2019 – November 11 – Editorial Section
Approved additions and revision to GMA-192-11 and GMA-192-11A. Ready for 2nd LB.

PRIMARY: G-192-11, 11A
RESPONSIBLE GROUP: DP/ER Task Group
PURPOSE: Review existing GM 5.4 Procedure – Inside leak or odor complaint,(i), and develop GM to address determining if there is an immediate threat to life and property, and actions to take in that situation.

Current GM: (i) If the call is an odor complaint, proceed to the area indicated by the caller/occupant to investigate. When entering a building as a result of detecting a leak on outside underground piping, initiate an “inside” investigation. If the visit is in response to an odor complaint, attempt to locate and identify all gas lines associated with the building to their respective points of termination or equipment connection. Observe for abandoned or inactive natural gas lines, and natural gas lines that may exist under a portion of the structure that has no basement (e.g., an addition, garage).

ORIGIN/RATIONALE: Bob Naper email 10/3/14
Add additional GM to address that reasonable checks, when an immediate threat to life and property exists may include, but not be limited to determining if there were atmospheric readings, if there was significant gas entering the structure, if there were strong odors inside, etc. It is inadvisable, under these circumstances, to take the time to locate any small leak or “non-hazardous release.” The specific wording is in need of being developed. Wording from a recent TR addressing the need to sometimes check inside buildings before checking the extent of the spread of gas, may be utilized. An experienced leak investigator, acting as a reasonable and prudent person will, when necessary, put life and property before O&M procedures. The LDC’s O&M procedures were only consistent with the GPTC guidance shown above [5.4(ii)]. The regulator cited the LDC for failure to follow their O&M, even though, in this case, the actions were clearly reasonable and prudent.

LB Processing Note: The proposed changes from LB3-2018 are shown in yellow highlight.

Editorial Note: The term "includes" does not limit any list to those items presented and means, "includes but not limited to." This term is used in the same manner as it is used in the Regulations (reference §192.15). Further, added qualifiers such as "may" or "might" are sometimes used to emphasize that a list is not intended to set a minimum requirement or practice.

GMA G-192-11

5 LEAK INVESTIGATION AND CLASSIFICATION
5.1 Scope
5.2 Procedure – General.
   (a) If a leak investigation is initiated by an “inside” odor complaint, see 5.4 below. The following guide material is not intended to be a step-by-step procedure in responding to leak calls, but is intended to assist operators in developing their own written procedures. Certain action items may be initiated ahead of other action items based on the conditions at the leak location. If a hazardous situation is discovered, the operator should consider evacuating structures or areas that are or could be affected by the hazard.
   (b) There are situations that might warrant entering a building before checking the extent of gas migration. If gas is found within a structure, immediately evacuate all persons within the structure. These situations can include, but are not limited to, the following.
      (1) Broken gas lines, service line, or customer-owned fuel line.
      (2) Gas blowing out of the ground.
(3) Hissing, roaring, or other sounds indicating underground gas leakage or leakage inside a building.

(4) Noticeable odor levels upon entry of a building.

(5) Noticeable odor levels both inside and outside a building.

(6) Gas in multiple underground structures that are normally connected by ducts or piping to houses, especially when the gas readings are high.

(7) Inside odor reports in an area of underground leakage or coincident with outside odor reports.

(8) If a gas reading at or above a hazardous concentration is detected, the operator should consider evacuating the structure. Calling for additional resources might be necessary based on the type of building involved in the leak complaint (e.g., hospital, school, commercial building).

(c) Where a leak indication appears to originate from buried piping, operator personnel should identify the extent of gas migration. If the migration pattern extends to nearby structures, the structures should be immediately checked for the presence of combustible gases. Structures may include buildings, confined spaces, and other buried utilities. See 5.3 below. Considerations should include the following.

(1) If gas is found within a structure, other structures within the boundaries of the migration pattern should be checked for the presence of gas. Based on the local conditions, structures beyond the identified migration pattern may also need to be checked.

(2) The levels of gas migrating into buildings need to be monitored so that the "make safe" actions can be initiated at appropriate times. Under these and similar conditions, it is recommended that immediate assistance be requested and the inside investigations be initiated without delay, including finding the farthest extent of gas migration.

