

## Assessment and Repair - Integrity Assessment Via Pressure Test

**1. Test Acceptance Criteria and Procedures** *Were test acceptance criteria and procedures/processes sufficient to assure the basis for an acceptable pressure test?* (AR.PTI.PRESSTESTACCEP.P) 192.503(a) (192.503(b);192.503(c);192.503(d);192.503(e);192.505(a);192.505(b);192.505(c);192.505(d);192.507(a);192.507(b);192.507(c);192.513(a);192.513(b);192.513(c);192.513(d))

## Assessment and Repair - Repair Criteria (O and M)

**1. Repair of Corroded Pipe** *Does the process give sufficient guidance for personnel to repair or replace pipe that has corroded to an extent that there is no longer sufficient remaining strength in the pipe wall?* (AR.RCOM.REPAIR.P) 192.605(b)(2) (192.487(a);192.487(b);192.489(a);192.489(b);192.491(c))

**2. Repair of Corroded Pipe** *Do records document the repair or replacement of pipe that has been internally corroded to an extent that there is not sufficient remaining strength in the pipe wall?* (AR.RCOM.REPAIR.R) 192.487 (192.489)

**3. Field Inspection - Remedial Actions (OM)** *Is anomaly remediation and documentation of remediation adequate for all segments?* (AR.RCOM.REMEDIATIONOM.O) 192.487(a) (192.487(b);192.489)

## Assessment and Repair - Repair Methods and Practices

**1. Safety While Making Repairs** *Does the process ensure that repairs are made in a safe manner and are made so as to prevent damage to persons and property?* (AR.RMP.SAFETY.P) 192.605(b)(9) (192.713(b))

**2. Prevention of Accidental Ignition** *Perform observations of selected locations to verify that adequate steps have been taken by the operator to minimize the potential for accidental ignition.* (AR.RMP.IGNITION.O) 192.751(a) (192.751(b);192.751(c))

**3. Tapping Pipelines Under Pressure** *Is the process adequate for tapping pipelines under pressure?* (AR.RMP.HOTTAP.P) 192.605(b)(1) (192.627)

**4. Test Reinstated Service Lines** *Is the process adequate for the testing of disconnected service lines?*  
(AR.RMP.TESTREINSTATE.P) 192.605(b) (192.725(a);192.725(b))

**5. Test Reinstated Service Lines** *From the review of records, did the operator properly test disconnected service lines?*  
(AR.RMP.TESTREINSTATE.R) 192.603(b) (192.725(a);192.725(b))

## CRM, SCADA, and Leak Detection - General

**1. Control Room Management Criteria** *Do procedures adequately address the process and criteria to determine which facilities are control rooms?* (CR.CRMGEN.CRMCRITERIA.P) 192.631(a)(2)

**2. Control Room Management** *Are CRM procedures formalized and controlled?* (CR.CRMGEN.CRMMGMT.P) 192.631(a)(2)

**3. Control Room Management** *Were procedures approved, in place, and implemented on or before the regulatory deadline?* (CR.CRMGEN.CRMIMPLEMENT.R) 192.631(a)(2)

**4. Control Room Management** *Are procedures readily available to controllers in the control room?*  
(CR.CRMGEN.CRMPROCLOCATION.O) 192.631(a)(2)

## CRM, SCADA, and Leak Detection - Roles and Responsibilities

**1. Roles and Responsibilities** *Are there clear processes to describe each controller's physical domain of responsibility for pipelines and other facility assets?* (CR.CRMRR.RESPONSIBLE.P) 192.631(b)

**2. Roles and Responsibilities** *Are there provisions in place to assure that only qualified individuals may assume control at any console/desk?* (CR.CRMRR.QUALCONTROL.P) 192.631(b)

**3. Roles and Responsibilities** *If the physical domain of responsibility periodically changes, has a clear process been established to describe the conditions for when such a change occurs?* (CR.CRMRR.DOMAINCHANGE.P) 192.631(b)

**4. Controller Authority (Abnormal Operations)** *Have processes been established to define the controllers' authority and responsibilities when an abnormal operating condition is detected?* (CR.CRMRR.AUTHORITYABNORMAL.P) 192.631(b)(2)

**5. Roles and Responsibilities** *Do processes address a controller's role during temporary impromptu (unplanned) changes in controller responsibilities?* (CR.CRMRR.RESPCHANGE.P) 192.631(b)

**6. Roles and Responsibilities** *Do the defined roles and responsibilities require controllers to stay at the console to verify all SCADA commands that have been initiated are fulfilled, and that commands given via verbal communications are acknowledged before leaving the console for any reason?* (CR.CRMRR.COMMANDVERIFY.P) 192.631(b)

**7. Overpressure Limits** *Are controllers aware of the current MAOPs of all pipeline segments for which they are responsible, and have they been assigned the responsibility to maintain those pipelines at or below the MAOP?* (CR.CRMRR.PRESSLIMITS.O) 192.631(b)(2) (192.619(a);192.631(e)(1))

**8. Controller Authority (Emergency Operations)** *Do processes define the controllers' authority and responsibility to make decisions, take actions, and communicate with others upon being notified of, or upon detection of, and during, an emergency or if a leak or rupture is suspected?* (CR.CRMRR.AUTHORITYEMERGENCY.P) 192.631(b)(3) (192.615(a)(8);NTSB P-11-9)

**9. Control Center Evacuation** *Do processes specifically address the controller's responsibilities in the event the control room must be evacuated?* (CR.CRMRR.EVACUATION.P) 192.631(b)(3)

**10. Communication Failure** *Do processes specifically address the controller's responsibilities in the event of a SCADA system or data communications system failure impacting large sections of the controller's domain of responsibility?* (CR.CRMRR.COMMSYSFAIL.P) 192.631(b)(3)

**11. Shift Change Process** *Have processes been established for the hand-over of responsibility that specify the type of information to be communicated to the oncoming shift?* (CR.CRMRR.HANDOVER.P) 192.631(b)(4) (192.631(c)(5))

**12. Shift Change Process** *Do observations indicate adequate hand-over of responsibility to the oncoming shift?* (CR.CRMRR.HANDOVER.O) 192.631(b)(4) (192.631(c)(5))

**13. Shift Change Process - Documentation** *Do processes require that records document the hand-over of responsibility, document the time the actual hand-over of responsibility occurs, and the key information and topics that were communicated during the hand-over?* (CR.CRMRR.HANDOVERDOC.P) 192.631(b)(4) (192.631(c)(5))

**14. Shift Change Process - Documentation** *Are there records that document the hand-over of responsibility, document the time the actual hand-over of responsibility occurs, and the key information and topics that were communicated during the hand-over?* (CR.CRMRR.HANDOVERDOC.R) 192.631(b)(4) (192.631(c)(5))

**15. Shift Change Process - Overlap** *Do processes require the controllers to discuss recent and impending important activities ensuring adequate overlap?* (CR.CRMRR.HANDOVEROVERLAP.P) 192.631(b)(4)

**16. Shift Change Process - Handover Alternative** *When a controller is unable to continue or assume responsibility for any reason, do the shift hand-over processes include alternative shift hand-over actions that specifically address this situation?* (CR.CRMRR.HANDOVERALTERNATIVE.P) 192.631(b)(4)

**17. Shift Change Process - Unattended Consoles** *Has the operator established an adequate process for occasions when the console is left temporarily unattended for any reason?* (CR.CRMRR.UNATTENDCONSOLE.P) 192.631(b)(4)

**18. Shift Change Process - Console Coverage** *Do processes maintain adequate console coverage during shift hand-over?* (CR.CRMRR.CONSOLECOVERAGE.P) 192.631(b)(4)

**19. Authority to Supersede Controller Action Disallowed - Controllers** *Do processes disallow others to have authority to direct or supersede the specific technical actions of a controller?* (CR.CRMRR.OTHERAUTHORITYDISALLOW.P) 192.631(b)(5)

**20. Authority to Supersede Controller Action Disallowed - Controllers** *Do records indicate that the policy disallowing others to have authority to direct or supersede the specific technical actions of a controller has been communicated to controllers and others?* (CR.CRMRR.OTHERAUTHORITYDISALLOW.R) 192.631(b)(5)

