02) EMERGENCY RESPONSE

This procedure outlines steps to take when investigating concerns pertaining to system pressures. Be aware that individual pressure complaints can be an indication of system problems of a greater magnitude.

I. Elevated Pressure Complaints

Complaints of high gas pressure should receive an emergency investigative priority.

A. Verify the correct service address and meter number.

B. If there are indications of high gas pressure throughout the customer's piping, close the shutoff valve upstream of the meter.

C. Check the inlet pressure, regulator set point and lock-up pressure.

D. Adjust or replace the regulator as required.

E. If there is high pressure on the inlet side of the regulator, immediately notify a Supervisor or dispatcher. Immediate action must be taken to reduce the high pressure to a level at or below established MAOP.

F. Place and test bar hole(s) as near as practical to the service riser. If indications of gas are detected perform a full leak investigation according to Leak Investigation Procedures.

G. When applicable, leave the appropriate door tag to communicate findings to the customer.

II. Low Pressure Complaints

Complaints of low gas pressure should receive an emergency investigative priority.

A. If there are indications of low gas pressure throughout the customer's piping, close the shutoff valve upstream of the meter.

B. Check the inlet pressure, regulator set point and lock-up pressure.

C. If the inlet pressure to the meter is adequate, check the load to determine if the meter/regulator is sized appropriately (see Measurement Procedures Manual Appendix A-1).

D. Adjust or replace the meter and/or regulator as required and restore service to customer.

E. Perform Customer Piping Test Procedure if deemed necessary.

F. If low pressure on customer's piping persists, notify customer there may be a house piping problem.

G. If there is low pressure on the inlet side of the regulator, check pressure at adjacent meter loops to determine the extent of the low-pressure condition. If the low-pressure investigation reveals inadequate system pressure or inadequate pressure on the individual company service line, immediately notify a Supervisor or dispatcher.

H. Place and test bar hole(s) as near as practical to the service riser. If indications of gas are detected perform a full leak investigation according to Leak Investigation Procedures.

I. When applicable, leave the appropriate door tag to communicate findings to the customer.

III. Leak Investigation

Emergency orders take precedence over all other types of service orders and will be responded to without delay. Every leak investigation should be considered potentially hazardous until it is determined to be non-hazardous. If hydrocarbons, other than natural gas are suspected, notify a Supervisor and consider taking a sample for testing as appropriate. When an Emergency Responder receives an order to investigate any leak complaint, where appropriate the Emergency Responder should:

Upon Arrival:

A. Use calibrated and approved leak detection equipment, including a Calibrated Combustible Gas Indicator (CGI), to investigate for the presence of gas according to the specific manufacturer's instructions. Links to these instructions can be found in Section 9.6 (Gas Detection Equipment Instruction Manuals) of the Operations and Maintenance Manual).

B. Turn on and zero CGI detector in fresh air according to specific manufacturer's instructions found in Section 9.6 (Gas Detection Equipment Instruction Manuals) of the Operations and Maintenance Manual.

C. Verify the correct service address/location and if applicable verify the meter number.

D. Immediately upon arrival, make a preliminary investigation of the customer's premises and/or area. This investigation can include a visual observation for excess consumption on the meter, abnormal appearance of vegetation around the location, sewer venting locations or odor of natural gas or other signs that may indicate the presence of natural gas. Do not rely on your sense of smell alone to detect the presence of natural gas: use all your senses—smell, listen and look—and use calibrated leak detection equipment to check indications of gas.

