one other congregation member is inside the church.

Figure 6. Approaching the Church



Note: Adapted from Google. (2023d). [Street view 12644 NY-12, Boonville, NY]. ©2026 Google. https://bit.ly/4avZswt. Image created with Open AI, (2026) ChatGPT 5.2. [Large language model].

[2] It is unknown if the first arriving fire department personnel performed atmospheric monitoring and if so, what readings they obtained and from where. The readings provided in this 10-Minute Training are based on conditions that were likely, given that there was a flammable atmosphere at some location inside the building at the time of the explosion.

4. Would you change the action you are taking or modify the assignments given to your crew? If so, what task orders would you provide?

5. State your follow up report exactly as you would transmit it to dispatch.

6. Ladder 1 arrives and reports that they are Level 1 on Highway 12 at the entrance to the church. State the tactical assignment you would give them exactly as you would transmit it.

The following information is based on a decision to make entry (given that the reading on the exterior of the building was 0% of the LEL. As illustrated in Figure 7, you obtain a reading of 5% of the LEL inside the entryway to the church.

Figure 7. Conditions Inside the Church

Note: Image created with Open AI, (2026) ChatGPT 5.2. [Large language model]. This generic image does not necessarily replicate the interior of the Abundant Life Church in Boonville, NY.

7. What action will you take based on observation of the percentage of the LEL inside the entryway to the church. State communication you would have with dispatch and/or other companies on-scene or responding exactly as you would transmit them.

8. Engine 2 arrives and reports that they are Level 1 on Highway 12 at the entrance to the church. State the tactical assignment you would give them exactly as you would transmit it.

9. Based on anticipated effectiveness of your tactical operations, state your conditions, actions, and needs (CAN) report that you would provide to the first arriving command officer as part of command transfer to IC #2.

Reflect on your strategic decision-making and responses to questions one through eight before answering the next six questions. Think about what cues, patterns, or anomalies (differences from conditions that you would anticipate) informed your answers.

10. What was the problem?

11. What were your tactical priorities and what was getting in the way of achieving them?

12. Was there anything in this incident that could have hurt or killed you (right now)?

13. Was it reasonable to believe that the Incident Occupancy was occupied?

14. Was there searchable space?

15. If you believed it was reasonable that there was searchable space, what could you do about it?

First arriving units investigated the odor of gas along with the pastor from the church.

> The investigation indicates that a propane fuel line was damaged due to roof slumping caused by heavy snow accumulation. Fire department personnel were attempting to locate the electrical panel to shut off power to the building prior to addressing the propane leak when the explosion occurred.
>
> Four individuals were in the basement when the furnace activated, triggering the explosion. One firefighter was on the first floor attempting to ventilate the structure and was thrown against a wall by the blast (NYSP, 2026).

16. How did you address control of further release of propane?

17. It was reported that the furnace activated and resulted in ignition of the flammable propane/air mixture in the basement. How did you address the potential for an electrical source of ignition?

18. What is indicated by detection of some percentage of the lower explosive limit inside the building? How might conditions vary at other locations (e.g., basement versus the first floor)?

Additional Learning

Propane and natural gas leaks that result in accumulation of a flammable mixture of air and fuel gas inside buildings can result in catastrophic explosions resulting in structural damage, fires and injury or death to building occupants, firefighters, bystanders, and occupants of exposures. Firefighters often respond to odor of gas incidents and find nothing or simply low propane levels resulting in a higher than normal concentration of ethyl mercaptan, the odorant added to the odorless fuel gas to allow for ease of detection. These types of incidents can result in complacency, which can have deadly consequences.

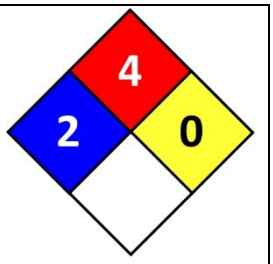
Safe and effective response to propane and natural gas incidents (including reports of “an odor of gas”) requires an understanding of the characteristics of these two common fuel gases and the hazards they present, a sound strategy and effective tactics, as well as appropriate deployment of apparatus and personnel, use of structural firefighting clothing and self-contained breathing apparatus, and proficient use of gas monitoring equipment.

Review the characteristics of propane and natural gas and response considerations for propane and natural gas incidents with the members of your crew.

Propane

Propane (C_3H_8) is a flammable hydrocarbon gas. It is a gas at standard temperature and pressure, but compressible to a transportable liquid. Propane is a common fuel gas. Table 1 provides an overview of the characteristics and physiological effects of propane.