**21. Authority to Supersede Controller Action Disallowed - Controllers** *Are controllers aware of, and can reference, processes that disallow others to have authority to direct or supersede the specific technical actions of a controller?* (CR.CRMRR.OTHERAUTHORITYDISALLOW.O) 192.631(b)(5)

**22. Others with Authority Qualification - Controllers** *Does the process result in identification of required qualification elements for those authorized to direct or supersede the technical actions of a controller that are sufficient for those individuals to understand the implications of the scope of potential actions?* (CR.CRMRR.OTHERAUTHORITYQUAL.P) 192.631(b)(5)

**23. Others with Authority Qualification - Controllers** *Do records indicate that others given authority to direct or supersede the specific technical actions of a controller were qualified?* (CR.CRMRR.OTHERAUTHORITYQUAL.R) 192.631(b)(5)

**24. Others with Authority Implementation - Controllers** *Is the process defined with respect to the details of how those authorized to direct or supersede the technical actions of a controller are to implement their authority?* (CR.CRMRR.OTHERAUTHORITYIMPLEMENT.P) 192.631(b)(5)

**25. Others with Authority List - Controllers** *Is a list of individuals with authority to direct or supersede the technical actions of a controller readily available to controllers?* (CR.CRMRR.OTHERAUTHORITYLIST.R) 192.631(b)(5)

**26. Others with Authority Implementation - Controllers** *Do records adequately document occurrences of when others authorized to direct or supersede the technical actions of a controller have done so?* (CR.CRMRR.OTHERAUTHORITYIMPLEMENT.R) 192.631(b)(5)

**27. Others with Authority Implementation - Controllers** *Do others authorized to direct or supersede the technical actions of a controller demonstrate an understanding of the process to implement this authority?*  
(CR.CRMRR.OTHERAUTHORITYIMPLEMENT.O) 192.631(b)(5)

## **CRM, SCADA, and Leak Detection - Supervisory Control and Data Acquisition**

**1. Adequate Information (API 1165 Compliance)** *Do processes clearly define the types of changes to the SCADA system(s) that constitute additions, expansions, or replacements under the meaning of the CRM rule?*  
(CR.SCADA.SYSTEMMOC.P) 192.631(c)(1)

**2. SCADA Displays** *Are there written processes to implement the API RP 1165 display standards to the SCADA systems that have been added, expanded, or replaced since August 1, 2012?* (CR.SCADA.DISPLAYCONFIG.P) 192.631(c)(1)

**3. SCADA API RP 1165 Human Factors** *Has section 4 of API RP 1165 regarding human factors engineering been implemented?* (CR.SCADA.1165HUMANFACTORS.O) 192.631(c)(1)

**4. SCADA Display Objects** *Has section 8 of API RP 1165 regarding display object characteristics been implemented?*  
(CR.SCADA.DISPLAYOBJECTS.O) 192.631(c)(1)

**5. SCADA Display Dynamics** *Has Section 9 of API RP 1165 regarding display object dynamics been implemented?*  
(CR.SCADA.DISPLAYDYNAMICS.R) 192.631(c)(1)

**6. SCADA Administration** *Have applicable paragraphs of section 11 of API RP 1165 administration been implemented?*  
(CR.SCADA.ADMINISTRATION.R) 192.631(c)(1)

**7. SCADA Impracticality** *If any/all applicable paragraph(s) of API RP 1165 have not been implemented, has it been demonstrated and documented that the unimplemented provisions are impractical for the SCADA system used?*  
(CR.SCADA.1165IMPRACTICAL.R) 192.631(c)(1)

**8. Set Points** *Does the process adequately define safety-related points? (CR.SCADA.SETPOINT.P) 192.631(c)(2)*

**9. Set Points** *Do records indicate safety-related points have been adequately implemented? (CR.SCADA.SETPOINT.R) 192.631(c)(2)*

**10. Point-to-Point Verification** *Are there adequate processes to define and identify the circumstances which require a point-to-point verification? (CR.SCADA.POINTVERIFY.P) 192.631(c)(2)*

**11. Point-to-Point Verification** *Have required point-to-point verifications been performed? (CR.SCADA.POINTVERIFY.R) 192.631(c)(2)*

**12. Point-to-Point Verification Extent** *Are there adequate processes for the thoroughness of the point-to-point verification? (CR.SCADA.POINTVERIFYEXTENT.P) 192.631(c)(2)*

**13. Point-to-Point Verification Extent** *Do records demonstrate adequate thoroughness of the point-to-point verification? (CR.SCADA.POINTVERIFYEXTENT.R) 192.631(c)(2)*

**14. Point-to-Point Verification Interval** *Is there an adequate process for defining when the point-to-point verification must be completed? (CR.SCADA.POINTVERFIYINTVL.P) 192.631(c)(2)*

**15. Point-to-Point Verification Interval** *Do records indicate the point-to-point verification has been completed at the required intervals? (CR.SCADA.POINTVERFIYINTVL.R) 192.631(c)(2)*

**16. Point-to-Point Verification** *Are point-to-point verifications performed adequately when required? (CR.SCADA.POINTVERIFY.O) 192.631(c)(2)*

**17. Internal Communication Plan** *Has an internal communication plan been established and implemented that is adequate to manually operate the pipeline during a SCADA failure/outage?* (CR.SCADA.COMMPLAN.P) 192.631(c)(3)

**18. Internal Communication Plan** *Has the internal communication plan been tested and verified for manual operation of the pipeline safely at least once each calendar year but at intervals not exceeding 15 months?* (CR.SCADA.COMMPLAN.R) 192.631(c)(3)

**19. Backup SCADA System** *Is there a backup SCADA system?* (CR.SCADA.BACKUPSCADA.O) 192.631(c)

**20. Backup SCADA Development** *Has the use of the backup SCADA system for development work been defined?* (CR.SCADA.BACKUPSCADADEV.P) 192.631(c)(4)

**21. Backup SCADA Testing** *Is the backup SCADA system required to be tested at least once each calendar year at intervals not to exceed 15 months?* (CR.SCADA.BACKUPSCADATEST.P) 192.631(c)(4)

**22. Backup SCADA Testing** *Is the backup SCADA system tested at least once each calendar year at intervals not to exceed 15 months?* (CR.SCADA.BACKUPSCADATEST.R) 192.631(c)(4)

**23. Backup SCADA Verification** *Is testing required to verify adequate processes are in place for decision-making and internal communications to successfully implement a transition from primary SCADA to backup SCADA, and back to primary SCADA?* (CR.SCADA.BACKUPSCADAVERIFY.P) 192.631(c)(4)

**24. Backup SCADA Verification** *Does the testing verify that there are adequate processes in place for decision-making and internal communications to successfully implement a transition from primary SCADA to backup SCADA, and back to primary SCADA?* (CR.SCADA.BACKUPSCADAVERIFY.R) 192.631(c)(4)

**25. Backup SCADA Adequacy** *If the back-up SCADA system is not designed to handle all the functionality of the main SCADA system, does the testing determine whether there are adequate procedures in place to account for displaced and/or different available functions during back-up operations?* (CR.SCADA.BACKUPSCADA Adequacy.R) 192.631(c)(4)



**26. Backup SCADA Transfer** *Do processes adequately address and test the logistics of transferring control to a backup control room?* (CR.SCADA.BACKUPSCADATRANSFER.P) 192.631(c)(4)

**27. Backup SCADA Return to Primary** *Do procedures adequately address and test the logistics of returning operations back to the primary control room?* (CR.SCADA.BACKUPSCADARETURN.P) 192.631(c)(4)

**28. Backup SCADA Testing** *Is a representative sampling of critical functions in the back-up SCADA system being tested to ensure proper operation in the event the backup system is needed?* (CR.SCADA.BACKUPSCADAFUNCTIONS.R) 192.631(c)(4)

## CRM, SCADA, and Leak Detection - Fatigue Management

**1. Fatigue Mitigation** *Does the fatigue mitigation process or procedures (plan) identify operator-specific fatigue risks?* (CR.CRMFM.FATIGUEMITIGATION.P) 192.631(d)

