

12-B Leak Response, Leak Classification, and Gas Emergencies

DESC O&M Manual - Version 2022.5 October 5, 2022

[1.0 SCOPE](#)

[2.0 REGULATORY REFERENCES](#)

[3.0 PROCEDURE](#)

[4.0 TRAINING/QUALIFICATIONS \[192.615\(b\)\(3\)\]](#)

[5.0 DOCUMENTATION/FORMS](#)

[6.0 RELATED DOCUMENTS](#)

[7.0 APPENDICES](#)

1.0 SCOPE

The purpose of this procedure is to maintain public safety and protect the environment. This chapter describes procedures for receiving, identifying, classifying, and responding to notifications of gas leaks, ruptures, odors and emergencies, so that hazardous leaks may be eliminated and the release of natural gas from pipeline facilities may be minimized.

2.0 REGULATORY REFERENCES

49 CFR Part 192 §§ [192.605\(b\)\(11\)](#), [192.615](#), [192.703](#), [ADB-2021-01]

3.0 PROCEDURE

[3.1 Initial Response to Leak Scene \[192.605\(b\)\(11\)\] \[192.615\(a\)\]](#)

[3.2 Working in Natural Gas Atmospheres involving Excavations](#)

[3.3 Leak Grade Classification and Action Criteria \[192.703\]](#)

[3.4 Leak Response Involving Buildings](#)

[3.5 Leak Response](#)

[3.6 Coordination of Leak Response with Non-DENC and DESC Entities \[192.615\(a\)\]](#)

[3.7 Approved Gas Detectors](#)

[3.8 Fires and Explosions](#)

3.1 Initial Response to Leak Scene [[192.605\(b\)\(11\)](#)] [[192.615\(a\)](#)]

A proper and quick response is essential for protecting the public in the event of a gas *emergency*. An emergency is defined as any sudden, unexpected occurrence that demands immediate action. This includes:

- Notice of potential pipeline rupture where there is an unexplainable or unexpected pressure drop (HP distribution, transmission or storage) or where a segment contains an RMV or alternative equivalent technology (e.g., manual valve)
 - Unexplainable or Unexpected large increase or decrease in pressure (any pipeline system)
 - Reportable Incident as determined by 49 CFR [191.3](#)
 - Any uncontrolled fire where natural gas has ignited, where there are no emergency responders (fire or police) on site.
 - Uncontained hazardous liquid facility rupture
 - Hazardous leak that results in evacuation of people from a structure, where there are no emergency responders (fire or police) on site.
- (a) Local gas offices are expected to initiate response to gas emergencies in their area. Local Office, Dispatch or First Responders must establish and maintain liaison with appropriate public safety answering point (i.e., 9–1–1 emergency call center) where direct access to a 9–1–1 emergency call center is available from the location of the pipeline, as well as fire, police, and other public officials
- (b) If upon arrival on the scene, fire department, police department or other non-DENC and DESC responders are involved, the DENC and DESC responder shall establish command and coordinate with non-DENC and DESC entities in accordance with section 3.6
- (c) The responder in charge at the emergency site shall notify Local Manager when it is determined that emergency shutdown valve shut off, or pressure reduction in any section of the operator's pipeline system necessary to minimize hazards of released gas to life, property, or the environment is required.
- (d) Using a gas detector, the DENC and DESC responder shall evaluate the scene.
- (e) If the *leak* was reported, the DENC and DESC responder *should* establish contact with the person reporting the leak, if readily available, and determine suspected location of the leak, any recent activity which *may* have contributed to the leak and/or any other information pertinent to the leak call.
- (f) If there is a notice of potential rupture, immediately and directly notify the appropriate public safety answering point or other coordinating agency for the communities and jurisdictions in which the pipeline is located.
- (g) If Dispatch receives an emergency notice from an entity that there could be a rupture, Gas Control should be notified to determine whether this event meets the notice of potential rupture requirements. If Gas Control confirms that there are indications of a potential rupture, Dispatch will immediately notify local emergency responders of this event.