RECOGNIZING A GAS LEAK

- **Natural gas is odorized so that the gas is readily detectable by a person with a normal sense of smell.**
- **Sense of smell for most people is a highly reliable indicator of a natural gas release.**
- **However, continued exposure to the odorant can desensitize the sense of smell. Additionally, the smell of natural gas can be masked by other odors in the area.**
- **In certain rare situations, the odor intensity can be diminished by physical and/or chemical processes, such as when gas passes through certain soil conditions.**
- **If you suffer from loss of smell, olfactory fatigue or recurrent ailments, such as colds, sinus conditions or allergies, you may have a diminished capability to detect a natural gas leak. The Center for Disease Control has identified the loss of smell as a potential symptom of exposure to the virus that causes COVID-19. Using tobacco, alcohol, medications or narcotics can lessen your ability to smell odorized gas.**
- **If odorant is not readily detectable, contact your Supervisor immediately.**
- **A CGI, or other leak detection equipment, indicates the presence of gas regardless of odorant being detected.**

If during investigation, a probable or existing hazardous condition is discovered take **CONTINUING ACTIONS** shown below. With the primary objective of protecting life first and property second, the Emergency Responder will rely upon their training and experience in determining the order in which **CONTINUING ACTIONS** are taken based on the condition(s) they discover during their investigation.

CONTINUING ACTIONS

- **Continue to implement H.E.L.P. Steps (See H.E.L.P. Steps):**
  - **Continue with Determination of Hazard,**
  - **Determine Extent of Hazard,**
  - **Protect Life, and**
  - **Protect Property.**
- **Evacuate occupants of affected structure(s) to a safe location.**
- **Turn off gas at affected structure(s) and secure the meter(s) per Turn Off Procedure.**
- **Move to a safe location and:**
  - **Call 911; and**
  - **Notify a Supervisor and if needed, request assistance.**
- **Eliminate sources of ignition.**
- **Consider requesting that the electric provider shut off electric service to affected structure(s) or area based on the degree and location of hazardous condition(s).**
- **Establish a safety perimeter while locating the source of gas (See Safety Perimeter).**

ALWAYS protect people first and property second.

If an Atmos Energy Emergency Responder determines the cause of the reported leak is on another operator's asset or facility, the Emergency Responder will take reasonable actions to make the area safe, including calling 911 if needed, and remain on site until the other operator's technician arrives. The Atmos Energy Emergency Responder should document the other operator's name, the name of the other operator's responding technician, and the time the other operator's technician arrived on scene in the appropriate portion of notes on the Leak Investigation Order. In the event that the Atmos Energy Emergency Responder must mobilize and cannot remain on site until the other operator's technician arrives, they should contact a supervisor. The supervisor can approve the Atmos Energy Emergency Responder's mobilization if the area is safe. Close the electronic order to provide the proper notes on the Emergency Log.

In conducting a leak investigation, special consideration should be given to weather conditions and fire-related events as outlined in the Leak Investigation – Weather Actions and Leak Investigation – Fire-Related Event Response sections below.

IV. Inside Leak Investigation

Perform "Leak Investigation" actions, listed above, then proceed with Inside Leak Investigation.

If customer:

A. Is not available, turn off gas and secure meter per Turn-Off Procedure and conduct an Outside Leak Investigation.

B. Is available, confirm why customer called.

Prior to entering the structure:

A. Use CGI to take "Open Air" gas in air reading and CO reading at the doorway. If:

1) Open-air gas readings at the doorway are at or above 1% (20% LEL) gas in air, DO NOT ENTER the structure and take **CONTINUING ACTIONS** listed above.

2) Open-air CO readings at the doorway are at or above 200 ppm DO NOT ENTER the structure and conduct a CO Investigation per Carbon Monoxide Investigation Procedure.

3) Open-air readings at the doorway are less than 1% (20% LEL) Gas in Air and Open-air CO readings are less than 200 PPM, ENTER the structure and keep CGI on in order to continuously monitor open-air gas readings and open-air CO readings. While in the structure, if open-air gas or open-air CO readings are detected at or above these levels, LEAVE THE STRUCTURE IMMEDIATELY and take **CONTINUING ACTIONS** listed above.

B. Proceed to each accessible appliance and check for proper operation. Appliances that are found to be leaking or not functioning properly will be isolated / shut-off and handled according to Customer Caution Notice Procedure.

C. Perform customer piping test per Customer Piping Test Procedure.

D. If customer piping DOES NOT pass Customer Piping Test or a hazardous condition is found during the Inside Leak Investigation, leave gas off, secure the meter and follow Customer Notification Procedure.