**2. Fatigue Risk Reduction** *Does the fatigue mitigation plan adequately address how the program reduces the risk associated with controller fatigue?* (CR.CRMFM.FATIGUERISKS.P) 192.631(d)

**3. Fatigue Quantification** *Do processes require that the potential contribution of controller fatigue to incidents and accidents be quantified during investigations?* (CR.CRMFM.FATIGUEQUANTIFY.P) 192.631(d)

**4. Fatigue Mitigation Manager** *Is there a designated fatigue risk manager who is responsible and accountable for managing fatigue risk and fatigue countermeasures, and someone (perhaps the same person) that is authorized to review and approve HOS emergency deviations?* (CR.CRMFM.FATIGUEMANAGER.P) 192.631(d)

**5. Scheduled Shift Length** *Is the scheduled shift length less than or equal to 12 hours (not including shift hand-over) or is there a documented technical basis to show that shift lengths and schedule rotations are adequate to provide controllers off-duty time sufficient to achieve 8 hours of continuous sleep?* (CR.CRMFM.SHIFTLENGTH.R) 192.631(d)(1)

**6. Establishing Shift Length** *Does the operator factor in all time the individual is working for the company when establishing shift lengths and schedule rotations or is there a documented technical basis to show that shift lengths and schedule rotations are adequate to provide controllers off-duty time sufficient to achieve 8 hours of continuous sleep?* (CR.CRMFM.SHIFTLENGTHTIME.R) 192.631(d)(1)

**7. Scheduled Time Off Between Shifts** *Are all scheduled periods of time off at least one hour longer than 8 hours plus commute time or is there a documented technical basis to show that shift lengths and schedule rotations are adequate to provide controllers off-duty time sufficient to achieve 8 hours of continuous sleep?* (CR.CRMFM.SCHEDULEDTIMEOFF.R) 192.631(d)(1)

**8. On Call Controllers** *For controllers who are on call, do processes minimize interrupting the required 8 hours of continuous sleep or require a documented technical basis to show that shift lengths and schedule rotations are adequate to provide controllers off-duty time sufficient to achieve 8 hours of continuous sleep?* (CR.CRMFM.ONCALLCONTROLLER.P) 192.631(d)

**9. On Call Controllers** *For controllers who are on call, does the operator minimize interrupting the required 8 hours of continuous sleep or is there a documented technical basis to show that shift lengths and schedule rotations are adequate to provide controllers off-duty time sufficient to achieve 8 hours of continuous sleep?* (CR.CRMFM.ONCALLCONTROLLER.R) 192.631(d)(1)

**10. Maximum Hours of Service** *Do processes limit the maximum HOS limit in any sliding 7-day period to no more than 65 hours or is there a documented technical basis to show a reduction of the risk associated with controller fatigue?* (CR.CRMFM.MAXHOS.P) 192.631(d)(4)

**11. Minimum Time Off After HOS Limit Reached** *After reaching the HOS limit in any sliding 7-day period, is the minimum time off at least 35 hours or is there a documented technical basis to show a reduction of the risk associated with controller fatigue?* (CR.CRMFM.MINTIMEOFF.P) 192.631(d)(4)

**12. Documented Time Schedule** *Is there a formal system to document all scheduled and unscheduled HOS worked, including overtime and time spent performing duties other than control room duties?* (CR.CRMFM.DOCSCHEDULE.P) 192.631(d)(4)

**13. Time Off Following Successive Days Worked** *For normal business hour type operations (i.e., five days per week), are no more than five days worked in succession before at least two days off?* (CR.CRMFM.DAYSOFF.P) 192.631(d)(4)

**14. Day Only Work Hours** *For normal business hour type operations (i.e., five days per week), do records indicate shift start times no earlier than 6:00 a.m. and shift end times no later than 7:00 p.m.?* (CR.CRMFM.WORKHOURS.R) 192.631(d)(4)

**15. Fatigue Countermeasures** *For shifts longer than 8 hours, have specific fatigue countermeasures been implemented for the ninth and beyond hours?* (CR.CRMFM.FATIGUECOUNTERMEASURES.P) 192.631(d)(4)

**16. Daily HOS Limit** *Do processes limit the daily maximum HOS limit no more than 14 hours in any sliding 24-hour period?* (CR.CRMFM.DAILYHOSLIMIT.P) 192.631(d)(4)

**17. Number of Qualified Controllers** *Do operations include a sufficient number of qualified controllers?* (CR.CRMFM.CONTROLLERNUMBERS.O) 192.631(d)

**18. Off Duty Hours When Limits Reached** *Do processes ensure that controllers are provided with at least thirty-five (35) continuous off-duty hours when limits are reached following the most recent 35-hour (minimum) off-duty rest period or is there a documented technical basis to show that the maximum limit on controller HOS is adequate to reduce the risk associated with controller fatigue?* (CR.CRMFM.OFFDUTYHOURS.P) 192.631(d)(4)

**19. Shift Holdover** *Does the shift holdover process conform to shift holdover guidelines or is there a documented technical basis to show that the maximum limit on controller HOS is adequate to reduce the risk associated with controller fatigue?* (CR.CRMFM.SHIFTHOLDOVER.P) 192.631(d)(4)

**20. Specific Fatigue Countermeasures During Times of Heightened Risk** *Do processes require specific fatigue countermeasures during applicable time periods, or is there a documented technical basis to show that the maximum limit on controller HOS is adequate to reduce the risk associated with controller fatigue?* (CR.CRMFM.SPECIFICCOUNTERMEASURES.P) 192.631(d)(4)

**21. Deviations from HOS Limits** *Is there a formal process for approving deviations from the maximum HOS limits?* (CR.CRMFM.HOSDEVIATIONS.P) 192.631(d)(4)

**22. Fatigue Education** *Does the program require that fatigue education/training is required for all controllers and control room supervisors?* (CR.CRMFM.FATIGUEEDUCATE.P) 192.631(d)(2) (192.631(d)(3))

**23. Fatigue Education** *Is fatigue education/training documented for all controllers and control room supervisors?*  
(CR.CRMFM.FATIGUEEDUCATE.R) 192.631(d)(2) (192.631(d)(3))

**24. Review of Fatigue Education/Training Program Effectiveness** *Do processes require that the effectiveness of the fatigue education/training program be reviewed at least once each calendar year, not to exceed 15 months?*  
(CR.CRMFM.FATIGUEREVIEW.P) 192.631(d)(2) (192.631(d)(3);192.605(a))

**25. Fatigue Mitigation Strategies** *Does fatigue education address fatigue mitigation strategies (countermeasures)?*  
(CR.CRMFM.FATIGUESTATEGY.P) 192.631(d)(2)

**26. Off-Duty Activity Impact on Fatigue** *Does fatigue education address how off-duty activities contribute to fatigue?* (CR.CRMFM.OFFDUTY.P) 192.631(d)(2)

**27. Fatigue Training Content** *Is the content of fatigue training adequate for training controllers and supervisors to recognize the effects of fatigue?* (CR.CRMFM.FATIGUECONTENT.P) 192.631(d)(3)

**28. Fatigue Training Content** *Has controller and supervisor training to recognize the effects of fatigue been documented?* (CR.CRMFM.FATIGUECONTENT.R) 192.631(d)(3)

## CRM, SCADA, and Leak Detection - Alarm Management

**1. Alarm Procedures** *Is the alarm management plan a formal process that specifically identifies critical topical areas included in the program?* (CR.CRMAM.ALARM.P) 192.631(e)

**2. Alarm Malfunction** *Is there a process to identify and correct inaccurate or malfunctioning alarms?*  
(CR.CRMAM.ALARMMALFUNCTION.P) 192.631(e)(1)

**3. Alarm Review** *Does the review of safety-related alarms account for different alarm designs and all alarm types/priorities?* (CR.CRMAM.ALARMREVIEW.P) 192.631(e)(1)

**4. Controller SCADA Performance** *Does the review of safety-related alarms account for console differences that could affect individual-specific controller qualification and performance?* (CR.CRMAM.CONTROLLERPERFORMANCE.P) 192.631(h) (192.631(e)(1))