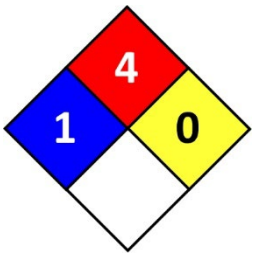
Table 1. Characteristics & Physiological Effects of Propane

<table>
<tr><td colspan="3">Product Name (UN/NA ID)
Propane (1075)</td><td>Formula
C_3H_8</td><td>NAERG
Guide 115</td><td rowspan="2"> 
</td></tr>
<tr><td colspan="5">Description
Colorless, tasteless, odorless, heavier than air, flammable gas. As propane is odorless, ethyl mercaptan is added to provide a distinctive “gas” odor.</td></tr>
<tr><td>Molecular Weight
44.09</td><td>Vapor Density
1.5</td><td>Specific Gravity
0.59 @ 60° F</td><td>Vapor Pressure
124.9 @70° F</td><td colspan="2">Ionization Potential
14.01 eV</td></tr>
<tr><td>Solubility
XX%</td><td>Flash Point
n/a (gas)</td><td>LFL
2.1 %</td><td>UFL
9.5 %</td><td colspan="2">Ignition Temperature
920° F (493° C)</td></tr>
<tr><td>TLV-TWA (ACGIH)
1000 ppm (5% LEL)</td><td>STEL (15 min)
n/a</td><td>IDLH
2100 ppm (10% LEL)</td><td colspan="3">Routes of Entry
Inhalation, Contact (Liquid)</td></tr>
<tr><td colspan="6">Physiological Effects
Propane is a simple asphyxiant and rapid evaporation of propane liquid on the skin will result in rapid cooling.</td></tr>
<tr><td colspan="6">Symptoms of Exposure
Inhalation of propane may result in dizziness, confusion, excitation, or asphyxia; Contact with propane liquid may result in frostbite</td></tr>
<tr><td colspan="6">Other
Propane containers may present risk of a boiling liquid expanding vapor explosion (BLEVE) if the container is damaged (typically due to mechanical harm) or thermally stressed (due to flame contact above the vapor space). Note that a BLEVE does not require fire or flame impingement prior to container failure (mechanical damage and an increase in ambient temperature may result in a BLEVE).</td></tr>
</table>

Natural Gas

Natural gas is a common fuel gas that contains many different compounds. The largest component of natural gas is methane, a compound with one carbon atom and four hydrogen atoms (CH_4). Natural gas also contains smaller amounts of other hydrocarbon gases such as ethane, butane and propane, and nonhydrocarbon gases, including trace quantities of carbon dioxide, nitrogen, hydrogen sulfide, and helium. Table 2 provides an overview of the characteristics and physiological effects of methane.

Table 2, Properties and Characteristics of Methane

<table>
<tr><td colspan="3">Product Name (UN/NA ID)
Methane, Compressed (1971), Natural Gas
Methane, Refrigerated Liquid (1972), Liquefied Natural Gas (LNG)</td><td>Formula
CH_4</td><td>NAERG
Guide 115</td><td rowspan="2"> 
</td></tr>
<tr><td colspan="4">Description
Colorless, tasteless, odorless, lighter than air, flammable gas. As methane is odorless, methyl mercaptan is added to provide a distinctive “gas” odor when methane is used as a fuel gas.</td></tr>
<tr><td>Molecular Weight
16.04 g/mol</td><td>Vapor Density
0.544</td><td>Specific Gravity
n/a</td><td>Vapor Pressure
> 1 ATM @ 70° F</td><td>Ionization Potential
13.7 eV</td></tr>
<tr><td>Solubility
Slightly Soluble</td><td>Flash Point
n/a (gas)</td><td>LFL
5.0 %</td><td>UFL
15.0 %</td><td>Ignition Temperature
1,112° F (600° C)</td></tr>
<tr><td>TLV-TWA (ACGIH)
1000 ppm</td><td>STEL (15 min)
n/a</td><td>IDLH
n/a</td><td colspan="2">Routes of Entry
Inhalation, Contact (Liquid)</td></tr>
<tr><td colspan="5">Physiological Effects
Methane is a simple asphyxiant. Methane refrigerated liquid (liquefied natural gas) is a cryogenic material transported and stored at extremely low temperature (e.g., -260° F (-162° C).</td></tr>
<tr><td colspan="5">Symptoms of Exposure
Inhalation of methane may result in dizziness, confusion, excitation, or asphyxia; Contact with methane refrigerated liquid will result in freeze injury.</td></tr>
<tr><td colspan="5">Other
Methane (natural gas) is commonly transported through pipelines. However, compressed natural gas (CNG) is also used as fuel for vehicles. CNG cylinders do not present a boiling liquid expanding vapor (BLEVE) risk as they do not contain liquid. However, they can fail catastrophically with a resulting ignition of the flammable gas. Methane refrigerated liquid (liquefied natural gas (LNG)) containers do present a BLEVE risk if the container is damaged (typically due to mechanical harm) or thermally stressed (due to flame contact above the vapor space). Note that a BLEVE does not require fire or flame impingement prior to container failure (mechanical damage and an increase in ambient temperature may result in a BLEVE).</td></tr>
</table>