State Specific: South Carolina

- [DESC Emergency Manual](#) (PDF file)

3.2 Working in Natural Gas Atmospheres Involving Excavations

See [Chapter 1-E Safety](#) for taking adequate precautions in excavated trenches.

Note: A charged fire extinguisher is required at excavation sites.

- (a) Any emergency involving an uncontrolled Natural Gas Atmosphere shall follow the procedures of [GD-SF-A-140-001](#), Responding to Natural Gas Hazardous Atmospheres Involving Excavations.
- (b) All employees on site must don PPE appropriate for the atmosphere they are reasonably expected to be in.
- (c) If the qualified employee determines the atmosphere safe, then employees may enter the work area wearing applicable PPE. However, the atmosphere should continue to be evaluated and monitored with a CGI. If the leak or conditions change all personnel must exit the space, re-evaluate the conditions, and take appropriate actions up to and including reclassifying the atmosphere as hazardous. For intentional releases of gas in this category (purging), the volume and duration of the gas release should be controlled by valves or other methods approved by *engineering* and must still be monitored.
- (d) If a qualified employee determines the atmosphere HAZARDOUS, then all onsite personnel shall follow steps beginning at section 7.4 of [GD-SF-A-140-001](#), Responding to Natural Gas Hazardous Atmospheres Involving Excavations.
- (e) Local fire departments may be called upon for assistance with hazardous atmospheres as appropriate.
- (f) Employees should also refer to [Chapter 12-I Prevention of Accidental Ignition](#) which addresses preventing accidental ignition in potentially hazardous atmospheres.
- (g) If the situation permits a bypass to be safely installed on a one-way feed, this should be accomplished. If the location of the line break prohibits the safe installation of a bypass, the line should be shut down and service will be restored after the line repair. Each service temporarily disconnected from the *main* must be tested from the point of disconnection to the stop cock on the riser, in the same manner as a new service, before reconnecting.
- (h) All plastic gas services and mains must be properly grounded before starting any squeeze-off operations (tool grounded, use of soapy rags, etc.). See [12-E Repair of Plastic and Steel Pipelines, 3.2 Squeezing Off Pipelines](#).
- (i) All trenches and excavations are also subject to the requirements of [Chapter 1-E Safety, 3.3 Trenching and Excavation Safety](#).

3.3 Leak Grade Classification and Action Criteria [[192.703](#)], [ADB-2021-01]

(a) Classification of leaks should be made in accordance with the following:

- (1) Grade "1" leak - Any leak that represents an existing or probable hazard to persons or property, and requires immediate repair or continuous action until the conditions are no longer hazardous. Grade "1" leaks may be downgraded if some remedial action has been taken and if approved by the supervisor or, designee.
 - (i) Responding to grade "1" leaks may necessitate one or more of the following actions:
 - (A) Evacuation of a building.
 - (B) Eliminating sources of ignition.

- (D) Ventilating the building.
- (E) Rerouting traffic or blocking off an area.
- (F) Alerting proper public officials or agencies.

(ii) Examples of grade "1" leaks are as follows (not all inclusive):

- (A) Any leak that is determined by on-site operating personnel to represent an immediate hazard to persons or property.
- (B) Any leak detected inside or under a building.
- (C) Escaping gas that has ignited.
- (D) Leaking gas that has migrated into a sewer, tunnel, storm drain, French drain, subsurface, etc. (i.e. anything in the ground that could cause gas to migrate to a structure and/or create a hazardous condition).
- (E) Any below ground reading at the outside wall of a building, or where gas would likely migrate to an outside wall of a building.
- (F) Any above ground leak that could likely migrate into or under a building.
- (G) Any reading of 80% of L.E.L. or greater in a subsurface structure. (i.e. anything in the ground that could cause gas to migrate to a structure and/or create a hazardous condition).
- (H) Any leak which can be heard, seen, felt and/or which is located where property or the general public is endangered.
- (I) Service line leak where the EFV activated.