E. If customer piping passes the Customer Piping Test, then turn gas on per Turn-On Procedure and activate appliances, where appropriate, per Appliance Activation Procedure.

F. After completing the Inside Leak Investigation, conduct a full Outside Leak Investigation as outlined below.

V. *Outside Leak Investigation*

Perform "Leak Investigation" actions, listed above, then proceed with a Surface and Subsurface Gas Detection Investigation (Outside Leak Investigation).

If a probable or existing hazardous condition is discovered at any time during an Outside Leak Investigation, take **CONTINUING ACTIONS** shown below, with the primary objective of protecting life first and property second. The Emergency Responder will rely upon their training and experience in determining the order in which **CONTINUING ACTIONS** are taken based on the condition(s) they discover during their investigation.

CONTINUING ACTIONS

- **Continue to implement H.E.L.P. Steps (See H.E.L.P. Steps):**
  - **Continue with Determination of Hazard,**
  - **Determine Extent of Hazard,**
  - **Protect Life, and**
  - **Protect Property.**
- **Evacuate occupants of affected structure(s) to a safe location.**
- **Turn off gas at affected structure(s) and secure the meter(s) per Turn Off Procedure.**
- **Move to a safe location and:**
  - **Call 911; and**
  - **Notify a Supervisor and if needed, request assistance.**
- **Eliminate sources of ignition.**
- **Consider requesting that the electric provider shut off electric service to affected structure(s) or area, based on the degree and location of hazardous condition(s).**
- **Establish a safety perimeter while locating the source of gas (See Safety Perimeter).**

ALWAYS protect people first and property second.

Surface Gas Detection Investigation

A Surface Gas Detection Investigation is part of an Outside Leak Investigation and consists of investigating for the presence of gas above ground level by using a calibrated CGI or other approved and calibrated gas detection equipment, in accordance with the applicable manufacturer's and/or equipment manuals.

A. Conduct the Surface Gas Detection Investigation in the vicinity of the suspected or reported leak location and in the vicinity of any identified structures. Investigate where appropriate and if possible:

    1) Over the main, over the service line, at the tap and service riser and, if present, over the customer's yard line.

    2) Around the primary structure and any adjacent structure(s) on the property (for example, a detached garage).

    3) Along other underground utility lines in proximity to the primary structure (for example, water, electric, sewer, etc.) when able to visually determine their general location(s).

    4) At accessible openings such as sewer vents, sewer cleanouts, sewer manholes, storm drains, utility manholes or boxes, crawlspaces, substructures, and the perimeter of potentially involved structures. If gas is detected in any of these locations, take **CONTINUING ACTIONS**, ventilate if possible, and expand the area of investigation to include structures on adjacent properties and along the street and/or alley as appropriate.

B. Continue the Outside Leak Investigation by performing a Subsurface Gas Detection Investigation.

Subsurface Gas Detection Investigation

A Subsurface Gas Detection Investigation is part of an Outside Leak Investigation and consists of investigating for the presence of gas below ground level using a bar hole probe and calibrated CGI in accordance with the applicable manufacturer's and/or equipment manuals, to identify a suspected leak and/or to determine any potential gas migration.

A Subsurface Gas Detection Investigation is performed by testing with a CGI at bar holes placed near the underground gas facilities. Enough subsurface sampling points (bar holes) should be made, at similar depths, to sample the underground gas facilities and accurately pinpoint the suspected leak and determine the extent of any gas migration. Spacing of the bar holes may vary due to several reasons including, but not limited to: conditions at the site, pinpointing the source of a leak, etc. Record the readings for each bar hole.

At times it may be necessary to drill to obtain access to the subsurface above or adjacent to these facilities and/or locations. Exercise care so underground facilities are not punctured or otherwise damaged.

A. Bar test the service riser at the meter, at the tap on the main, over the main on both sides of the tap, and on both sides of the driveway (if present and as applicable), and at the water meter box.