**5. Managing Stale or Unreliable Data** *Does the review of safety-related alarms include specific procedures and practices for managing stale or unreliable data?* (CR.CRMAM.STALEDATA.P) 192.631(e)(1)

**6. Monthly Analysis of SCADA Data** *Do processes require the monthly identification, recording, review, and analysis of points that have been taken off scan, have had alarms inhibited, generated false alarms, or that have had forced or manual values for periods of time exceeding that required for associated maintenance or operating activities?* (CR.CRMAM.MONTHLYANALYSIS.P) 192.631(e)(2)

**7. Correction of SCADA Problems** *Does the alarm management plan include a process for promptly correcting identified problems and for returning these points to service?* (CR.CRMAM.PROBLEMCORRECTION.P) 192.631(e)(2)

**8. Alarm Point Verification** *Do records verify that monthly reviews and analysis of alarm points have been performed?* (CR.CRMAM.ALARMVERIFY.R) 192.631(e)(2)

**9. Alarm Setpoint Process** *Is there a formal process to determine the correct alarm setpoint values and alarm descriptions?* (CR.CRMAM.ALARMSETPOINTS.P) 192.631(e)(3)

**10. Controls on SCADA Settings** *Have procedures been established to clearly address how and to what degree controllers can change alarm limits or setpoints, or inhibit alarms, or take points off-scan?* (CR.CRMAM.SETTINGCONTROL.P) 192.631(e)(3)

**11. Alarm Value Verification** *Do records demonstrate verification of correct safety-related alarm set-point values and alarm descriptors when associated field instruments are calibrated or changed and at least once each calendar year, but at intervals not to exceed 15 months?* (CR.CRMAM.ALARMVALUEVERIFY.R) 192.631(e)(3)

**12. Alarm Management Plan Review** *Are there processes to review the alarm management plan at least once each calendar year, but at intervals not exceeding 15 months, in order to determine the effectiveness of the plan?* (CR.CRMAM.PLANREVIEW.P) 192.631(e)(4)

**13. Alarm Management Plan Review** *Do records indicate review of the alarm management plan at least once each calendar year, but at intervals not exceeding 15 months, in order to determine the effectiveness of the plan?* (CR.CRMAM.PLANREVIEW.R) 192.631(e)(4)

**14. Measuring Work Load** *Does the CRM program have a means of identifying and measuring the work load (content and volume of general activity) being directed to an individual controller?* (CR.CRMAM.WORKLOAD.P) 192.631(e)(5)

**15. Monitoring Work Load** *Is the process of monitoring and analyzing general activity comprehensive?* (CR.CRMAM.WORKLOADMONITORING.P) 192.631(e)(5)

**16. Controller Reaction to Incoming Alarms** *Does the process have a means of determining that the controller has sufficient time to analyze and react to incoming alarms?* (CR.CRMAM.CONTROLLERREACTION.P) 192.631(e)(5)

**17. Analysis of Controller Performance** *Has an analysis been performed to determine if controller(s) performance is currently adequate?* (CR.CRMAM.PERFORMANCEANALYSIS.R) 192.631(e)(5)

**18. Alarm Deficiency Resolution** *Is there a process to address how deficiencies found in implementing 192.631(e)(1) through 192.631(e)(5) will be resolved?* (CR.CRMAM.DEFICIENCIES.P) 192.631(e)(6)

**19. Alarm Management Deficiencies** *Do records indicate deficiencies found in implementing 192.631(e)(1) through 192.631(e)(5) have been resolved?* (CR.CRMAM.DEFICIENCIES.R) 192.631(e)(6)

## CRM, SCADA, and Leak Detection - Change Management

**1. Field Equipment Changes** *Is there a process to assure changes in field equipment that could affect control room operations are coordinated with the control room personnel?* (CR.CRMCMGT.EQUIPMENTCHANGES.P) 192.631(f)(1)

**2. Controller Participation in System Changes** *Are control room representative(s) required to participate in meetings where changes that could directly or indirectly affect the hydraulic performance or configuration of the pipeline (including routine maintenance and repairs) are being considered, designed and implemented?* (CR.CRMCMGT.CONTROLLERPARTICIPATE.P) 192.631(f)(1) (192.631(f)(3))

**3. Controller Participation in System Changes** *Do records indicate that control room representative(s) participate in meetings where changes that could directly or indirectly affect the hydraulic performance or configuration of the pipeline (including routine maintenance and repairs) are being considered, designed and implemented?* (CR.CRMCMGT.CONTROLLERPARTICIPATE.R) 192.631(f)(1) (192.631(f)(3))

**4. Emergency Contact with Control Room** *Is there a process requiring field personnel and SCADA support personnel to contact the control room when emergency conditions exist?* (CR.CRMCMGT.EMERGENCYCONTACT.P) 192.631(f)(2)

**5. Coordination of Field Changes** *Does the process require field personnel and SCADA support personnel to contact the control room when making field changes (for example, moving a valve) that affect control room operations?* (CR.CRMCMGT.FIELDCONTACT.P) 192.631(f)(2)

**6. Coordination of Field Changes** *Do records indicate field personnel and SCADA support personnel contacted the control room when making field changes (for example, moving a valve) that affect control room operations?* (CR.CRMCMGT.FIELDCHANGES.R) 192.631(f)(2)

## CRM, SCADA, and Leak Detection - Operating Experience

**1. Reportable Incident (Review)** *Is there a formal, structured approach for reviewing and critiquing reportable events to identify lessons learned?* (CR.CRMEXP.REPORTABLEINCIDENTREVIEW.P) 192.631(g)(1)

**2. Reportable Incident (Review)** *Do records indicate reviews of reportable events specifically analyzed all contributing factors to determine if control room actions contributed to the event, and corrected any deficiencies?*  
(CR.CRMEXP.REPORTABLEINCIDENTREVIEW.R) 192.631(g)(1)

**3. Lessons Learned** *Does the program require training on lessons learned from a broad range of events (reportable incidents/accidents, near misses, leaks, operational and maintenance errors, etc.), even though the control room may not have been at fault?* (CR.CRMEXP.LESSONSLEARNED.P) 192.631(g)(2) (192.631(b)(5))

**4. Lessons Learned** *Has operating experience review training been conducted on lessons learned from a broad range of events (reportable incidents/accidents, near misses, leaks, operational and maintenance errors, etc.)?*  
(CR.CRMEXP.LESSONSLEARNED.R) 192.631(g)(2) (192.631(b)(5))

## CRM, SCADA, and Leak Detection - Training

**1. Controller Training Program** *Has a controller training program been established to provide training for each controller to carry out their roles and responsibilities?* (CR.CRMTRAIN.CONTROLLERTRAIN.P) 192.631(h)

**2. Controller Training Program** *Has a controller training program been implemented to provide training for each controller to carry out their roles and responsibilities?* (CR.CRMTRAIN.CONTROLLERTRAIN.R) 192.631(h)

**3. Training Program Review** *Have processes been established to review the controller training program content to identify potential improvements at least once each calendar year, but at intervals not to exceed 15 months?*  
(CR.CRMTRAIN.TRAININGREVIEW.P) 192.631(h)

**4. Training Program Review** *Have processes been implemented to review the controller training program content to identify potential improvements at least once each calendar year, but at intervals not to exceed 15 months?*  
(CR.CRMTRAIN.TRAININGREVIEW.R) 192.631(h)

**5. Content of Training Program** *Does training content address all required material, including training each controller to carry out the roles and responsibilities that were defined by the operator?* (CR.CRMTRAIN.TRAININGCONTENT.R) 192.631(h)



**6. List of AOCs for Training** *Has a list of the abnormal operating conditions that are likely to occur simultaneously or in sequence been established?* (CR.CRMTRAIN.AOCLIST.R) 192.631(h)(1)

**7. Controller Training and Qualification** *Does the training program provide controller training on recognizing and responding to abnormal operating conditions that are likely to occur simultaneously or in sequence?* (CR.CRMTRAIN.TRAININGABNORMAL.P) 192.631(h)(1)