(2) Grade "2" leak - Any leak that is considered to be non-hazardous at the time it is detected, but justifies scheduled repair based on probable future hazard or significant loss of gas. A grade "2" leak should be repaired within 6 months of its detection. If a grade 2 cannot be repaired within 6 months the leak must be resurveyed or down-graded. A grade "2" leak may be downgraded if it is determined to be impractical to repair and if approved by the supervisor or, designee. Factors to consider when scheduling the date for repair of a grade "2" leak are as follows:

- (i) Amount and migration of gas.
- (ii) Proximity of gas to buildings and subsurface structures.
- (iii) Extent of pavement and sidewalk.
- (iv) Soil type, soil conditions and natural venting.

(3) Grade "3" leak - Any leak that is non-hazardous at the time it is detected, that can be reasonably expected to remain non-hazardous, and that is determined to be impractical to repair. A grade "3" leak must be reevaluated within 15 months of its detection, and each 15 months thereafter until it is repaired.

State Specific: South Carolina

- (4) Downgrading a leak to “No Leak Found” – this situation can sometimes occur when following up on grade 2 leaks reported during previous leak surveys or investigations of customer called in leaks. Sometimes naturally occurring methane can result in positive leak indications and it must be confirmed that natural gas is not present. If combustible gas is detected but a natural gas leak cannot be pinpointed, a combustible gas analyzer or other testing means should be used to confirm there is no natural gas present.

See below GPTC chart for additional guidance.

The following tables contain minimum guidelines for grading leaks and is referenced from Appendix G11 of the *GPTC Guide For Gas Transmission and Distribution Systems*. The example section in the following charts is not all inclusive.

GRADE	DEFINITION	ACTION CRITERIA	EXAMPLE
1	A leak that represents an existing or probable hazard to persons or property, and requires immediate repair or continuous action until the conditions are no longer hazardous.	<p>Requires <i>prompt action</i>* to protect life and property, and continuous action until the conditions are no longer hazardous.</p> <p>*The prompt action in some instances may require one or more of the following.</p> <ul style="list-style-type: none"> a. Implementation of company emergency plan (192.615). b. Evacuating premises. c. Blocking off an area. d. Rerouting traffic. e. Eliminating sources of ignition. f. Venting the area. g. Stopping the flow of gas by closing valves or other means. h. Notifying police and fire departments. 	<ul style="list-style-type: none"> 1. Any leak which, in the judgment of operating personnel at the scene, is regarded as an immediate hazard. 2. Escaping gas that has ignited. 3. Any indication of gas which has migrated into or under a building, or into a tunnel. 4. Any reading at the outside wall of a building, or where gas would likely migrate to an outside wall of a building. 5. Any reading of 80% LEL, or greater, in a confined space. 6. Any reading of 80% LEL, or greater in small substructures (other than gas associated substructures) from which gas would likely migrate to the outside wall of a building. 7. Any leak that can be seen, heard, or felt, and which is in a location that may endanger the general public or property.