B. If accessible, test the following: (i) openings such as sewer vents, sewer cleanouts, sewer manholes, storm drains, utility manholes or boxes, crawlspaces, substructures, and (ii) at points around the perimeter of the foundation of potentially affected structures. If gas is detected in any of these locations, take **CONTINUING ACTIONS** and expand the area of investigation to include structures on adjacent properties and along the street and/or alley as appropriate.

C. If the presence of gas, at any level, is found during the Subsurface Gas Detection Investigation, bar test in the area of indication along and adjacent to mains and service lines, paying close attention to valves, service tees, fittings, stubs, connections, risers, or service entry points to buildings. Continue bar tests utilizing a CGI to determine gas concentration readings and whether gas is migrating toward a structure or is present in a non-gas substructure (e.g., storm drain, water meter box, etc.). Continue bar testing to zero percent (0%) gas in all directions in order to determine the extent of any gas migration and identify the source of gas. Bar holes should be evenly placed in all directions from the suspected leak location. Record readings, even if readings are zero percent (0%). Classify (grade) any found leak(s) in accordance with Section 9.4.1 of the Operations and Maintenance Manual (Classification of Leaks) and complete Leak Found Records in accordance with Section 9.5 of the Operations and Maintenance Manual (Record Keeping), Paragraphs 9.5.2 and 9.5.3.

D. Continue to expand the investigation if the source of odor or gas has not been determined by continuing to bar test along the alley, street and the perimeter of structures on adjacent properties and record readings, even if the readings are zero percent (0%).

E. If the presence of gas is detected or suspected but the source of the gas cannot be identified, contact a Supervisor to take Escalated Actions (as outlined further below).

Weather conditions (e.g., rain, wind, snow, ice, frost line or water saturated soil) may affect the operation and/or accuracy of certain leak detection equipment and gas migration patterns. If such conditions are present, additional actions, as outlined below in the Leak

Investigation -- Weather Actions section, may be required when conducting an Outside Leak Investigation.

Leak Investigation -- Weather Actions

Weather conditions (e.g., rain, wind, snow, ice, frost line, and water-saturated soil) may affect the operation and/or accuracy of certain gas detection equipment and/or gas migration patterns. Refer to Section 9.6 (Gas Detection Equipment Instruction Manuals) of the Operations and Maintenance Manual for the proper use and care of gas detection equipment and possible limitations related to weather or environmental conditions.

Emergency Responders must be diligent, thorough, and persistent while conducting their leak investigations. Determining the impact of weather conditions on a leak investigation will require the experience, training, and judgment of the personnel involved. In making that determination, consider, among other factors:

A. The extent of the environmental conditions encountered (i.e., standing water as compared to flooding conditions, damp soil as compared to saturated soil, light rain as compared to heavy rain, etc.); and

B. The potential limitations of available gas detection equipment based upon the manufacturer's manuals.

Weather conditions should be monitored during the course of the leak investigation and appropriate actions taken for changing weather conditions.

Take the following additional actions as needed to assist with outside leak investigations:

A. Make multiple bar holes, expand the area of investigation, and use all your senses to search for the presence of gas (i.e., visually observe for bubbles or vapors, listen for hissing noises, smell for odorant, etc.).

B. Consider expanding the area of investigation to:

    1) both sides of street(s), alley, driveway, sidewalk(s), if present; and

    2) along other potential migration paths, including underground utility lines (for example, water, electric, sewer, etc.) when able to visually determine their general location(s).

C. If water fills bar holes, use gas detection equipment to test at the surface over the bar holes.

D. If gas is detected at any point, expand bar hole testing and make sufficient number of additional bar holes to pinpoint the leak until zero percent (0%) gas is reached to determine the extent of gas migration, if any.

Contact a Supervisor to take Escalated Actions if: (i) weather conditions prevent the completion of the investigation (for example, if water prevents the use of subsurface gas detection equipment), or (ii) if gas has been detected but the source has not been determined.