(3) Because leakage can be dynamic, the gas levels in nearby buildings need to be continually monitored. It is not uncommon, under extreme conditions, for buildings that had no gas detected on during the initial check to have gas levels found upon subsequent checks.

(4) Reentry to any structure within the leakage area boundaries of gas migration should be performed by qualified personnel and with extreme caution.

(d) Personnel investigating a leak indication reported as either an "inside" or "outside" complaint should perform a visual check for the existence of other underground utilities in the area. If "outside," see 5.3 below. Examples of other underground facilities in the area of suspected gas migration might include the following.

(1) Customer-owned service lines.

(2) Buried fuel lines.

(3) Electric lines.

(4) Telephone wiring.

(5) Television cables.

(6) Water or sewer lines.

(e) Consider the potential for gas migration under fully paved areas, ground frost, or buildings.

[Editorial note: TR 14-29 proposes a new (f) - if approved, re-letter (f) & (g) below to (g) & (h).]

(f) If the leak investigation is initiated by an outside odor complaint, see 5.3 below.

(g) If the leak investigation is initiated by an inside odor complaint, see 5.4 below.

5.3 Procedure – Outside underground leak.

Note: See 5.2(a) above before proceeding with any detailed outside underground leak investigation.

(a) Using a barhole device and CGI, barhole in the area of indication along and adjacent to operator's mains and service lines, paying close attention to valves, service tees, fittings, stubs, connections, risers, or service entry points to buildings. See 4.4(b) above.

Note: Use caution when barholing to avoid damage to operator facilities or other underground structures.
5.4 Procedure – Inside leak or odor complaint.

Note: See 5.2(a) above before proceeding with any detailed inside leak or odor complaint investigation.

(a) If a hazardous condition is detected or discovered during a leak investigation, see 5.2(a) above.

(b) ... 

5.4 Procedure – Inside leak or odor complaint.

Note: See 5.2(a) above before proceeding with any detailed inside leak or odor complaint investigation.

(a) It may be necessary to investigate a reported leak or gas odor inside a structure. These investigations may result from the following.

1. Gas migration.
2. Indications of gas readings while performing routine leak surveys.
3. Odor complaints.

Note: If a hazardous condition is detected or discovered during an leak investigation, see 5.2(a) above.

(b) ... 

(h) Using a CGI, test around the entry door for gas indications. Do not ring the door bell; knock on door to get the attention of the occupants. Upon entry do not operate any lights, but do take appropriate precautions to prevent accidental ignition. Immediately sample the inside atmosphere for the presence of a combustible gas. If a sustained gas reading is detected, consider evacuating all persons within the structure. If a gas reading at or above a hazardous concentration or an operator-established criteria is detected, the operator should consider evacuating the structure. Calling for additional resources might be necessary based on the type of building involved in the leak complaint (e.g., hospital, school, commercial building).

Note: If gas is detected, the applicable portions of the operator’s emergency procedures need to be implemented ($192.615(a)(3))

(i) Consider implementing emergency response actions (e.g., eliminating sources of ignition, venting, terminating gas supply).

[j][k][l][m][n][o][p][q]
[Editorial note: Re-letter remaining list under 5.4 (change (j)-(o) to (k)-(p)).]

GMA G-192-11A

5 LEAK INVESTIGATION AND CLASSIFICATION

5.1 Scope

5.2 Procedure – General.

(a) Petroleum gas...

(b) If a leak investigation is initiated by an "inside" odor complaint, see 5.4 below. The following guide material is not intended to be a step by step procedure in responding to leak calls but is intended to assist operators in developing their own written procedures. Certain action items may be initiated ahead of other action items based on the conditions at the leak location. If a hazardous situation is discovered, the operator should consider evacuating structures or areas that are or could be affected by the hazard.

(c) There are situations that might warrant entering a building before checking the extent of gas migration. If gas is found within a structure, immediately evacuate all persons within the structure. These situations might include the following:

1. Broken gas line, main, service line, or customer owned fuel line.
2. Gas blowing out of the ground.
3. Hissing, roaring, or other sounds indicating underground gas leakage or leakage inside a building.
(4) Noticeable odor levels upon entry of a building.
(45) Noticeable odor levels both inside and outside a building.
(56) Gas in multiple underground structures that are normally connected by ducts or piping to houses, especially when the gas readings are high.
(67) Inside odor reports in an area of underground leakage or coincident with outside odor reports.