GRADE	DEFINITION	ACTION CRITERIA	EXAMPLES
2	<p>A leak that is recognized as being non-hazardous at the time of detection, but justifies scheduled repair based on probable future hazard.</p>	<p>Where practical, leaks should be repaired or cleared within one calendar year from the date the leak was reported. In determining the repair priority, criteria such as the following should be considered.</p> <ul style="list-style-type: none"> a. Amount and migration of gas. b. Proximity of gas to buildings and sub-surface structures. c. Extent of pavement. d. Soil type, and soil conditions (such as frost cap, moisture and natural venting). <p>Grade 2 leaks should be reevaluated at least once every six months until cleared. The frequency of reevaluation should be determined by the location and magnitude of the leakage condition.</p> <p>Grade 2 leaks may vary greatly in degree of potential hazard. Some Grade 2 leaks, when evaluated by the above criteria, may justify scheduled repair within the next 5 working days. Others will justify repair within 30 days. During the working day on which the leak is discovered, these situations should be brought to the attention of the individual responsible for scheduling leak repair.</p> <p>On the other hand, many Grade 2 leaks, because of their location and magnitude, can be scheduled for repair on a normal routine basis with periodic reinspection as necessary.</p>	<p><i>A. Leaks Requiring Action Ahead of Ground Freezing or Other Adverse Changes in Venting Conditions</i></p> <p>Any leak which, under frozen or other adverse soil conditions, would likely migrate to the outside wall of a building.</p> <p><i>B. Leaks Requiring Action Within Six Months</i></p> <ul style="list-style-type: none"> 1. Any reading of 40% LEL, or greater, under a sidewalk in a wall-to-wall paved area that does not qualify as a Grade 1 leak. 2. Any reading of 100% LEL, or greater, under a street in a wall-to-wall paved area that has significant gas migration and does not qualify as a Grade 1 leak. 3. Any reading less than 80% LEL in small substructures (other than gas associated substructures) from which gas would likely migrate creating a probable future hazard. 4. Any reading between 20% LEL and 80% LEL in a confined space. 5. Any reading on a pipeline operating at 30 percent SMYS, or greater, in a class 3 or 4 location, which does not qualify as a Grade 1 leak. 6. Any reading of 80% LEL, or greater, in gas associated substructures. 7. Any leak which, in the judgment of operating personnel at the scene, is of sufficient magnitude to justify scheduled repair.

GRADE	DEFINITION	ACTION CRITERIA	EXAMPLES
3	A leak that is non-hazardous at the time of detection and can be reasonably expected to remain non-hazardous.	These leaks should be reevaluated during the next scheduled survey, or within 15 months of the date reported whichever occurs first, until the leak is regraded or no longer results in a reading.	<p><i>Leaks Requiring Reevaluation at Periodic Intervals</i></p> <ol style="list-style-type: none"> 1. Any reading of less than 80% LEL in small gas associated substructures. 2. Any reading under a street in areas without wall-to-wall paving where it is unlikely the gas could migrate to the outside wall of a building. 3. Any reading less than 20% LEL in a confined space.

3.4 Leak Response Involving Buildings

(a) A "Gas Filled Structure" (GFS) is defined as:

- (i) A structure with inside natural gas concentrations measured at $\geq 1.0\%$ gas by volume (20% of the LEL) as measured in open-air (ambient air reads, not pinpoint reads) with a properly calibrated combustible gas instrument (CGI); or
- (ii) A situation where damaged, blowing or leaking natural gas equipment (company or customer owned) is causing gas accumulation or migration which in the judgement of the First Responder has the potential to result in gas concentrations of $\geq 1.0\%$ gas by volume (20% of the LEL) inside a structure based upon indicators such as smell, sound, or visual signs.

(b) Protective clothing shall be used when the employee enters a potentially Gas Filled Structure. Don required personal protective equipment (PPE) – including, flame resistant (FR) clothing / fire suit, hard hat, safety glasses, safety boots, and high visibility vests.

(c) If a leak is in a building, follow Standard Operating Procedure GD-OM-L-020-001, Gas Filled Structure Emergency Response Procedures. For First Responders, follow steps beginning at section 4.4 of [GD-OM-L-020-001](#).

Remember: Natural gas is lighter than air, therefore it will rise if unrestricted.

(d) The DENC and DESC First Responder shall continuously monitor the atmosphere when working near and/or in the leak area.

(e) If gas concentrations inside are verified to be less than 20% LEL (1% Gas), follow Standard Operating Procedure [GD-OM-L-040-001, Leak and Odor Complaints – Inside, beginning at section 4.3](#).

(f) If gas concentration rises to 20% LEL (1% Gas) or above, then ask any remaining occupants to immediately evacuate the premises and immediately follow procedure [GD-OM-L-020-001, Gas Filled Structure Emergency Response Procedures](#).

(g) The DENC and DESC First Responder shall initiate the following procedures as needed to locate the source of the reported leak and/or odor, per [GD-OM-L-020-001, Gas Filled Structure Emergency Response Procedures](#).