VI. Escalated Actions

A. If a probable or existing hazardous condition is discovered at any time, take **CONTINUING ACTIONS**.

B. When Escalated Actions are required to supplement a leak investigation, on-site Emergency Responders are to contact a Supervisor who will coordinate one or more of the following:

   1) Request additional personnel to assist in the leak investigation; and/or

   2) Perform a special leak survey.

C. After taking Escalated Actions, if gas is detected but the source cannot be identified, the Supervisor will escalate the matter to a Manager and refer to section on *Emergency Shutdown, System Isolation, and Pressure Reduction* to begin taking appropriate actions to:

   1) shut-in a portion of the gas operating system, or

   2) isolate a portion of the gas operating system in order to perform a pressure test on one or more main(s) and/or service line(s).

VII. Safety Perimeter

The purpose of a Safety Perimeter is to establish an area to restrict entry when a probable or existing hazardous condition has been identified. The boundaries of the Safety Perimeter will be based on the Emergency Responder's assessment of the existing or probable hazards and conditions that exist at the time.

When establishing a Safety Perimeter, considerations should include, but are not limited to, the following:

A. Structures where gas is detected or suspected in the structure, at the outside building wall, or where gas would likely migrate to an outside wall.

B. The possible effects of gas ignition from accumulation of gas in a structure.

C. Areas where leaks can be seen, heard, or felt and in a location that may endanger employees, the public, or property.

D. The presence of gas in sewers.

E. Weather or soil conditions that can affect migration patterns.

It may be necessary to establish and maintain a Safety Perimeter beyond the address / location where a hazardous condition is found or suspected and could include structures on adjacent properties / addresses, across streets, across alleys and in other areas where gas could potentially migrate or be present. If, while establishing the Safety Perimeter, the hazardous condition is determined to affect additional structures or additional hazardous conditions are discovered or suspected, take **CONTINUING ACTIONS** relative to additional affected structure(s). If first responders (Fire and/or Police) are onsite or arrive onsite, the establishment of the Safety Perimeter should be coordinated with first responders. The Company's Emergency Responder, Company Supervisor, or Company incident commander should attempt to establish communications with first responders onsite and apprise them of the situation / conditions, request that they assist in establishing the Safety Perimeter, and request assistance with evacuations and maintaining evacuations, where appropriate.

An employee qualified in emergency response will remain on-site and continue to monitor gas migration patterns and accessible openings (sewer cleanouts, sewer vents, sewer manholes, storm sewer inlets, utility manholes, crawlspaces, and other accessible openings) until the hazardous condition(s) has been eliminated or a relief employee(s) qualified in emergency response arrives to continue monitoring gas migration patterns. While monitoring conditions on-site, it may be necessary to expand the boundaries of the Safety Perimeter as conditions change or if additional hazardous conditions are discovered

or suspected. If the boundaries of the Safety Perimeter are expanded, take **CONTINUING ACTIONS** relative to any additional affected structure(s).

Once the hazardous condition has been eliminated, the boundaries of the Safety Perimeter can be reduced working inward toward the leak location. In reducing the limits of the boundaries, continue to bar hole test and check accessible sewer cleanouts, sewer vents, sewer manholes, storm sewer inlets, utility manholes, crawlspaces, and other accessible openings for the presences of gas. DO NOT reduce the boundaries inside of any monitored location(s) if hazardous conditions are present.

VIII. Emergency Shutdown, System Isolation, and Pressure Reduction

Based on the condition that is identified or suspected during a leak investigation, it may be necessary to take prompt actions to control, reduce, or eliminate the flow of gas to the location or area that includes isolating or shutting down a portion of the gas operating system. These actions could include, but are not limited to, the use of a system valve(s), valve(s) at regulator/metering station(s), the use of squeeze off tools, or plugging & tapping equipment.

Emergency Responders have the authority to initiate a system shutdown. Secondary effects should be considered when making such decisions and, understandably, employees may need to contact a Supervisor for guidance on valve locations or instructions related to a specific situation. Only those employees holding requisite OQ's may operate:

A. Valves

B. Regulator or metering stations

C. Squeeze tools

D. Tapping and plugging equipment.

However, Emergency Responders do not need permission to initiate a system shutdown.