Responding to Flammable Gas Incidents Inside Buildings

Size-Up & Investigation: Natural gas or propane incidents may not present obvious visible indicators of the nature and extent of the incident. Most often, these types of incidents will be "*nothing showing, investigating in the offensive strategy"*. Consider the following as part of size-up and investigation of propane incidents.

- Reported conditions.
- Wind and terrain (approach from uphill and up wind whenever possible)
- Visible conditions are unlikely to indicate the presence of propane or natural gas (but propane containers or a natural gas meter indicates potential).
- Consider vapor density. Propane has a higher vapor density than air and will sink, in enclosed areas this may result in accumulation in basements or lower floors. Natural gas has a lower vapor density than air and will rise, accumulating in attics or upper floors.
- Spot apparatus at least two houses away or 333 feet (100 meters) from the dispatched address, upwind and up slope whenever possible
- All later arriving units shall maintain Level 1 Staging a minimum of 800 feet away from the incident location, upwind and up slope whenever possible.
- Establish traffic control to minimize potential life hazards (and potential for ignition should the release be outside).
- All personnel entering the potential hazard zone must be in structural firefighting clothing and self-contained breathing apparatus (SCBA).
- Companies investigating potential releases of propane or natural gas must be equipped with an atmospheric monitor (preferably two) capable of detecting the presence of a flammable gas.
- Personnel should work in teams of two or more but limit the number of personnel allowed to approach the hazard area for size-up.
- Atmospheric monitoring for percentage of the lower explosive limit (LEL) must start in the cold zone and be performed on approach, around the building (performing a 360^{o} recon), and on entry at residential and commercial propane or natural gas incidents
- Remember that atmospheric monitors do not react immediately, allow time for the monitor to obtain accurate readings (this will depend on the device). Remember vapor density and for propane, start low and for natural gas, start high.
- Conduct focused monitoring in areas where propane storage, natural gas meters, appliances, and equipment may be located.

Natural gas or propane may ignite explosively. If the building is occupied and any percent of the lower explosive limit (LEL) reading is obtained inside a residential or commercial building, evacuate the occupancy until the hazard has been mitigated. A low percentage of the LEL reading obtained at a

distance from the leak or potential leak should not be perceived as low hazard, readings will be higher closer to the point of release and at some point, will be 100% of the LEL!

Explosion in a Building: Units arriving at the scene of an explosion in a building must consider natural gas or propane as a significant possible cause. In these circumstances, the cause of the explosion may be difficult to determine. Most often, these types of incidents will present *defensive fire conditions, structural collapse, or both and the strategy will be defensive*. Consider the following as part of response to an explosion in a structure.

The area (blast zone) of the explosion shall be considered to present defensive conditions. No member shall enter this area until the gas and electric utility companies have deemed the area safe from hosting any further explosions. A standard incident action plan for a propane or natural gas explosion includes:

- Notify the propane or natural gas distributor and request an immediate response
- Minimize the number of exposed personnel. All apparatus must be spotted in the cold zone at least two houses away or 333 ft. away (100 meters) from the explosion area.
- Conduct reconnaissance and search for possible victims outside of the explosion zone. Interview neighbors or witnesses to try to determine if the building(s) was occupied. Victims can be found a long distance from the origin of the explosion.
- Evacuate exposed structures.
- Observe for signs of ongoing gas leaks, i.e., flames coming through cracks in the ground or around foundations or bubbling through puddles.
- Do not extinguish flames coming up through the ground.
- Perform comprehensive atmospheric monitoring for percentage of the LEL outside the explosion area.
- If there is any reading above 0% of LEL withdraw all personnel a minimum of 333 ft (100 meters) from the last zero reading on the meter
- Consider the possibility of additional explosions

Because something has just exploded, other structures located in proximity could be involved in fire. Nearby structures may have also suffered structural damage. If a structure in the blast area is involved in fire, conduct fire control operations from the warm zone to protect exposures. No entry should be made in the hot zone for firefighting activity.