(1) Utilization Equipment

Inspect utilization equipment for leaks using an approved utilization equipment leak test. If the gas utilization equipment is not immediately repaired, the DENC and DESC responder shall initiate action as required in the "Red-Tag Procedures".

(2) Customer's Piping

Inspect the customer's piping for leaks using an approved *building piping* leak test. If the customer's piping is not immediately repaired, the DENC and DESC responder shall initiate action as required in the "Red-Tag Procedures".

(3) Meter Set and Aboveground Distribution Piping.

Inspect the meter set and riser for leaks using soapsuds, a gas detector or other approved means. If the meter set or aboveground distribution piping are found to be leaking, the DENC and DESC responder shall repair or replace the leaking equipment and/or request assistance to do so.

(4) Migration

Bar test around the perimeter of the foundation for leaks. If the bar test indicates the presence of gas below ground level, the DENC or DESC responder shall:

(i) Immediately identify the perimeter of the leak area.

(ii) Initiate the leak response procedure(s) for buildings (this section) or for distribution/transmission systems ([section 3.5.](#))

(iii) Locate the source of the gas leak and initiate the appropriate response.

(f) Upon completion of any repair on the gas utilization equipment, customer's piping and/or the distribution system, the DENC and DESC responder shall verify the integrity of the repair with an approved leak test.

(g) When an approved leak test administered by a DENC and DESC responder indicates no leaks are present on the gas utilization equipment and/or the customer's piping, the DENC and DESC responder should notify the customer by appropriate means and restore service.

(h) If the DENC and DESC responder determines that indications of carbon monoxide exist, the possibility of incorrectly operating gas utilization equipment shall be considered. If the gas utilization equipment is not immediately repaired, the DENC and DESC responder shall initiate action as required in the "Red-Tag Procedures"

Remember: Carbon monoxide is equivalent in weight to air, therefore it will not readily rise and dissipate like natural gas.

3.5 Leak Response

(a) If escaped gas is detectable by any means and/or suspected to be present, the DENC and DESC responder shall immediately determine the perimeter of the safe zone using a gas detector. In the case of a leak on a buried line, the possibility of migration shall be considered. The identification area may include taking gas/air readings in bar holes, manholes, valve boxes, at pavement and curb cracks and other subsurface openings. Initiate the leak response procedure(s) for buildings ([section 3.4](#)) or for excavations ([section 3.2.](#))

(b) As soon as possible, the DENC and DESC responder shall evacuate everyone onsite to the safe zone. DENC and DESC responders should request assistance from emergency responders, usually the fire department, to evacuate people if needed.

(c) The DENC and DESC responder shall locate the source of the leak using a gas detector and if needed, use other leak detection methods.

- (d) The DENC and DESC responder shall classify the leak as Grade 1, Grade 2 or Grade 3 in accordance with the tables in [section 3.3](#). The examples in the tables should be used as guidelines and are not intended to be all inclusive.
- (e) If control of the gas is required, gas supply on the main may be controlled through the operation of a distribution valve, "squeeze-off" tool, stopper fittings, pressure regulators or other means with prior approval from the local Supervisor-Operations or other appropriate personnel. See [Chapter 12-E Repair of Plastic and Steel Pipelines, 3.2 Squeezing off Pipelines](#).
- (f) If work on the system is required, the DENC and DESC responder shall advise personnel not associated with response operations to remain outside the leak area until the response is complete.
- (g) Grade 1 Leaks - The leakage technician or first responder shall remain onsite and document leak or damage information on the LDF Form. If the leakage technician or first responder does not make the repair, the LDF Form will be reassigned to the person that is responsible for repairing the leak. Personnel responsible for leak repair and/or reevaluation shall maintain the LDF Form until the leak repair is complete and documented. All repaired leaks shall be rechecked using an approved gas detection instrument within 72 hours of the repair to ensure no other leaks exist. Rechecks may be performed immediately after repairs are completed. If no residual gas is present in the leak area the appropriate form may be completed and documented. If residual gas is present a second recheck shall be performed using an approved gas detection instrument within 72 hours of the time the repair was made to allow any residual gas to vent.

