§192.605

Procedural manual for operations, maintenance, and emergencies.

[Effective Date: 02/01/10]

(a) ***General.*** **Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least once each calendar year. This manual must be prepared before operations of a pipeline system commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.**

(b) ***Maintenance and normal operations.*** **The manual required by paragraph (a) of this section must include procedures for the following, if applicable, to provide safety during maintenance and operations.**

(1) Operating, maintaining, and repairing the pipeline in accordance with each of the requirements of this subpart and subpart M of this part.

(2) Controlling corrosion in accordance with the operations and maintenance requirements of subpart I of this part.

(3) Making construction records, maps, and operating history available to appropriate operating personnel.

(4) Gathering of data needed for reporting incidents under Part 191 of this chapter in a timely and effective manner.

(5) Starting up and shutting down any part of the pipeline in a manner designed to assure operations within the MAOP limits prescribed by this part, plus the build-up allowed for operation of pressure-limiting and control devices.

(6) Maintaining compressor stations, including provisions for isolating units or sections of pipe and for purging before returning to service.

(7) Starting, operating and shutting down gas compressor units.

(8) Periodically reviewing the work done by operator personnel to determine the effectiveness, and adequacy of the procedures used in normal operation and maintenance and modifying the procedures when deficiencies are found.

(9) Taking adequate precautions in excavated trenches to protect personnel from the hazards of unsafe accumulations of vapor or gas, and making available when needed at the excavation, emergency rescue equipment, including a breathing apparatus and a rescue harness and line.

(10) Systematic and routine testing and inspection of pipe-type or bottle-type holders including-

(i) Provision for detecting external corrosion before the strength of the container has been impaired;

(ii) Periodic sampling and testing of gas in storage to determine the dew point of vapors contained in the stored gas which, if condensed, might cause internal corrosion or interfere with the safe operation of the storage plant; and

(iii) Periodic inspection and testing of pressure limiting equipment to determine that it is in safe operating condition and has adequate capacity.

(11) Responding promptly to a report of a gas odor inside or near a building, unless the operator's emergency procedures under §192.615(a)(3) specifically apply to these reports.

(12) Implementing the applicable control room management procedures required by §192.631.

(c) ***Abnormal operation.*** **For transmission lines, the manual required by paragraph (a) of this section must include procedures for the following to provide safety when operating design limits have been exceeded:**

(1) Responding to, investigating, and correcting the cause of:

This is a preview. Click here to purchase the full publication.

(i) Unintended closure of valves or shutdowns;
(ii) Increase or decrease in pressure or flow rate outside normal operating limits;
(iii) Loss of communications;
(iv) Operation of any safety device; and
(v) Any other foreseeable malfunction of a component, deviation from normal operation, or personnel error, which may result in a hazard to persons or property.

(2) Checking variations from normal operation after abnormal operation has ended at sufficient critical locations in the system to determine continued integrity and safe operation.

(3) Notifying responsible operator personnel when notice of an abnormal operation is received.

(4) Periodically reviewing the response of operator personnel to determine the effectiveness of the procedures controlling abnormal operation and taking corrective action where deficiencies are found.

(5) The requirements of this paragraph (c) do not apply to natural gas distribution operators that are operating transmission lines in connection with their distribution system.

(d) *Safety-related condition reports.* The manual required by paragraph (a) of this section must include instructions enabling personnel who perform operation and maintenance activities to recognize conditions that potentially may be safety-related conditions that are subject to the reporting requirements of §191.23 of this subchapter.

(e) *Surveillance, emergency response, and accident investigation.* The procedures required by §§192.613(a), 192.615, and 192.617 must be included in the manual required by paragraph (a) of this section.

[Amdt. 192-27A, 41 FR 47252, Oct. 28, 1976; Amdt. 192-59, 53 FR 24942, July 1, 1988 with Amdt. 192-59 Correction, 53 FR 26560, July 13, 1988; Amdt. 192-71, 59 FR 6579, Feb. 11, 1994 with Amdt. 19271A, 60 FR 14379, Mar. 17, 1995; Amdt. 192-93, 68 FR 53895, Sept. 15, 2003; Amdt. 192-112, 74 FR 63310, Dec. 3, 2009]

GUIDE MATERIAL

1 GENERAL

(a) Each procedural manual for operations, maintenance, and emergencies should include a written statement, procedure, or other document addressing each specific requirement of §192.605. The requirements include the maintenance and normal operation of any pipeline; and the abnormal operations of transmission lines, other than those transmission lines operated in connection with a distribution system.