Natural Gas and Propane Incidents

The incidents in Table 3 represent building explosions involving natural gas or propane (confirmed or suspected) that have occurred in the United States in the first two months of 2026. They illustrate common operational hazards encountered during gas-leak responses. Fuel type reflects available reporting and observable indicators at the time. Some incidents remain under investigation (these are shaded grey). What are the similarities and differences in these incidents?

Table 3. 2026 Gas-Explosion Incidents in the United States (to date)

Date	Location (City, State)	Occupancy	Fuel	Notes	URL	QR Code
2/18/26	Ypsilanti Township, MI	Commercial	Unspecified (Likely Natural Gas)	Forklift hit gas line → ignition by manual exhaust system activation → explosion while employees inside, prior to fire service arrival (3 people injured)	https://bit.ly/3MTQpMI (Lindblom, 2026)	
2/17/26	Boonville, NY	Church	Propane	Odor report → ignition by furnace → explosion while firefighters inside → post explosion fire (5 people injured, including 4 firefighters)	https://bit.ly/46msgoC (AP, 2026)	
2/17/26	Olive Branch, MS	Commercial	Natural Gas	Building under renovation → unknown ignition source → no occupants inside, explosion occurred prior to fire service arrival (no injuries)	https://bit.ly/4rv0AGD (Norwood, 2026)	
2/15/26	Pentagon City, VA	Apartment	Natural Gas	Leaking gas appliance → unknown ignition source → explosion occurred while occupant inside, prior to fire service arrival (1 person with minor injuries).	https://bit.ly/40lWBjw (ARLnow.com, 2026)	
2/15/26	Centreville, VA	House	Natural Gas	Subsurface leak → unknown ignition source → explosion occurred while occupants inside, prior to fire service arrival (2 people injured).	https://bit.ly/4tN2JPh (Ronan, 2026)	

Continued

Table 1. 2026 Gas-Explosion Incidents in the United States (to date) (Continued)

Date	Location (City, State)	Occupancy	Fuel	Notes	URL	QR Code
1/29/26	Oswego, IL	House	Natural Gas	Unknown ignition source → explosion occurred while occupants inside (two fatalities) → post explosion fire.	https://bit.ly/475sz7t (Sun Times Wire, 2026)	
1/28/26	Smithville, MO	House	Natural Gas	Unknown ignition source → explosion occurred while occupant inside, prior to fire service arrival (1 fatality) → post explosion fire.	https://bit.ly/3OtzdOD (Motter, Lumma, & Smith, 2026)	
1/24/26	Bronx, NY	High-Rise	Natural Gas	Odor reported → unknown ignition source → explosion while occupants and firefighters inside (1 fatality, 14 civilians injured, minor injuries to firefighters) → post explosion fire.	https://bit.ly/4qQ4NU7 (Collins, 2026)	
1/22/26	Delmont, PA	Apartment	Propane	Unknown ignition source → explosion occurred while occupants inside, prior to fire service arrival (1 person injured).	https://bit.ly/4qNh4bK (Cioppa, 2026)	

Notes: Incidents in this table were identified using *ChatGPT 5.2* and verified by review of the related source material. While this table contains incidents that occurred in the United States, these types of events occur around the world. In the same period, similar incidents were identified in Pakistan, Iran, and India.

Learn from the Past

The incident examined in this 10-Minute Training has several similarities with a propane explosion in a building in Farmington, Maine that resulted in a line of duty death and injury to six other fire service members and a civilian. The Farmington, Maine incident was addressed in *10-Minute Training 22-32* (Hartin, 2022) and in the Farmington Propane Incident Case Study developed for Central Whidbey Fire & Rescue (CWIFR) in-service training.

The "tuition cost" for lessons learned from the experience of others can be far less than when we learn them through out own experience.

References

7 News. (2026). *Investigators pinpoint cause of Boonville church explosion that injured 5.* Retrieved February 21, 2026, from https://bit.ly/40nx4qg.

Abundant Life. (2026). [Facebook post]. Retrieved February 21, 2026, from https://bit.ly/4aHXTKC.

ARLnow.com. (2026) *ACFD investigating gas explosion in Pentagon City apartment.* Retrieved February 21, 2026, from https://bit.ly/40lWBjw.