3.6 Coordination of Leak Response with Non-DENC and DESC Entities [192.615(a)]

The following procedure outlines the process DENC and DESC response personnel shall follow to coordinate leak response operations with non-DENC and DESC entities, such as the fire department, police, etc.

- (a) Upon arriving at the scene of the emergency response (ER) in which non-DENC and DESC responders are present, the DENC and DESC responder should respect all previously established perimeters.
- (b) The DENC and DESC responder shall report to the *ER Commander* on the scene or assume the post of ER Commander until higher-ranking personnel arrive. The ER Commander is responsible for:
 - (1) Supervising all DENC and DESC ER operations,
 - (2) Coordinating DENC and DESC ER operations with any other ER entities present.
- (c) As higher-ranking DENC and DESC personnel arrive at the scene of the ER, each may assume the post of ER Commander upon arrival by establishing communication with the present ER Commander and relieving him of his post.
- (d) Once the ER Commander post has been initially established, the ER Commander shall evaluate the situation and decide upon an appropriate response procedure(s).

State Specific: South Carolina

First Responders shall follow the Incident Command System described in the Incident Command Systems presentation (PowerPoint file).

3.7 Approved Gas Detectors

The following leak detectors, unless otherwise approved by engineering, shall be used in accordance with manufacturer guidelines to monitor potentially combustible atmospheres in a leak response. Gas detectors shall not be used in combustible atmospheres unless they have been specifically approved for that application by the manufacturer. Since these procedures require action based on quantitative gas measurement in the range 0 - 20% LEL, gas detectors with an LEL scale should be used for atmospheric monitoring.

Manufacturer	Trademark/Name	Model	Calibrate At Least	Scales
Bascom-Turner Instruments		Sentry Series & Ranger Series	Once a month	0-100% LEL, 0-100% gas, Track Gas (ppm), O ² , CO
	Explorer	EGA-411	Once a month	0-100% LEL, 0-100% gas, Track Gas (ppm), O ² , CO
Heath Consultants	RMLD	101514-0	*Daily before each survey (<i>calibration log to be kept with instrument</i>)	Between 500 and 2000 ppm-m (Typically 1100 ppm-m)
	RMLD-CS	HPN 105301	*Daily before each survey (<i>a self-test log file is recorded and stored on the RMLD-CS instrument</i>)	0-99,999 ppm-m
	OMD		*Daily before each survey (<i>calibration documented in Essentials</i>)	+/- 10% within a range of 1 to 100 PPM. The accuracy drops to +/- 20% within the range of 100 to 200 PPM
Industrial Scientific Co.	Multi-Gas Monitor	TMX410	Once every 3 months	0-100% LEL
IRwin	IRwin (Infra-Red Detector)	SX-Basic Leak Survey	Daily before each survey (a self-test log file is recorded and stored on the IRwin instrument)	1PPM to 100% full volume.
		SXT-Basic Survey includes Toxic modules		
		SXG-Leak Survey & GC capabilities		
		SXGT-Leak Survey, GC, & Toxic modules		
J&N Enterprises	Gas-Trac	NGX	Once a month	LED Reading: "Slight" @ 2% LEL, "Medium" @ 20% LEL, "Alarm" @ 40% LEL
	Sensit	HX6-1	Once a month	LED Reading; Audible Alarm
	Sensit Gold / G2 / Trak-It IIIa	CGI EX/CO	Once a month	0-50% LEL, 2.5-100% gas, 0-25% O ² , 0-2000 PPM CO
	Trak-It	SSG	Once a year	0-100% gas
Mine Safety Appliance	Gascope	62S	Once a month	0-100% LEL, 0-100% gas
Southern Cross	Flame Pack	400	*Daily before each survey (<i>calibration log to be kept with instrument</i>)	

Note: Some of the instruments listed above may not only have combustible gas sensors but also sensors for carbon monoxide, oxygen deficiency, toxic gases, etc. Only combustible gas scale information is compiled above.