IX. Fire-Related Event Response Procedure

This procedure will be used when an Emergency Responder is dispatched to the scene of a fire-related event.

A. Upon arrival:

1) Assess the situation and, if a probable or existing hazardous condition is discovered, take **CONTINUING ACTIONS** in Section 2.3 Leak Investigation of these procedures.

2) As applicable, turn off the gas to the affected structure(s) and secure the meter per the Turn-Off Procedure.

3) If the fire department (or the responding agency) is not on site, notify a Supervisor who will contact the appropriate department and, as practical, ask if any cause(s) of the fire-related event have been determined.

4) If fire department is on site, make contact to:

(i) Determine whether utilities have been shut off;

(ii) Ask whether any preliminary cause(s) of the fire-related event have been determined and/or excluded; and

(iii)Confirm with the fire department that the area is safe to conduct a leak investigation.

5) Notify the Supervisor of possible gas involvement or if there were injuries or fatalities. The Supervisor will escalate the matter to a Manager.

B. Perform an Outside Leak Investigation

1) Complete as much of the investigation as possible when safe to do so and when access to the property is allowed. If you cannot complete the leak investigation, contact a Supervisor to determine a time to return to the site, if appropriate, to complete the leak investigation.

2) Use remote leak detection equipment to search for potential gas:

(i) Around, in proximity to, and the inside of the relevant structure(s), including crawlspaces if applicable and accessible, without entering the subject structure(s); and

(ii) Around the perimeter of the foundation of adjacent structures on the property (for example, a detached garage).

3) If natural gas is detected or the involvement of natural gas is suspected:

(i) Contact a Supervisor immediately to take Escalated Actions found in Section 2.6 of this procedure. The Supervisor will escalate the matter to a Manager.

(ii) Expand the investigation to conduct a special leak survey of the area.

(iii) Using **AIR**, perform a Pressure Drop Test on Customer Piping unless a safety-related condition or other circumstance prevents completion of the test. Access to the inside of the structure is not required, and appliance valves do not need to be closed in order to perform the Customer Piping Test using a Pressure Drop Test with air as part of a fire leak investigation.

4) If a probable or existing hazardous condition is discovered at any time during the investigation, take appropriate **CONTINUING ACTIONS** found in Section 2.3 of these procedures.

5) Personnel do not need approval to take any and all necessary actions to safeguard life and property, including evacuating occupants and/or shutting-in a portion of the gas operating system.

6) At the appropriate time, document the leak investigation findings and other relevant information.

7) Once the investigation is complete, the Emergency Responder should complete/close the electronic order to provide proper date and time stamping on the emergency log. Ensure the work order has the accurate address and meter serial number. If the Emergency Responder does not have a Mobile Data Terminal, a paper order will be completed with all information and given to the Supervisor or designee for proper data entry into Customer Service System.

8) Any onsite materials removed from the property, including the meter and regulator, are to be properly documented, tagged, and stored.

9) If on-site, inform the fire department and/or customers of your intended departure.

Completing the Order

A. When applicable, leave the appropriate door tag to communicate findings to customer.

B. After completing investigation(s), complete and close the electronic order to provide proper date and time stamping on the emergency log.

C. If the Emergency Responder is unable to complete and close the order on a Mobil Data Terminal (MDT), such as after hours, on weekends or MDT not functioning, record applicable information on paper, and communicate with Dispatch. Complete and close the electronic order as soon as practical after access to an MDT is available.

    1) If MDT cannot connect due to network issues, complete/close the order locally on the MDT and communicate with Dispatch. Upload order completion and close order as soon as practical after network connectivity is re-established.

    2) Notify a Supervisor of your investigation results and provide any supporting documents.

D. For leaks found as a result of leak investigations, complete leak found records in the appropriate company system.

    1) All natural gas and CO readings obtained during the investigation should be recorded even if readings are zero percent (0%).

Refer to: Section 9.6 (Gas Detection Equipment Instruction Manuals) of the Operations and Maintenance Manual.