Associated Press (AP). (2026). *Church explosion in upstate New York injures 5 people, including firefighters.* Retrieved February 21, 2026, from https://bit.ly/46msgoC.

Broadcastify. (2026a). *Oneida County Public Safety 02/17/2026 10:05 AM <--> 10:35 AM EST.* Retrieved February 21, 2026, from https://bit.ly/4kXZCjF.

Broadcastify. (2026b). *Oneida County Public Safety 02/17/2026 10:35 AM <--> 11:05 AM EST.* Retrieved February 21, 2026, from https://bit.ly/3OT8evQ.

Broadcastify. (2026c). *Oneida County Public Safety 02/17/2026 11:05 AM <--> 11:35 AM EST.* Retrieved February 21, 2026, from https://bit.ly/4qTcdpM.

Cioppa, J. (2026). Delmont apartment explosion: One person flown to hospital. Retrieved February 21, 2026, from https://bit.ly/4qNh4bK.

Collins, D. (2026). Gas explosion, fire on top floors of New York City apartment building kills 1, injures 14. Retrieved February 21, 2026, from https://bit.ly/4qQ4NU7.

Google. (2023a). [Street view 12644 NY-12, Boonville, NY]. ©2026 Google. Retrieved February 21, 2026, from https://bit.ly/4qNjsQ0.

Google. (2023b). [Street view 12644 NY-12, Boonville, NY]. ©2026 Google. Retrieved February 21, 2026, from https://bit.ly/40nne7O.

Google. (2023c). [Street view 12644 NY-12, Boonville, NY]. ©2026 Google. Retrieved February 21, 2026, from https://bit.ly/4avZswt,

Google. (2023d). [Street view 12644 NY-12, Boonville, NY]. ©2026 Google. Retrieved February 21, 2026, from https://bit.ly/4avZswt.

Google. (2026a). [Map, 12644 NY-12, Boonville, NY]. Map data ©2026 Google. Retrieved February 21, 2026, from https://bit.ly/4kNYsXL.

Google. (2026b). [Aerial view 12644 NY-12, Boonville, NY]. Imagery © Google, Imagery © Airbus Maxar Technologies, Map Data © 2026. Retrieved February 21, 2026, from https://bit.ly/4s0P7ya.

Hartin, E. (2022a). *10-Minute training 22 -32 gas leak.* Retrieved February 24, 2026, from https://bit.ly/4tSZDJR.

Hartin, E. (2022) *IS 22-43 Farmington propane incident.* Retrieved February 24, 2026, from https://bit.ly/3Mwf0qR.

Lindblom, J. (2026). *3 injured after gas line explosion at business in Ypsilanti Township.* Retrieved February 21, 2026, from https://bit.ly/3MTQpMI.

Motter, S., Lumma, G., & Smith, G. (2026). Home explosion kills one in Smithville. Retrieved February 21, 2026, from https://bit.ly/3OtzdOD.

National Institute for Occupational Safety and Health (NIOSH). (2020). *Pocket guide to chemical hazards.* Retrieved February 21, 2026, from https://bit.ly/4mobBGF.

National Oceanic and Atmospheric Administration (NOAA). Computer Aided Management of Emergency Operations (CAMEO) Chemicals. February 21, 2026, from https://bit.ly/3Xm9byB.

New York State Police (NYSP). (2026). *Update: State Police investigating explosion at Boonville church.* Retrieved February 21, 2026, from https://bit.ly/4aEi6lX.

News Channel 2. (2026). *Updated: propane leak leads to explosion at Boonville church, 5 hospitalized.* Retrieved February 21, 2026, from https://bit.ly/4kR0FSD.

Norwood, S. (2026). *Gas line causes building explosion in Olive Branch.* Retrieved February 21, 2026, from https://bit.ly/4rv0AGD.

OpenAI. (2026). *ChatGPT 5.2* [Large language model]. Retrieved February 21, 2026, from https://chat.openai.com/chat.

Ronan, D. (2026). *Residents near Virginia natural gas explosion uncertain about safety*. Retrieved February 21, 2026, from https://bit.ly/4tN2JPh.

Sun Times Wire. (2026). 2 dead after Oswego house explosion. Retrieved February 21, 2026, from https://bit.ly/475sz7t.

US Department of Transportation (US DOT). (2024). *Emergency response guidebook.* Retrieved February 21, 2026, from https://bit.ly/4dlCnLo.

Weather Underground (2026). *Rome, NY weather history* [historical weather February 18, 2025]. Retrieved February 21, 2026, from https://bit.ly/4kN7BQt.

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