(8) If a gas reading at or above a hazardous concentration is detected, the operator should consider evacuating the structure. Calling for additional resources might be necessary based on the type of building involved in the leak complaint (e.g., hospital, school, commercial building).

(d) Where a leak indication appears to originate from buried piping, operator personnel should identify the extent of gas migration. If the migration pattern extends to nearby structures, the structures should be immediately checked for the presence of combustible gases. Structures may include buildings, confined spaces, and other buried utilities. See 5.3 below. Considerations should include the following.

(1) If gas is found within a structure, other structures within the boundaries of the migration pattern should be checked for the presence of gas. Based on the local conditions, structures beyond the identified migration pattern may also need to be checked.
(2) The levels of gas migrating into buildings need to be monitored so that the “make safe” actions can be initiated at appropriate times. Under these and similar conditions, it is recommended that immediate assistance be requested and the inside investigations be initiated without delay, including finding the farthest extent of gas migration.
(3) Because leakage can be dynamic, the gas levels in nearby buildings need to be continually monitored. It is not uncommon, under extreme conditions, for buildings that had no gas detected en-during the initial check to have gas levels found upon subsequent checks.
(4) Reentry, by qualified personnel, to any structure within the leakage area boundaries of gas migration should be performed with extreme caution.

(e) Personnel investigating a leak indication reported as either an “inside” or “outside” complaint should perform a visual check for the existence of other underground utilities in the area. If “outside,” see 5.3 below. Examples of other underground facilities in the area of suspected gas migration might include the following.
(1) Customer-owned service lines.
(2) Buried fuel lines.
(3) Electric lines.
(4) Telephone wiring.
(5) Television cables.
(6) Water or sewer lines.

(f) Consider the potential for gas migration under fully paved areas, ground frost, or buildings. [Editorial note: TR 14-29 proposes a new (g) - if approved, re-letter (g) & (h) below to (h) & (i).]

(g) If the leak investigation is initiated by an outside odor complaint, see 5.3 below.
(h) If the leak investigation is initiated by an inside odor complaint, see 5.4 below.

5.3 Procedure – Outside underground leak.

Note: See 5.2(a) above before proceeding with any detailed outside underground leak investigation.

(a) Using a barhole device and CGI, barhole in the area of indication along and adjacent to operator’s mains and service lines, paying close attention to valves, service tees, fittings, stubs, connections, risers, or service entry points to buildings. See 4.4(b) above. If a hazardous condition is detected or discovered during a leak investigation, see 5.2(a) above.

Note 1: Use caution when barholing to avoid damage to operator facilities or other underground structures.

Note 2: If a hazardous condition is detected or discovered during a leak investigation, see 5.2(a) above.
5.4 Procedure – Inside leak or odor complaint.

Note: See 5.2(a) above before proceeding with any detailed inside leak or odor complaint investigation.

(a) It may be necessary to investigate a reported leak or gas odor inside a structure. These investigations may result from the following.

1. Gas migration.
2. Indications of gas readings while performing routine leak surveys.
3. Odor complaints.

Note: If a hazardous condition is detected or discovered during a leak investigation, see 5.2(a) above.

(b) …

(h) Using a CGI, test around the entry door for gas indications. Do not ring the door bell; knock on door to get the attention of the occupants. Upon entry do not operate any lights, but do take appropriate precautions to prevent accidental ignition. Immediately sample the inside atmosphere for the presence of a combustible gas. Remember, petroleum gas is heavier than air and will accumulate in the lower atmosphere. If a sustained gas reading is detected, consider evacuation of all persons within the structure. If a gas reading at or above a hazardous concentration or an operator-established criteria is detected, the operator should consider evacuating the structure. Calling for additional resources might be necessary based on the type of building involved in the leak complaint (e.g., hospital, school, commercial building).

Note: If gas is detected, the applicable portions of the operator’s emergency procedures need to be implemented (§192.615(a)(3)).

(i) Consider implementing emergency response actions (e.g., eliminating sources of ignition, venting, terminating gas supply).

[Editorial note: Re-letter remaining list under 5.4 – change (j)-(o) to (k)-(p)].