**8. Controller Training and Qualification** *Do records indicate the training program used a simulator or tabletop exercises to train controllers how to recognize and respond to abnormal operating conditions?* (CR.CRMTRAIN.TRAINING.R) 192.631(h)(2)

**9. Controller Training and Qualification** *Does the training program use a simulator or tabletop exercises to train controllers how to recognize and respond to abnormal operating conditions?* (CR.CRMTRAIN.TRAINING.O) 192.631(h)(2)

**10. Communication Training** *Does the CRM program train controllers on their responsibilities for communication under the operator's emergency response procedures?* (CR.CRMTRAIN.COMMUNICATIONTRAINING.P) 192.631(h)(3)

**11. Working Knowledge of Pipeline System** *Does the training program provide controllers a working knowledge of the pipeline system, especially during the development of abnormal operating conditions?* (CR.CRMTRAIN.SYSKNOWLEDGE.P) 192.631(h)(4)

**12. List of Infrequently Used Pipeline Setups** *Has a list of pipeline operating setups that are periodically (but infrequently) used been established?* (CR.CRMTRAIN.INFREQOPSLIST.R) 192.631(h)(5)

**13. Review of Procedures Prior to Use** *Do processes specify that, for pipeline operating set-ups that are periodically (but infrequently) used, the controllers must be provided an opportunity to review relevant procedures in advance of their use?* (CR.CRMTRAIN.INFREQOPSREVIEW.P) 192.631(h)(5)

**14. Control Room Team Training - Personnel** *Do processes establish who, regardless of location, operationally collaborates with control room personnel?* (CR.CRMTRAIN.TEAMTRAINPERSONNEL.P) 192.631(h)(6)

**15. Control Room Team Training - Frequency** *Do processes define the frequency of new and recurring team training?* (CR.CRMTRAIN.TEAMTRAINFREQ.P) 192.631(h)(6)

**16. Control Room Team Training - Completeness** *Do processes address all operational modes and operational collaboration/control?* (CR.CRMTRAIN.TEAMTRAINCOMPLETE.P) 192.631(h)(6)

**17. Control Room Team Training - Operational Experience** *Do processes include incorporation of lessons learned from actual historical events and other oil-gas industry events?* (CR.CRMTRAIN.TEAMTRAINEXPERIENCE.P) 192.631(h)(6)

**18. Control Room Team Training - Exercises** *Do records indicate that training exercises were adequate and involved at least one qualified controller?* (CR.CRMTRAIN.TEAMTRAINEXERCISE.R) 192.631(h)(6)

**19. Control Room Team Training - Exercises** *Does implementation of a control room team exercise demonstrate performance in accordance with regulatory and process requirements?* (CR.CRMTRAIN.TEAMTRAINEXERCISE.O) 192.631(h)(6)

**20. Control Room Team Training - Identified Individuals** *Do records demonstrate that individuals identified as of January 23, 2018 received team training by January 23, 2019?* (CR.CRMTRAIN.TEAMTRAINIDENTINDIVIDUAL.R) 192.631(h)(6)

## **CRM, SCADA, and Leak Detection - Compliance Validation and Deviations**

**1. Submittal of Procedures** *Are there adequate processes to assure that the operator is responsive to requests from applicable agencies to submit their CRM procedures?* (CR.CRMCOMP.SUBMITPROCEDURES.P) 192.631(i)

**2. Record of Procedure Submittals** *Has the operator been responsive to requests from applicable agencies to submit their CRM procedures?* (CR.CRMCOMP.SUBMITPROCEDURES.R) 192.631(i)

**3. CRM Coordinator** *Is there an individual that is responsible and accountable for compliance with requests from PHMSA or other applicable agencies?* (CR.CRMCOMP.CRMCOORDINATOR.R) 192.631(i)

**4. CRM Records Management** *Are records management processes adequate to assure records are sufficient to demonstrate compliance with the CRM rule?* (CR.CRMCOMP.RECORDS.P) 192.631(j)(1)

**5. CRM Records** *Are records sufficient to demonstrate compliance with the CRM rule?* (CR.CRMCOMP.RECORDS.R) 192.631(j)(1)

**6. Electronic Records** *Are electronic records properly stored, safeguarded, and readily retrievable?* (CR.CRMCOMP.ELECTRONICRECORDS.R) 192.631(j)(1)

**7. CRM Deviations** *Are there processes to demonstrate and provide a documented record that every deviation from any CRM rule requirement was necessary for safe operation?* (CR.CRMCOMP.DEVIATIONS.P) 192.631(j)(2)

**8. Deviation Records** *Were all deviations documented in a way that demonstrates they were necessary for safe operation?* (CR.CRMCOMP.DEVIATIONS.R) 192.631(j)(2)

## Design and Construction - Construction

**1. Plastic Pipe Joints** *Does the process require plastic pipe joints to be designed and installed in accordance with 192.281?* (DC.CO.PLASTICJOINT.P) 192.273(b) (192.281(a);192.281(b);192.281(c);192.281(d);192.281(e);192.303)

**2. Plastic pipe - Qualifying Joining Procedures** *Does the process require plastic pipe joining procedures to be qualified in accordance with §192.283, prior to making plastic pipe joints?* (DC.CO.PLASTICJOINTPROCEDURE.P) 192.273(b) (192.283(a);192.283(b);192.283(c))

**3. Plastic pipe - Qualifying Joining Procedures** *Have plastic pipe joining procedures been qualified in accordance with 192.283?* (DC.CO.PLASTICJOINTPROCEDURE.R) 192.273(b) (192.283(a);192.283(b);192.283(c))

**4. Plastic pipe - Qualifying Personnel to Make Joints** *Is a process in place to ensure that personnel making joints in plastic pipelines are qualified?* (DC.CO.PLASTICJOINTQUAL.P) 192.285(d) (192.285(a);192.285(b);192.285(c);192.805)

**5. Plastic pipe - Qualifying Personnel to Make Joints** *Do records indicate persons making joints in plastic pipelines are qualified in accordance with 192.285?* (DC.CO.PLASTICJOINTQUAL.R) 192.285(d) (192.285(a);192.285(b);192.285(c);192.807(a);192.807(b))

**6. Qualification of Personnel Inspecting Joints in Plastic Pipelines** *Is a process in place to assure that persons who inspect joints in plastic pipes are qualified?* (DC.CO.PLASTICJOINTINS.P) 192.287 (192.805(h))

**7. Qualification of Personnel Inspecting Joints in Plastic Pipelines** *Do records indicate persons inspecting the making of plastic pipe joints have been qualified?* (DC.CO.PLASTICJOINTINS.R) 192.287 (192.807(a);192.807(b))

## Design and Construction - Construction Weld Inspection

**1. Inspection and Test of Welds** *Does the process require visual inspections of welds to be conducted by qualified inspectors?* (DC.WELDINS.P.WELDVISUALQUAL.P) 192.303 (192.241(a);192.241(b);192.241(c))

**2. Nondestructive Test and Interpretation Procedures** *Is there a process for welds nondestructive testing and interpretation in accordance with 192.243?* (DC.WELDINS.P.WELDNDT.P) 192.243(a) (192.243(b);192.243(c);192.243(d);192.243(e))

**3. Repair or Removal of Weld Defects** *Does the process require welds that are unacceptable to be removed and/or repaired as specified by 192.245?* (DC.WELDINS.P.WELDREPAIR.P) 192.303 (192.245(a);192.245(b);192.245(c))

## Design and Construction - Construction Welder Qualification

**1. Limitations on Welders** *Does the process require certain limitations be placed on welders and welding operators in accordance with 192.229?* (DC.WELDERQUAL.WELDERLIMITNDT.P) 192.303 (192.229(a);192.229(b);192.229(c);192.229(d))

## Design and Construction - Construction Welding Procedures

**1. Welding Procedures** *Does the process require welding to be performed by qualified welders using qualified welding procedures and are welding procedures and qualifying tests required to be recorded in detail?* (DC.WELDPROCEDURE.WELD.P) 192.225(a) (192.225(b))

**2. Welding Procedures** *Do records indicate weld procedures are being qualified in accordance with 192.225?* (DC.WELDPROCEDURE.WELD.R) 192.225(a) (192.225(b))