(b) The comprehensive manual can consist of multiple binders with relevant sections kept at appropriate locations. Appropriate sections of other documents may be referenced instead of being incorporated, but the referenced documents are to be present at the location to which they apply.

(c) The manual will necessarily vary in length and complexity depending upon the individual operator, its size, locale, policies, and types of equipment in use and the amount of material included in its entirety or cross-referenced, including manufacturers' instructions, where appropriate.

(d) Procedures for only those facilities within the operator's system need be included in the manual. Therefore, it is not necessary to have a manual for each pipeline.

(e) The required review of the manual should ensure that the operator's current facilities and any deficiencies in the manual are addressed. An operator should consider reviewing its operator qualification (OQ) processes and procedures since changes to the manual may affect the OQ program. More serious deficiencies, possibly identified following an accident, may require immediate correction.

(f) Many sections of the pipeline safety regulations are written using performance language to achieve a desired result, but the method to reach that result is not specified. In such situations, an operator should use a method that is suitable for its individual operations and include it in the manual.

This is a preview. Click here to purchase the full publication.

(g) An operator may include material in its procedural manual for operations, maintenance, and emergencies that is not required by the federal or state pipeline safety regulations (e.g., procedures for the use of personal protection equipment, procedures regarding the aesthetic acceptability of paint on aboveground piping). Even though such procedures themselves are supplementary to the procedures required by the pipeline safety regulations, they may be subject to inspection or enforcement by pipeline safety inspection agencies. The operator may consider identifying such procedures as not being part of the manual for operations, maintenance, and emergencies that is required by §192.605.

(h) An operator may define in its manual a process to address situations in which a procedure cannot be followed in its entirety. That process should include the requirement for a written request and approval for a variance from the procedure, the level of authority that can approve a variance, and record-retention requirements. The operator should ensure the effect of the approved variance from the procedure still meets the minimum regulatory requirements.

2 TRAINING

2.1 Operations and maintenance (O&M) procedures.
Each operator should establish a training program that will provide operating and maintenance personnel with a basic understanding of each element of the procedural manual for operations, maintenance, and emergencies appropriate to the job assignment. See 3.7 below regarding periodic reviews, procedure modifications, and retraining of personnel.

2.2 Operations and maintenance tasks.
See Subpart N.

2.3 Emergency response procedures.
Each operator is required by §192.615(b)(2) to train the appropriate operating personnel to ensure that they are knowledgeable of the emergency procedures. See 2 of the guide material under §192.615.

3 MAINTENANCE AND NORMAL OPERATIONS

In addition to those items required to be in the manual under Subparts L and M as they apply to the operator's facilities, other Subparts (e.g., E, F, I, J, and K) may also require written procedures. Additional guide material can be found under individual sections.

3.1 Control of corrosion.
Refer to guide material for respective sections of Subpart I.

3.2 Availability of construction records, maps, and operating history.

(a) Construction records, maps, and operating history should be comprehensive and current. The construction records, maps, and operating history will depend upon the individual operator, its size and locale, and the types of equipment in use.

(b) The construction records, maps, and operating history should be made available to operating personnel, especially supervisors or those called on to safely operate pipeline facilities or respond to emergencies, or both. Dispatch or gas control personnel should have maps and operating history available.

(c) For transmission facilities, the types of records and data that could be made available are as follows.
(1) Pipeline system maps, including abandoned and out-of-service facilities.
(2) Compressor station and other piping drawings (mechanical and major gas piping).
(3) Maximum allowable operating pressures.
(4) Inventories of pipe and equipment.
(5) Pressure and temperature histories.
(6) Maintenance history.
(7) Emergency shutdown systems drawings.
(8) Isolation drawings.
(9) Purging information

This is a preview. Click here to purchase the full publication.

(10) Applicable bolt torquing information.
(11) Operating parameters for engines and equipment.
(12) Leak history.

(d) For distribution systems, the types of records and data that could be made available are as follows.
(1) Maps showing location of pipe, valves, and other system components.
(2) Maps and records showing pipe specifications, valve type, and operating pressure.
(3) Auxiliary maps and records showing other useful information, including abandoned and out-of-service facilities.

