

PRIMARY: 192.615, 616

SECONDARY: 192.614

PURPOSE: Review existing GM and revise as necessary, to address the issues raised by the recent event in the over-pressurization that occurred in MA including the Preliminary Report issued by NTSB, by the NTSB Reports listed below, and by the American Gas Association – AGA Gas Engineering and Operations Practices (GEOP) Series (Regulator Station Design).

1. Over-Pressure of Peoples Gas Light & Coke Co. Low Pressure Distribution System, Chicago, IL 1/17/92
2. Boston Gas Company Natural Gas Overpressure, Explosion and Fires East Boston, MA 9/23/83
3. Missouri Power & Light Company – Natural Gas Fires Centralia, MO 1/28/82
4. Low Pressure Natural Gas Distribution System, Burlington IA, 11/6/69
5. Low Pressure Natural Gas Distribution System, Gary, IN, 6/3/69
6. AGA Leading Practices to Reduce the Possibility of a Natural Gas Over-Pressurization Event: 11/26/18, Section 2 Damage Prevention & Damage Prevention Practices

RESPONSIBLE GROUP: Damage Prevention/Emergency Response Task Group

Section 192.614

2 WRITTEN PROGRAM

...

2.5 *Information to be communicated.*

Entities that may engage in excavation activities should be informed of the purpose of the program, how they can learn the location of underground pipelines before commencing excavation activities, and actions to be taken if the pipeline or its related components, such as tracer wire, warning tape, and passive locating devices, are hit or damaged. Illustrations or pictures of the various types of pipeline locations should be included. The information should include a discussion of control (sensing) lines, their typical installation, and the importance of coordinating activities with the operator before commencing excavations. Program information should also advise that even minor residential activities, such as installing fences or performing landscaping, could cause pipeline damage.

(a) The programs and methods of informing entities that may perform excavation activity as described in 2.4 above should be designed to educate excavators about their obligations under applicable state laws and regulations, including the following.

- (1) How to provide notice of intent to dig, emphasizing the importance of using a one-call notification system (e.g., 811), where applicable.
- (2) How far in advance of excavation activity must the notice of intent to dig be provided.
- (3) Waiting the required time to allow operators to mark their facilities.
- (4) Verifying the location of facilities by hand digging test holes.
- (5) Support and protection of exposed facilities.

~~(6) Identification of possible buried control lines during excavation activities, with appropriate notification to the operator.~~

- (6) Minimum clearances of powered equipment from facilities.
- (7) Preservation of markings.
- (8) Pipe support, backfill, and compaction requirements.
- (9) Reporting discovery of unknown underground facilities.
- (10) Reporting damages or emergencies. See §192.616.
- (11) Pre-marking the excavation area with white paint.
- (12) Avoidance of disturbing cast iron facilities.
- (13) Safe excavation, support, and backfilling requirements unique to cast iron facilities.

(b) In addition, the following should be addressed in communications with excavators.

- (1) ...

...

2.6 *Receiving excavation notification.*

...

2.7 Responding to excavation notification.

- (a) Preparation. The operator should develop procedures for responding to notifications of intent to excavate. Consideration should be given to the following.
- (1) How information about the location of existing and newly installed facilities may be obtained from maps, records, digital or aerial imagery, or field investigation. If the operator's records include GPS coordinates, the reference datum and nomenclature to be used should be clearly documented. For control (sensing) lines, personnel involved in this process need to know where to obtain current information on their locations. Depending upon the operator, this information might not be digitized.
 - (2) How individuals responding to excavation notifications can have access to up-to-date pipeline alignment and as-built drawings.
 - (3) Standards for marking facilities consistent with the field conditions, including items such as the use of paint on paved areas and stakes, and signs or flags in unpaved areas. A reference for marking facilities is the Common Ground Alliance's "Best Practices" Guide, available at <https://commongroundalliance.com/best-practices-guide>.
 - (i) No national standards exist for marking out a control line that is parallel to or above a larger pipeline. Until national standards are established, each operator should consider addressing this issue for themselves.
 - (ii) Operators should consider contacting the excavator directly when excavations are proposed in the vicinity of buried control lines to alert the excavator of their presence.
 - (4) Availability of personnel who are qualified (see Subpart N) to mark facilities as necessary.
 - (5) The potential for facility markings to become obscured prior to, or during, excavation activity and appropriate action to be taken.
 - (6) Whether a response to the excavator should be made when the operator has no facilities located in the area of excavation activity. The operator should also review state and local regulations to determine if other response requirements apply.
- (b) Response. Where facilities exist in the area of excavation activity, the operator should respond to the notification prior to the planned start of the excavation activity. The operator should consider documenting the response. The response should include the following.
- (1) Marking the operator's pipeline facilities, including laterals, in the area of the proposed excavation activity. In areas where the pipeline facilities are curved or make sharp bends, consider the visibility and frequency of markings. Individually mark pipeline facilities located in the same trench or right-of-way. If metallic facilities are exposed during locating activities, see guide material under §192.459.
- ...
- (c) Records. Operators should document their responses to excavation notifications.