**3. Welding Weather** *Does the process require welding to be protected from weather conditions that would impair the quality of the completed weld?* (DC.WELDPROCEDURE.WELDWEATHER.P) 192.303 (192.231)

**4. Miter joints** *Does the process prohibit the use of certain miter joints as required by 192.233?* (DC.WELDPROCEDURE.MITERJOINT.P) 192.303 (192.233(a);192.233(b);192.233(c))

**5. Preparation for Welding** *Does the process require certain preparations for welding, in accordance with 192.235?* (DC.WELDPROCEDURE.WELDPREP.P) 192.303 (192.235)

## Design and Construction - Design of Pipe Components

**1. Flanges and Flange Accessories** *Do records indicate flanges and flange accessories meet the requirements of 192.147?* (DC.DPC.FLANGE.R) 192.147(a) (192.147(b);192.147(c))

**2. Flanges and Flange Accessories** *Do flanges and flange accessories meet the requirements of 192.147?*  
(DC.DPC.FLANGE.O) 192.141 (192.147(a);192.147(b);192.147(c))

**3. Distribution Valve Placement** *Are distribution line valves being installed as required of 192.181?*  
(DC.DPC.GDVALVEPLACEMENT.O) 192.141 (192.181(a);192.181(b);192.181(c))

## Design and Construction - Maintenance and Operations

**1. Start-Stop Procedures** *During startup or shut-in, is it assured that the pressure limitations on the pipeline were not exceeded?* (DC.MO.MAOPLIMIT.O) 192.605(b)(5)

## Design and Construction - Materials

**1. Marking of Materials** *Are pipe, valves, and fittings properly marked for identification in accordance with the requirements of 192.63?* (DC.MA.MARKING.O) 192.63(a) (192.63(b);192.63(c);192.63(d))

## Design and Construction - Meters, Service Regulators, and Service Lines

**1. Customer Meters and Regulator Location** *Are meters and service regulators being located consistent with the requirements of 192.353?* (DC.METERREGSVC.CUSTOMETERREGLOC.O) 192.351 (192.353(a);192.353(b);192.353(c);192.353(d))

**2. Customer Meters and Regulator Protection** *Are meters and service regulators being protected from damage consistent with the requirements of 192.355?* (DC.METERREGSVC.CUSTOMETERREGPROT.O) 192.351 (192.355(a);192.355(b);192.355(c))

**3. Customer Meters and Regulator Installation** *Are meters and service regulators being installed consistent with the requirements of 192.357? (DC.METERREGSVC.CUSTOMETERREGINSTALL.O) 192.351 (192.357(a);192.357(b);192.357(c);192.357(d))*

**4. Customer Meter Operating Pressure** *Are customer meter operating pressures consistent with the requirements of 192.359? (DC.METERREGSVC.CUSTOMETEROPPRESS.O) 192.351 (192.359(a);192.359(b);192.359(c))*

**5. Service Line Installation** *Are customer service lines being installed consistent with the requirements of 192.361? (DC.METERREGSVC.SVCLINEINSTALL.O) 192.351 (192.361(a);192.361(b);192.361(c);192.361(d);192.361(e);192.361(f);192.361(g))*

**6. Service Line Valve and Location Requirements** *Are customer service line valves being installed meeting the valve and locations requirements of 192.363 and 192.365? (DC.METERREGSVC.SVCLINEVLVLOCATEREQT.O) 192.351 (192.363(a);192.363(b);192.363(c);192.365(a);192.365(b);192.365(c))*

**7. Service Line Connection Requirements** *Are customer service lines being installed with connections meeting the requirements of 192.367 and 192.369? (DC.METERREGSVC.SVCLINECONNECT.O) 192.351 (192.367(a);192.367(b);192.369(a);192.369(b))*

**8. Service Line Connection Requirements** *Are customer service lines being installed constructed appropriately for the types of materials used? (DC.METERREGSVC.SVCLINEMATERIAL.O) 192.351 (192.371;192.373(a);192.373(b);192.373(c);192.375(a);192.375(b);192.377)*

**9. Service Line Connection Requirements** *Are new customer service lines not in use configured in accordance with the requirements of 192.379? (DC.METERREGSVC.NEWSVCLINENOTUSED.O) 192.351 (192.379;192.379(a);192.379(b);192.379(c))*

**10. Service Line Connection Requirements** *Are service line excess flow valves located and identified in accordance with the requirements of 192.381? (DC.METERREGSVC.EXCSFLOWVLVLOCATE.O) 192.351 (192.381(c);192.381(d);192.381(e))*

## Design and Construction - Pressure Testing

**1. Test Requirements for Plastic Pipe** *Do records indicate that pressure testing is conducted in accordance with 192.513? (DC.PT.PRESSTESTPLASTIC.R) 192.517(b) (192.513(a);192.513(b);192.513(c);192.513(d))*

**2. Test Requirements for Service Lines** *Do records indicate that pressure testing is conducted in accordance with 192.511? (DC.PT.SERVICELINE.R) 192.517(b) (192.511(a);192.511(b);192.511(c))*

## Design and Construction - Pressure Testing - Low Pressure

**1. Strength Test Duration Requirements for SMYS < 30%** *Do records indicate that pressure testing is conducted in accordance with 192.507? (DC.PTLOWPRESS.PRESSTESTLOWSTRESS.R) 192.517(a) (192.507(a);192.507(b);192.507(c))*

**2. Strength Test Requirements for Operations < 100 psig** *Do records indicate that pressure testing is conducted in accordance with 192.509(a) (except for service lines and plastic pipelines)? (DC.PTLOWPRESS.PRESSTEST100PSIG.R) 192.517(b) (192.509(a);192.509(b))*

## Emergency Preparedness and Response - Emergency Response

**1. Receiving Notices** *Does the emergency plan include procedures for receiving, identifying, and classifying notices of events which need immediate response? (EP.ERG.NOTICES.P) 192.615(a)(1)*

**2. Emergency Response Communication** *Does the emergency plan include procedures for establishing and maintaining adequate means of communication with appropriate fire, police, and other public officials? (EP.ERG.COMMSYS.P) 192.615(a) (192.615(a)(2))*



**3. Emergency Response** *Does the emergency plan include procedures for making a prompt and effective response to a notice of each type of emergency, including gas detected inside or near a building, a fire or explosion near or directly involving a pipeline facility, or a natural disaster?* (EP.ERG.RESPONSE.P) 192.615(a) (192.615(a)(3);192.615(a)(11);192.615(b)(1))

**4. Emergency Response** *Does the process include procedures for ensuring the availability of personnel, equipment, tools, and materials as needed at the scene of an emergency?* (EP.ERG.READINESS.P) 192.615(a) (192.615(a)(4))

**5. Emergency Response - Actions** *Does the emergency plan include procedures for taking actions directed toward protecting people first and then property?* (EP.ERG.PUBLICPRIORITY.P) 192.615(a) (192.615(a)(5))

**6. Emergency Response** *Does the emergency plan include procedures for the emergency shutdown or pressure reduction in any section of pipeline system necessary to minimize hazards to life or property?* (EP.ERG.PRESSREDUCESD.P) 192.615(a) (192.615(a)(6))

**7. Emergency Response - Hazards** *Does the emergency plan include procedures for making safe any actual or potential hazard to life or property?* (EP.ERG.PUBLICHAZ.P) 192.605(a) (192.615(a)(7))

**8. Public Official Notification** *Does the emergency plan include procedures for notifying appropriate public officials of gas pipeline emergencies and coordinating with them both planned responses and actual responses during an emergency?* (EP.ERG.AUTHORITIES.P) 192.615(a) (192.615(a)(8))

**9. Emergency Response - Designated Persons Notify 911** *Does the emergency plan define the operator's designated person(s) (e.g., controller or other personnel) responsible to directly notify 911 or the phone number of appropriate local emergency officials to report emergencies and possible pipeline ruptures to first responder agencies/authorities?* (EP.ERG.NOTIFY911.P) 192.615(a) (192.615(a)(8);NTSB P-11-9)