(e) Communications with knowledgeable personnel should be maintained to respond to questions concerning the records, maps, or history if the need arises.

(f) Field identification of valves.
(1) Valve identification criteria should be established.
(2) Each operator should have available sufficiently accurate records (including field location measurements) to readily locate valves and valve covers.
(3) Where valves are located in a valve cluster or in close proximity to valves of other operators, in addition to records and field location measurements, the following are also recommended.
(i) A valve identification system should be developed so that each valve will have a unique set of numbers or letters, or both, which is keyed to the records or mapping system.
(ii) For above ground and vault applications, a readily observable and durable code identifying tag, stamp, or other device should be affixed to the valve.
(iii) For remotely operated and underground valves, a readily observable and durable code identifying tag, stamp or other device should be affixed to the inside wall of the valve box or valve extension unit. It should be affixed so that it will not interfere with the valve operation, and will not be defaced or dislocated by normal operations.

3.3 Data gathering for incidents.

(a) The operator should designate personnel to gather data at the incident site and other locations where records are retained.

(b) For verification and telephonic reporting that an incident has occurred on the operator's facility, the following information should be gathered as soon as possible. See Guide Material Appendix G-191-1.
(1) Time of the incident.
(2) Location of the incident.
(3) Number of fatalities and personal injuries necessitating in-patient hospitalization.
(4) Estimate of property damage, including gas lost.
(5) Type of incident: leak, rupture, other.
(6) Whether there was an explosion.
(7) Whether there was a fire.
(8) Whether there was a curtailment or interruption of service.
(9) Environmental impact.
(10) Apparent cause.
(11) Component(s) involved and material specification.
(12) Pressure at the time of incident.
(13) Estimated time of repair and return to service.
(14) A 24-hour staffed telephone number.

(c) Procedures should be established for personnel to determine if the event meets the criteria for the Part 191 definition of an "incident" and to make the telephonic report. Alternate personnel should be included in the procedures in case primary personnel are not available. If some of the information is not available, the notification should be made without that information. Any corrections or additional information may be provided later. See guide material under §191.5.

(d) For post-accident drug and alcohol testing, see Part 199 – Drug and Alcohol Testing and OPS Advisory Bulletin ADB-12-02 (77 FR 10666, Feb. 23, 2012; see Guide Material Appendix G-192-1, Section 2).

(e) For the written Incident Report, see guide material under §192.617 and Guide Material Appendices G-191-2 and G-191-5.

This is a preview. Click here to purchase the full publication.

3.4 Starting up and shutting down a pipeline.

(a) Starting up a new transmission line or distribution main.

(1) For transmission lines, following the test to establish maximum allowable operating pressure (MAOP), the operator and the person in charge of placing the pipeline in service should establish procedures for commissioning the new pipeline and placing it in service. The procedures should include provisions for the following.

(i) Ensuring that the procedural manual for operations, maintenance, and emergencies addresses the new pipeline.

(ii) Inspecting all overpressure protection devices required for starting up a new pipeline, including the testing of set pressures and the checking of capacities, if necessary.

(iii) Determining requirements for purging and notifying public officials. See guide material under §192.751.

(iv) Establishing communication with field personnel and gas control personnel.

(v) Controlling the purge flow rate when pressurizing the pipeline and monitoring pressures until normal operation is established.

(vi) Conducting a follow-up leak survey, if applicable.

(vii) Updating maps and other pertinent operating records.

(2) For distribution mains, following the test to prove tightness or strength, the operator should establish procedures for commissioning a new main. The procedures should include provisions for the following.

(i) Ensuring that the procedural manual for operations, maintenance, and emergencies addresses the new main.

(ii) Tying-in the new system segment.

(iii) Determining requirements for purging and notifying public officials and residents of purging activity. See guide material under §192.751.

(iv) Updating maps and other pertinent operating records.

(b) Starting up or reinstating service lines.

The operator should establish procedures for reinstating the service line following the test to prove tightness or strength. The procedures should include provisions for the following.

(1) Ensuring that the procedural manual for operations, maintenance, and emergencies addresses the new or reinstated services.

(2) Tying-in new or reinstated service segment.

(3) Introducing gas into the meter. Also, see 3.4(c) below.