2.8 Inspecting pipelines.

- (a) Need and schedule. Each notification should be evaluated to determine the need for, and the extent of, the inspection. Where required, the inspection may include periodic or full-time surveillance and may include leak surveys during and after construction. Examples of when full-time surveillance might be necessary include inspections of excavations that take place in the vicinity of control (sensing) lines or in HCAs on transmission pipelines. The operator should consider maintaining field contact with the excavator during the excavation activities to avoid potential problems and to promptly resolve any problems that may arise. The operator should also consider additional temporary operational actions to mitigate potential problems. The following factors should be considered in determining the need for, and extent of, inspections.
- (1) Type and duration of the excavation activity involved.
 - (2) Proximity to the operator's facilities.
 - (3) Located within a High Consequence Area (HCA). If the inspection work is on a covered segment of transmission line, the operator is required to follow the additional items described in §192.935. For threat of third-party damage, see 2 of the guide material under §192.935.
 - (4) Type of excavating equipment involved.
 - (5) Importance of the operator's facilities.

- (6) Type of area in which the excavation activity is being performed.
 - (7) Potential for a serious incident should damage occur.
 - (8) Past experience of the excavator.
 - (9) Potential for damage occurring which may not be easily recognized by the excavator, such as improper support during excavation and backfill or trenchless installations (e.g., boring).
 - (10) Potential for facility markings to become obscured.
- (b) Onsite inspection. When onsite inspection is performed, the operator should use qualified personnel as necessary to ensure that the excavator is doing the following (see OPS Advisory Bulletin ADB-06-01; 71 FR 2613, Jan. 17, 2006; reference Guide Material Appendix G-192-1, Section 2).
- (1) Verifying the location of the facilities by hand digging test holes.
 - (2) Supporting and protecting exposed facilities.
 - (3) Maintaining minimum clearances of powered equipment from facilities.
 - (4) Preserving location markings.
 - (5) Practicing safe excavation and backfill procedures related to the protection of operator facilities. When a **high-risk** condition is identified, the operator should consider locating the nearest valves or shut-off points necessary to isolate the site. The operator should check the operability of those valves and maintain as necessary (see guide material under §192.747).
- (c) Settlement. The operator should pay particular attention, during and after excavation activities, to the possibility of joint leaks and breaks due to settlement when excavation activities occur, especially in cast iron, threaded-coupled steel, and mechanical-compression joints.
- (d) Cast iron pipelines. See Guide Material Appendix G-192-18.
- (e) Plastic and steel pipelines. The operator should inspect plastic pipelines for gouges and steel pipelines for coating damage and gouges, when necessary, before the exposed pipeline is backfilled. If metallic facilities are exposed during locating activities, see guide material under §192.459.
- (f) Blasting. Leak surveys should be conducted on pipelines that could have been affected by blasting. For additional guidelines related to blasting activities, see Guide Material Appendix G-192-16.
- (g) Trenchless installations. Leak surveys should be considered on pipelines that could be affected by trenchless installations. See Guide Material Appendix G-192-6 for damage prevention considerations while performing directional drilling or using other trenchless technologies.
- (h) Damage concerns. When the operator is aware that its pipeline has been hit or almost hit, the excavator's practices and procedures that are likely to affect the operator's pipeline should be evaluated before excavation activity continues.
- (i) Transmission lines. A reference for inspecting transmission lines is API RP 1166, "Excavation Monitoring and Observation."
- (j) Regulator stations and overpressure protection equipment. When the operator is aware of any planned excavation or activity in close proximity to regulator stations or overpressure protection equipment, records and drawings should be reviewed to ensure all station-associated equipment is properly identified and their locations communicated to the excavator. This includes the location of taps, control (sensing) lines, valves, vent lines, and associated equipment.

2.9 *Protection at active construction sites.*

For temporary markings, see 4 of the guide material under §192.319.

Section 192.615

3 LIAISON WITH PUBLIC OFFICIALS (§192.615(c)) AND OPERATORS OF FACILITIES IN THE VICINITY OF THE PIPELINE

Note: Section 192.616 requires most operators to develop and implement a written continuing public education program that follows the guidance provided in API RP 1162 for stakeholder audiences that include emergency officials and public officials. Information provided to emergency and public officials under a public awareness program may address some of the requirements of §192.615(c), but may not adequately address all the "liaison" requirements. The liaison requirement of §192.615(c) is expected to bring an operator and respective emergency responders and public officials together to exchange information regarding emergency response that is specific to the operator's systems and facilities. Added guidance for liaison with emergency officials is provided below.

Those responsible for establishing liaison with appropriate public officials and operators of facilities in the vicinity of the pipeline (e.g., telephone, electric, gas, cable, water, sewer, and railroads), with respect to emergency procedures, should consider the following.

- 3.1 *Compiling current information on the resources of government organizations.*
...
- 3.2 *Acquainting public officials with emergency procedures.*
...
- 3.3 *Identifying emergencies that require notification to and from public officials.*
...
- 3.4 *Plan with public officials and operators of facilities in the vicinity of the pipeline for mutual assistance.*
 - (a) Operator personnel should establish and maintain liaison with appropriate fire, police, and other public officials and operators of facilities in the vicinity of the pipeline to plan how to engage in mutual assistance to minimize hazards to life and property. This planning should include how to work together effectively in an Incident Command System and the means to ensure communication of pertinent information is ongoing and timely during an emergency response. Consideration should be given to various situations including the following.
 - (1) ...
...
 - (b) The gas characteristics and properties, such as pressure, specific gravity, gas odor, and flammability limits, should be provided to local emergency response officials. The implications of these characteristics and properties on emergency response decisions should be thoroughly discussed. In discussions with local emergency response officials, the operator should emphasize the following.
 - (1) The importance of this information to local emergency response personnel arriving before operator personnel.
 - (2) The use of this information in making decisions, such as areas to be evacuated, traffic rerouting, and control of ignition sources.
 - (3) The importance of gas detectors in properly responding to an incident.
 - (4) The general location of various pressure systems, if any.