**10. Emergency Response - Designated Persons Notify 911** *Do records indicate that immediate and direct notification was made to 911 emergency call centers (or local emergency responder agency) for the communities and jurisdictions in which pipelines were located for situations when an emergency or possible rupture of a pipeline was indicated?* (EP.ERG.NOTIFY911.R) 192.615(a) (192.615(a)(8);NTSB P-11-9)

**11. Service Outage Restoration** *Does the emergency plan include procedures for safely restoring any service outage?* (EP.ERG.OUTAGERESTORE.P) 192.615(a) (192.615(a)(9))

**12. Incident Investigation Actions** *Does the process include procedures for beginning action under 192.617, if applicable, as soon after the end of the emergency as possible?* (EP.ERG.INCIDENTACTIONS.P) 192.615(a) (192.615(a)(10))

**13. Incident Investigation** *Does the process include procedures for analyzing accidents and failures, including the selection of samples of the failed facility or equipment for laboratory examination, where appropriate, for the purpose of determining the causes of the failure and minimizing the possibility of recurrence?* (EP.ERG.INCIDENTANALYSIS.P) 192.617

**14. Incident Investigation** *Do records indicate actions initiated to analyze accidents and failures, including the collection of appropriate samples for laboratory examination to determine the causes of the failure and minimize the possibility of recurrence, in accordance with its procedures?* (EP.ERG.INCIDENTANALYSIS.R) 192.605(a) (192.617)

**15. Emergency Response Training** *Does the process include training of the appropriate operating personnel to assure they are knowledgeable of the emergency procedures and verifying that the training is effective?* (EP.ERG.TRAINING.P) 192.615(b)(2)

**16. Emergency Response Training** *Has the operator trained the appropriate operating personnel on emergency procedures and verified that the training was effective in accordance with its procedures?* (EP.ERG.TRAINING.R) 192.605(a) (192.615(b)(2))

**17. Emergency Response Performance** *Does the process include detailed steps for reviewing employee activities to determine whether the procedures were effectively followed in each emergency?* (EP.ERG.POSTEVTNREVIEW.P) 192.615(b)(3)

**18. Emergency Response Performance** *Do records indicate review of employee activities to determine whether the procedures were effectively followed in each emergency?* (EP.ERG.POSTEVTNREVIEW.R) 192.605(a) (192.615(b)(1);192.615(b)(3))

**19. Liaison with Public Officials** *Does the process include steps for establishing and maintaining liaison with appropriate fire, police and other public officials and utility owners?* (EP.ERG.LIAISON.P) 192.615(c) (192.615(c)(1);192.615(c)(2);192.615(c)(3);192.615(c)(4);192.616(c);ADB-05-03)

**20. Liaison with Public Officials** *Do records indicate liaisons established and maintained with appropriate fire, police and other public officials and utility owners in accordance with procedures?* (EP.ERG.LIAISON.R) 192.605(a) (192.615(c)(1);192.615(c)(2);192.615(c)(3);192.615(c)(4);192.616(c);ADB-05-03)

## Facilities and Storage - Facilities General

**1. Abandonment or Deactivation of Pipe and Facilities** *Does the process include adequate requirements for the abandonment and deactivation of pipelines and facilities?* (MO.GM.ABANDONPIPE.P) 192.605(b)(1) (192.727(a);192.727(b);192.727(c);192.727(d);192.727(e);192.727(f);192.727(g))

**2. Vault Inspection** *What are process requirements for inspecting vaults having a volumetric internal content  $\geq 200$  cubic feet (5.66 cubic meters) that house pressure regulating/limiting equipment?* (FS.FG.VAULTINSPECT.P) 192.605(b)(1) (192.749(a);192.749(b);192.749(c);192.749(d))

**3. Vault Inspection** *Do records document the adequacy of inspections of all vaults having an internal volume  $\geq 200$  cubic feet (5.66 cubic meters) that house pressure regulating/limiting equipment?* (FS.FG.VAULTINSPECT.R) 192.709(c) (192.749(a);192.749(b);192.749(c);192.749(d))

**4. Vault Inspection** *Are inspections of selected vaults with internal volume  $\geq 200$  cubic feet (5.66 cubic meters) housing pressure regulating/limiting equipment adequate?* (FS.FG.VAULTINSPECT.O) 192.749(a) (192.749(b);192.749(c);192.749(d))

## Gas Distribution Integrity Management - Plan Implementation

**1. Plan Implementation - Implement Date** *Was the plan written and implemented per the requirement of 192.1005 by 08/02/2011?* (GDIM.QA.PLANIMPLEMENT.P) 192.1005

**2. Plan Implementation - Data Sources** *Do the procedures identify or reference the appropriate sources used to determine certain characteristics (e.g., Design, Operating Conditions, Operating Environmental Factors) necessary to assess the threats and risks to the pipeline?* (GDIM.RA.SOURCES.P) 192.1007(a)(1)

## Gas Distribution Integrity Management - Knowledge of the System

**1. System Knowledge - Information Considered** *Do the procedures require the consideration of information gained from past design, operations, and maintenance (e.g., O&M activities, field surveys, One-Call system information, excavation damage, etc.)?* (GDIM.RA.INFORMATION.P) 192.1007(a)(2)

**2. System Knowledge - Gaps** *Does the plan contain procedures to identify additional information that is needed to fill gaps due to missing, inaccurate, or incomplete records?* (GDIM.RA.GAPS.P) 192.1007(a)(3)

**3. System Knowledge - Information Needed** *Do the procedures specify the means to collect the additional information needed to fill gaps due to missing, inaccurate, or incomplete records (e.g., O&M activities, field surveys, One-Call System, etc.)?* (GDIM.RA.INFONEEDS.P) 192.1007(a)(3)

**4. System Knowledge - Information Needed** *Does the plan list the additional information needed to fill gaps due to missing, inaccurate, or incomplete records?* (GDIM.RA.INFONEEDS.R) 192.1007(a)(3)

**5. System Knowledge - New Pipe Data** *Do the procedures require the capture and retention of data on any new pipeline installed?* (GDIM.RA.NEWPIPEDATA.P) 192.1007(a)(5)

**6. System Knowledge - New Pipe Data** *Does the data required for capture and retention include, at a minimum, the location where the new pipeline is installed and the material from which it is constructed?* (GDIM.RA.NEWPIPEDATA.R) 192.1007(a)(5)

**7. System Knowledge - Implementation** *Do records demonstrate implementation of the element "Knowledge of the System"?* (GDIM.RA.DEMOKNOWLEDGE.R) 192.1007(a)

**8. System Knowledge - Understanding** *Has the operator demonstrated an adequate understanding of the system?* (GDIM.RA.DEMOUNDERSTANDING.R) 192.1007(a)

## Gas Distribution Integrity Management - Identify Threats

**1. Identify Threats - Information Considered** *Did the operator consider the information that was reasonably available to identify existing and potential threats?* (GDIM.RA.INFOCONSIDERED.P) 192.1007(b)

**2. Identify Threats - Information Considered** *In identifying threats did the information considered include all of the required data and information sources?* (GDIM.RA.INFOCONSIDERED.R) 192.1007(b)

**3. Identify Threats - Outside Sources** *Do the procedures consider, in addition to the operator's own information, data from external sources (e.g. trade associations, government agencies, or other system operators, etc.) to assist in identifying potential threats?* (GDIM.RA.OUTSIDESOURCES.P) 192.1007(b)

**4. Identify Threats - Threats Considered** *In identifying threats, do the procedures include consideration of all of the required threat categories to each gas distribution pipeline?* (GDIM.RA.THREATCATEGORIES.P) 192.1007(b)

**5. Identify Threats - Implementation** *Do records demonstrate implementation of the element "Identify Threats"?* (GDIM.RA.IMPLEMENTTH.R) 192.1007(b)

## Gas Distribution Integrity Management - Evaluate and Rank Risk

**1. Rank Risk - Methodology** *Do the procedures contain the method(s) and/or a model used to determine the relative importance of each threat and estimate and rank the risks posed?* (GDIM.RA.RISKRANKING.P) 192.1007(c)