(4) Updating maps or other pertinent operating records.

(5) Preventing unauthorized turn-on.

(c) Starting up service to a new customer.

The operator should establish procedures for starting up service to a new customer. The procedures should include provisions for the following.

(1) Operating the meter or service-line valve.

(2) Checking the regulator, if present, and the customer meter.

(3) Where a closed valve is not used at the meter outlet, checking the meter for indications of downstream leakage (e.g., open fuel line).

(4) Taking appropriate action when downstream leakage is indicated. This may include actions to prevent unauthorized operation of the meter or service-line valve until downstream leakage is eliminated.

(d) Shutting down a pipeline.

See Guide Material Appendix G-192-12.

(e) Abandoning a pipeline after it is shutdown.

See guide material under §192.727.

3.5 Maintaining compressor stations.

During normal maintenance activities, the following should be considered and applied where appropriate.

(a) Provisions should be made to prevent gas from entering the compressor cylinders of a reciprocating engine or a compressor case of a centrifugal compressor while work is being performed on the units. These provisions should also include the deactivation of the valve operators.

This is a preview. Click here to purchase the full publication.

(b) Provisions should be made to prevent fuel gas from entering the power cylinders of a reciprocating engine or the burner cans of a gas turbine while work is in progress on the unit or equipment driven by the unit.
(c) Provisions should be made to prevent starting air from entering the power cylinders of a reciprocating engine and to prevent starting air or gas from entering any other starting device on an engine or turbine while work is in progress on the unit or equipment driven by the unit. The flywheel of the reciprocating engine should be locked in a stationary position where possible.
(d) Recommended methods for isolating the units from sources of gas or starting air include installation of a blind flange, removal of a portion of the supply piping, or locking a stop valve closed and locking a downstream vent valve open. If a common downstream vent is used, provision should be made to prevent backflow to the units.
(e) Provisions should be made to prevent energizing the electric circuits of a motor driven or motor started compressor unit while work is in progress on the unit or on equipment driven by the unit.
(f) See 2 and 3 of the guide material under §192.147 for bolting information.
(g) Provisions should be made to return the equipment to service in an orderly manner to prevent the uncontrolled release of gas to the atmosphere, or overpressuring an isolated or purged piece of equipment or section of pipe.

3.6 Starting, operating, and shutting down gas compressor units.
The procedures for the starting, operating, and shutdown of gas compressor units should be in writing and may be developed from operating experience, direct use of manufacturers' instruction manuals, or a combination of both.

3.7 Periodically reviewing the work done by operator personnel.
The operator should designate a timetable to review personnel performance to determine if the normal operating and maintenance procedures found in the manual are effective and adequate. The operator should determine if deficiencies exist in the procedures. If applicable, modification of procedures should be accomplished as soon as possible. Documentation should be maintained for all procedure modifications and retraining of personnel.

3.8 Taking precautions in excavated trenches to protect personnel.
Personnel working in or near a trench should be aware of the potential for an oxygen-deficient environment and of potential dangers from accumulations of gas or vapor, particularly those associated with liquid petroleum gases. When determining the likelihood of gas or vapors presenting such a hazard to personnel, the operator should consider the depth and configuration of the trench, the product transported, and the diameter, pressure, type of piping material, condition, and configuration of the pipeline facilities. Although natural gas is lighter than air and non-toxic, some natural gas pipelines contain constituents such as hydrogen sulfide, heavier-than-air hydrocarbons, and hydrocarbon liquids that may present a hazard to personnel working in or near the trench. The operator should establish criteria for what constitutes a hazardous condition, taking into consideration the LEL of the gas involved. Escaping gas may present an added hazard because of the displacement of oxygen. An atmosphere containing less than 19.5% oxygen should be considered oxygen-deficient for respiration. When it is necessary for personnel to enter an excavated trench where hazards could reasonably be expected, the operator should consider taking the following actions, as appropriate.
(a) Confirming that atmospheric monitoring devices, rescue equipment, and breathing apparatus are in working order prior to each use.
(b) Checking the atmosphere in the excavated trench.
(c) Establishing a means of exiting the trench.
(d) Reviewing the rescue plan.
(e) Placing a safety observer outside the trench to monitor the atmosphere inside the trench and to be available to assist in use of rescue equipment, operation of a fire extinguisher, or otherwise assist in a rescue.
(f) Minimizing sources of ignition in and around the trench. See guide material under §192.751.
(g) Taking actions to reduce the accumulation of gas or vapors, such as:
    (1) Isolating the gas facility by closing valves, squeezing off, bagging off, or using stoppers.
    (2) Reducing pressure in the facility.
    (3) Ventilating the work area.