Units such as the flame ionization packs may be used during a leak response but not in combustible atmospheres. These units are not approved by the manufacturer for use within a combustible atmosphere. Gas detectors shall be periodically calibrated per manufacturer's instructions and in accordance with the calibration interval noted above.

Documentation for instrument calibration information shall be maintained with the exception for instruments requiring (*) Daily calibration.

3.8 Fires and Explosions

(a) Gas Burning Outside

- (1) Unless life or property is in jeopardy, it generally is preferable to not extinguish the fire. Burning gas will not explode.
- (2) Clear the danger area and barricade or rope it off to control access.
- (3) Protect surrounding locations from the burning gas and allow controlled burning until the fire can be extinguished by shutting off the gas supply. If a blowing gas fire is extinguished, the possibility of re-ignition or explosion is imminent and extra precautions must be taken.
- (4) Remove surrounding combustible materials or spray water on them to prevent ignition from the high radiant heat. Do not use water on burning natural gas at its point of escape.
- (5) Do not apply water to pipeline facilities that have been heated by fire as cast metal components can burst and cause injury and could release gas that can feed the fire or explode if ignited.
- (6) If the point of gas escape cannot be determined, extinguish the fire and take special precautions to prevent re-ignition or explosion.

(b) Gas Burning Inside

- (1) If gas is burning inside a building, do not attempt to extinguish the fire. Burning gas will not explode.
- (2) Shut off the gas at the meter, if accessible. If the meter cock cannot be reached, efforts should be made to shut off the supply of gas on the *service line*, i.e., closing curb valve (if available), squeezing off service line, isolating gas at the tapping tee, etc.

(c) Explosions

Explosions will be assumed to be a natural gas related *incident* until proven otherwise. A call out of all necessary personnel, evacuation of buildings and adjacent structures and protection of the general public is of the utmost urgency. Personnel should be continuously aware of the possibility of secondary explosions. Local emergency agencies must be alerted and called on for assistance, as necessary, to locate the source of the explosive mixture as rapidly as possible. The Gas Control Center should be notified as soon as field personnel arrive on site and work with them and the local offices to coordinate requests for additional help including construction crews, service personnel, fire and police, leak detection equipment, maps, etc. The gas supply should be cut off to the structure or to the area affected as soon as possible. See [Chapter 1-B Incident Reporting](#).

(d) Investigation Report

A [Gas Fire/Explosion Investigation Report](#) (PDF file) should be completed for all natural gas related fires or explosions. This report should also be completed whenever natural gas is suspected or cannot be ruled out as the cause and/or being involved in a fire or explosion (the only exception would be if there is no gas piping anywhere near the fire or explosion area.) This report should be retained at the local office for a period of 5 years. Additional reports may also be required.

See the appropriate system Operator Qualification Program.

DENC and DESC trains its employees that are responsible for responding to emergencies to insure that they are knowledgeable of the appropriate procedures. Employee activities are reviewed to determine whether the emergency procedures were followed and to verify that training is effective.

5.0 DOCUMENTATION/FORMS

System specific forms should be used where applicable.

- [Gas Fire/Explosion Investigation Report](#) (PDF file)

Record Retention: [[192.709](#)][[192.935](#)][[192.947](#)]

As long as a line remains in service, the transmission records documenting patrols shall be maintained.

These are minimum requirements. Periodically, designated records as listed above or copies of such shall be forwarded to Engineering for permanent filing. Once placed in the permanent file, these on records shall be kept for the life of the pipeline. Permanent files may be kept in a variety of media including but not limited to paper, micrographic or electronic. Engineering is responsible for designating records to be placed into the permanent file and maintenance of such. No permanent records may be destroyed or disposed of without prior approval from the General Manager-Engineering & Construction.

6.0 RELATED DOCUMENTS

State Specific: South Carolina:

- [Incident Command Systems presentation](#) (PowerPoint file)

7.0 APPENDICES

State Specific: South Carolina

- [DESC Emergency Contact List](#) (Excel file)
- [DESC Emergency Manual](#) (PDF file)

(UNCONTROLLED IF PRINTED)