This is a preview. Click here to purchase the full publication.

(h) Requiring the use of flame-retardant clothing, respiratory protection, or a rescue harness and line, as appropriate. The operator's written procedures should describe activities and situations where use of these items is required.

3.9 Responding promptly to a report of a gas odor inside or near a building.
See §192.605(b)(11), which requires procedures in either the procedural manual or its related emergency plan. See 1.1 and 1.3(a) of the guide material under §192.615 for related information.

3.10 Control room management procedures.
See guide material under §192.631.

4 ABNORMAL OPERATIONS

4.1 General.
An abnormal operation is a non-emergency event on a gas transmission facility that occurs when the operating design limits have been exceeded due to a change in pressure, flow rate, or temperature that is outside the normal limits. When an abnormal operation occurs, it does not pose an immediate threat to life or property, but could if not promptly corrected. Where applicable, the actions to be taken by the transmission operator in each situation should incorporate the current procedures. The procedures should be specific enough to ensure uniformity of action relative to the situation, such as those referenced above, while allowing sufficient flexibility to consider the particular details, material, equipment, and configurations involved.

4.2 Considerations for abnormal operations.
When developing response procedures for abnormal operations, the transmission operator should consider the following.
(a) Type of event. See list under §192.605(c)(1).
(b) Proximity of the event to the public.
(c) Potential for the event to become an emergency situation if not immediately corrected.
(d) Effect of the event on the pipeline system.
(e) Notification of appropriate operator personnel regarding the abnormal operation.
(f) Documentation of the response actions taken.

4.3 Preventing recurrence of abnormal operation.
Once the event has been investigated, and normal or safe operations have been restored, the operator should determine what measures can be taken to prevent the cause of the event from recurring. The operator should also consider whether these measures should be implemented elsewhere in the transmission system to avoid similar occurrences of abnormal operation.

4.4 Follow-up monitoring.
The extent of follow-up monitoring should be based on the nature of the event and the probability that the cause of the event could recur. The abnormal operation is considered corrected when an operator determines, at the end of the monitoring period, that the pipeline facility has maintained operations within its operating design limits and is capable of safely operating up to its MAOP.

4.5 Follow-up actions to consider.
(a) Notify field operations and maintenance personnel to be alert to signs of leakage or damage to pipeline facilities.
(b) Notify control room personnel, so they can more closely monitor facilities.
(c) Conduct and document right-of-way patrol of the affected pipeline segment.
(d) Conduct and document leak survey of the affected pipeline segment.
(e) Conduct and document inspection of overpressure protection devices for signs of activation. Determine if the devices activated as expected and at the correct pressures.

This is a preview. Click here to purchase the full publication.

(f) Determine probable cause or conduct failure analysis; share results with appropriate personnel. For guidance on performing a failure investigation, see guide material under §192.617.
(g) Ensure integrity management personnel are informed so this event and associated data can be considered in future risk analyses.
(h) Review procedural manual, operator qualification program, control room management procedures, and other written procedures for any needed revisions.

4.6 Review of response activities.
Response activities should be reviewed based on the extent of the abnormal operation. The review should consider the actions taken and whether the procedures followed were adequate for the given situation or should be revised to provide more specificity or more flexibility.

5 SAFETY-RELATED CONDITION REPORT

5.1 Potential safety-related conditions.
Personnel who perform O&M activities should recognize the following anomalies as potential safety-related conditions that may be subject to the reporting requirements of §191.23.
(a) General corrosion that has reduced the pipe wall thickness to less than that required for the MAOP.
(b) Localized corrosion pitting which has progressed to a degree where leakage might result.
(c) Unintended movement or abnormal loading by environmental causes, such as an earthquake, landslide, subsidence, or flood, that impairs the serviceability of a pipeline segment.
(d) Material defects, such as those caused in the manufacturing process, or physical damage that impair the serviceability of a pipeline segment. Sound engineering criteria should be used to determine if an observed condition involving a material defect or physical damage impairs serviceability.
(e) Malfunctions or operating errors that cause the pressure of a pipeline to rise above its MAOP plus the buildup allowed for the operation of pressure limiting or control devices. If this happens, consider the following actions, which may vary depending upon the situation.
    (1) Initial actions.
        (i) Verify that an overpressure condition has occurred by performing one or more of the following.
            (A) Dispatch personnel for field investigation.
            (B) Review SCADA information.
            (C) Review pressure records.
        (ii) Isolate the malfunctioning equipment or other cause of the overpressurization, if practicable, and reduce the pressure in the pipeline to normal operating pressures.
        (iii) Determine whether the magnitude of overpressure warrants taking the pipeline out of service immediately.
        (iv) Determine the extent of possible impact (e.g., a single customer, multiple customers).
            (A) SCADA and pressure recorders can be used to identify overpressured segments requiring possible corrective action.
            (B) For low-pressure distribution systems, determine whether gas utilization equipment has been adversely affected. Notify affected customers if damage is suspected. Consider notifying emergency responders and public officials.
        (v) Repair or replace the malfunctioning equipment that caused the overpressurization.
    (2) Additional actions.
        (i) Perform an instrumented leak survey of the overpressured pipe.
            (A) Consider taking the pipeline out of service based on the nature of discovered leaks.
            (B) Consider examining and repairing non-hazardous leaks on overpressured piping.
        (ii) Determine the duration of the overpressurization.
        (iii) Address transmission lines as follows.
            (A) Determine the highest percentage of SMYS attributed to the overpressure event.

This is a preview. Click here to purchase the full publication.

(B) For segments subject to integrity management under §192.917(e), determine whether the overpressured pipe needs to be prioritized as a high risk segment for the baseline assessment or a subsequent reassessment.

(iv) Determine the cause of the overpressurization to reduce the likelihood of a recurrence. See guide material under §192.617.

(v) Assess the need for replacement of system components exposed to pressures greater than manufacturers' test pressures.

(vi) Determine whether a Safety-Related Condition Report is required (see Guide Material Appendix G-191-7) and if required, file a report in accordance with §191.25.

(vii) In the event of an operating error, see the operator's Drug and Alcohol Testing and Operator Qualification Programs, if appropriate.

(viii) Retain documentation of the event and of the corrective actions taken to continue the safe operation of the pipeline.

(ix) For recordkeeping on transmission lines, see §192.709.

(f) Leaks in a pipeline that constitute the need for immediate corrective action to protect the public or property. Examples include leaks occurring in residential or commercial areas in conjunction with a natural disaster; leaks where a flammable vapor is detected inside a building; and leaks that involve response by police or fire departments. While venting is done to mitigate an unsafe condition, it does not remove the unsafe condition.

(g) Other known anomalies or events that could lead to an imminent hazard and cause (either directly or indirectly by remedial action of the operator) for purposes other than abandonment, a 20% or more reduction in operating pressures or shutdown of operation of the effected pipeline segment.

5.2 Procedures and guide material used to recognize a safety-related condition.

Personnel who perform operating and maintenance activities may use operating and maintenance procedures written in compliance with Subparts I, L and M and the associated guide material and guide material appendices to recognize anomalies or events that could become safety-related conditions. Some useful sections in Subparts I, L, and M include:

192.455	192.473	192.485	192.614	192.711	192.721
192.459	192.475	192.487	192.615	192.713	192.723
192.465	192.477	192.489	192.705	192.715	192.739
192.467	192.481	192.613	192.706	192.717	

5.3 Analysis and follow-up of in-line inspection (ILI).

Special consideration should be given to the development of written procedures for the timely analysis of, and follow through on, information obtained through the use of an ILI tool.

(a) An anomaly discovered with an ILI tool may be determined to be a safety-related condition when adequate information is available. For instance, adequate information would be available for each anomaly that is physically examined. Absent physical examination of each indicated anomaly, adequate information may be obtained when the ILI data is validated. For guidance on validation, see Guide Material Appendix G-192-14.

(b) The date an anomaly is discovered by an operator's representative and the date the anomaly is determined by an operator's representative to be a safety-related condition are used to determine the filing deadline stated in the reporting requirements of §191.25.

(c) See §192.933 and Guide Material Appendix G-192-14.

6 SURVEILLANCE, EMERGENCY RESPONSE, AND ACCIDENT INVESTIGATION

See guide material under §§192.613, 192.615, and 192.617.

This is a preview. Click here to purchase the full publication.

7 OTHER CONSIDERATIONS

7.1 "Work authorization" programs.

Operators should consider including written procedures in their procedural manual for operations, maintenance, and emergencies to protect maintenance workers from the unexpected movement or release of energy when working on electrical, pressurized fluid, or mechanical systems where the inadvertent actuation or release of energy could be dangerous. The procedures commonly used to protect maintenance personnel include "lockout," "tagout," "blocking," and "work authorization" programs. Equipment that should be considered includes compressors, filters, scrubbers, launchers, heat exchangers, and powered valve actuators.

7.2 Operator's use of powered equipment.

Before using powered equipment for making an excavation, the operator should consider the following.

(a) The use of pertinent maps, other records, or other means to locate the operator's facilities.

(b) Verifying that all other operators of underground facilities in the area have been notified of the pending excavation and have responded by marking their facilities.

(c) Determining safe distances to be maintained between the digging end of the powered equipment and underground facilities.

(d) The use of qualified personnel as necessary. See OPS Advisory Bulletin ADB-06-01 (71 FR 2613, Jan. 17, 2006; reference Guide Material Appendix G-192-1, Section 2).

7.3 Verification of established MAOP

(a) Operators should consider including written procedures in their manual for operations, maintenance, and emergencies that address the actions to be taken after records or materials are discovered that may call into question a pipeline's established MAOP. These written procedures should address the following, as applicable.

(1) Date the pipeline segment became regulated as outlined in §192.13, and how to address unknown or newly discovered records, or record discrepancies.

(2) Review of maintenance and construction activities subsequent to the original pressure test to verify that any repairs, relocations, or replacements meet the MAOP requirements and have the proper test and material documentation.

(3) Discovery of a pressure test record used to establish the pipeline's current MAOP that has a lower test value, a shorter test duration, or other test record that does not meet the requirements for a valid pressure test as outlined in Subpart J.

(4) Review of §§192.619, 192.621, 192.623 and 192.611 to determine if MAOP calculations are still valid.

(5) Options to use field verification for a record indicating an unknown strength or rating, or a pressure rating less than the pipeline's established MAOP.

(6) Consideration of an appropriate operating pressure reduction or restriction.

(7) Coordination with operator's gas control personnel for planning potential operating pressure changes that could affect control room operations.

(b) If the MAOP verification indicates changes to MAOP are necessary, the operator should consider the following actions.

(1) Assessing the impact to the pipeline system.

(2) Identifying a remediation strategy for addressing deficiencies.

(3) Revising the operator's pipeline records, which may include:

(i) manual for operations, maintenance, and emergencies.

(ii) gas control records.

(iii) gas control alarms.

(iv) GIS.

(v) electronic databases.

(vi) other records and documents where the operator may record pipeline MAOP data.

(4) Communicating the change to the appropriate operator personnel.

(5) Reviewing and revising overpressure protection requirements.

(6) Identifying potential reporting requirements.

This is a preview. Click here to purchase the full publication.

§192.607

(Removed and reserved.)

[Effective Date: 07/08/96]

§192.609

Change in class location: Required study.

[Effective Date: 11/12/70]

Whenever an increase in population density indicates a change in class location for a segment of an existing steel pipeline operating at hoop stress that is more than 40 percent of SMYS, or indicates that the hoop stress corresponding to the established maximum allowable operating pressure for a segment of existing pipeline is not commensurate with the present class location, the operator shall immediately make a study to determine:

(a) The present class location for the segment involved.

(b) The design, construction, and testing procedures followed in the original construction, and a comparison of these procedures with those required for the present class location by the applicable provisions of this part.

(c) The physical condition of the segment to the extent it can be ascertained from available records;

(d) The operating and maintenance history of the segment;

(e) The maximum actual operating pressure and the corresponding operating hoop stress, taking pressure gradient into account, for the segment of pipeline involved; and

(f) The actual area affected by the population density increase, and physical barriers or other factors which may limit further expansion of the more densely populated area.

GUIDE MATERIAL

No guide material necessary.

This is a preview. Click here to purchase the full publication.