**2. Rank Risk - Threats Considered** *Do the procedures to evaluate and rank risk consider each applicable current and potential threat?* (GDIM.RA.THREATSCONSIDERED.P) 192.1007(c)

**3. Rank Risk - Likelihood** *Do the procedures to evaluate and rank risk consider the likelihood of failure associated with each threat?* (GDIM.RA.LIKELIHOOD.P) 192.1007(c)

**4. Rank Risk - Consequences** *Do the procedures to evaluate and rank risk consider the potential consequence of failure for all applicable threats?* (GDIM.RA.CONSEQUENCE.P) 192.1007(c)

**5. Rank Risk - System Subdivision** *If subdivision of system occurs, does the plan subdivide the system into regions with similar characteristics and for which similar actions are likely to be effective in reducing risk?* (GDIM.RA.SUBDIVIDE.R) 192.1007(c)

**6. Rank Risk - Results** *Are the results of the risk ranking supported by the risk evaluation model/method?* (GDIM.RA.RESULTS.R) 192.1007(c)

**7. Rank Risk - Validation** *Did the operator validate the results generated by the risk evaluation model/method?* (GDIM.RA.RESULTSVALIDATION.R) 192.1007(c)

**8. Rank Risk - Implementation** *Do records demonstrate implementation of the element "Evaluate and Rank Risk"?* (GDIM.RA.IMPLEMENTRR.R) 192.1007(c)

## Gas Distribution Integrity Management - Preventive and Mitigative Actions

**1. Measures to Reduce Risk - Identification** *Does the plan include procedures to identify when measures, beyond minimum code requirements specified outside of Part 192 Subpart P, are required to reduce risk?* (GDIM.PM.IDENTIFYMEASURES.P) 192.1007(d)

**2. Measures to Reduce Risk - Identification** *When measures, beyond minimum code requirements specified outside of Part 192 Subpart P, are required to reduce risk, does the plan identify the measures selected, how they will be implemented, and the risks they are addressing?* (GDIM.PM.IDENTIFYMEASURES.R) 192.1007(d)

**3. Measures to Reduce Risk - Leak Management** *Does the plan include an effective leak management program (unless all leaks are repaired when found)?* (GDIM.PM.LEAKMANAGEMENT.P) 192.1007(d)

**4. Measures to Reduce Risk - Implementation** *Do records demonstrate implementation of the measures, required by Part 192 Subpart P, to reduce risk?* (GDIM.PM.IMPLEMENTPM.R) 192.1007(d)

## Gas Distribution Integrity Management - Measure Performance and Evaluate Effectiveness

**1. Measure Performance - Baseline** *Does the plan contain procedures for how the operator established a baseline for each performance measure?* (GDIM.QA.PERFMEASUREBASELINE.P) 192.1007(e)

**2. Measure Performance - Baseline** *Does the plan establish a baseline for each performance measure?* (GDIM.QA.PERFMEASUREBASELINE.R) 192.1007(e)

**3. Measure Performance - Data Collection** *Does the operator have procedures to collect the data for each performance measure?* (GDIM.QA.PERFMEASUREDATA.P) 192.1007(e)

**4. Measure Performance - Monitoring** *Do the procedures require the operator to monitor each performance measure?* (GDIM.QA.PERFMEASUREMONITOR.P) 192.1007(e)

**5. Measure Performance - Measure Effectiveness** *When measures are required to reduce risk, does the plan provide/describe what type and/or what specific performance measures will be used to measure effectiveness?* (GDIM.QA.MEASUREEFFECTIVENESS.P) 192.1007(e)

**6. Measure Performance - Implementation** *Do records demonstrate implementation of the element "Measure Performance, Monitor Results, and Evaluate Effectiveness"?* (GDIM.QA.IMPLEMENTEV.R) 192.1007(e)

## Gas Distribution Integrity Management - Periodic Evaluation

**1. Periodic Evaluation - Requirements** *Do the procedures for periodic evaluation include all of the requirements of 192.1007(f)?* (GDIM.CA.PERIODICEVAL.P) 192.1007(f)

**2. Periodic Evaluation - Implementation** *Do records demonstrate implementation of the element "Periodic Evaluation and Improvement"?* (GDIM.CA.PERIODICEVAL.R) 192.1007(f)

## Gas Distribution Integrity Management - Reporting

**1. Report Results - Performance Measures** *Does the plan contain or reference procedures for reporting, on an annual basis, the four measures listed in 192.1007(e)(1)(i) through (e)(1)(iv) to PHMSA as part of the annual report required by 191.11 and the State regulatory authority?* (GDIM.RR.ANNUALREPORT.P) 192.1007(g)

**2. Report Results - Submittal** *Has the operator submitted the required reports?* (GDIM.RR.SUBMITREPORTS.R) 192.1007(g)

## Gas Distribution Integrity Management - Report Mechanical Fitting Failures

**1. Mechanical Fitting Failures - Information Collection** *Are there procedures to collect information necessary to comply with the reporting requirements of 192.1009?* (GDIM.RR.MECHANICALFITTING.P) 192.1009



## Gas Distribution Integrity Management - Records Required to be Kept

**1. Records - Requirements** *Are there procedures specifying which records demonstrating compliance with Subpart P will be maintained for at least 10 years?* (GDIM.QA.RECORDREQUIREMENTS.P) 192.1011

**2. Records - IM Plans** *Are there procedures specifying that copies of superseded integrity management plans will be maintained for at least 10 years?* (GDIM.QA.PLANRETENTION.P) 192.1011

**3. Records - Implementation** *Has the operator maintained the required records?* (GDIM.QA.RECORDREQUIREMENTS.R) 192.1011

## Gas Distribution Integrity Management - GDIM Implementation

**1. Issues Identified in Previous Integrity Management Inspections** *Have all issues raised in previous DIMP inspections been satisfactorily addressed?* (GDIM.QA.ISSUESIMPL.R) 192.1005

**2. Identify Threats - Outside Sources** *Has the operator identified information or data from external sources (e.g. trade associations, operator's consultants, government agencies, other operators, manufacturers, etc.) that may require re-evaluation of threats and risks?* (GDIM.RA.OUTSIDESOURCESIMPL.R) 192.1007(b)

**3. System Knowledge - Gaps** *Is missing or incomplete system information and data needed to fill knowledge gaps to assess existing and potential threats being collected?* (GDIM.RA.GAPSIMPL.R) 192.1007(a)(3)

**4. System Knowledge - Information Needed (Systems)** *Is missing or incomplete system information and data using the procedures prescribed in the DIMP plan being collected?* (GDIM.RA.SYSINFONEEDSIMPL.R) 192.1007(a)(3)

**5. System Knowledge - Information Needed (O&M)** *Has any new or missing information identified or acquired during normal operations, maintenance, and inspection activities been incorporated into the DIMP plan?* (GDIM.RA.OMINFONEEDSIMPL.R) 192.1007(a)(3)

**6. System Knowledge - New Pipe Data** *Have required data on any new pipeline installations since August 2, 2011 been captured (e.g., location, wall thickness/SDR, manufacturer, lot/production number)?* (GDIM.RA.NEWPIPEIMPL.R) 192.1007(a)(5)

**7. System Knowledge - Data Collection Forms** *Are data collection forms used in conjunction with the operator's DIMP plan being fully and accurately completed?* (GDIM.RA.DATAFORMIMPL.R) 192.1007(a)

**8. System Knowledge - SME Input** *If Subject Matter Experts (SMEs), is their documented knowledge and experience being appropriately used in the DIMP Program?* (GDIM.RA.SMEIMPL.R) 192.1007(a)

**9. System Knowledge - Understanding** *Do operator personnel in the field understand their responsibilities under the DIMP plan?* (GDIM.RA.DEMOUNDERSTANDINGIMPL.O) 192.1007(a)

**10. Identify Threats - Threats Considered (New Information)** *Has the operator acquired any new information relevant to system knowledge that may affect its threat identification?* (GDIM.RA.THREATCATEGORIESIMPL.R) 192.1007(b)

**11. Identify Threats - Information Considered (Changes)** *Have any changes occurred that require re-evaluation of threats and risks?* (GDIM.RA.INFOCONSIDEREDIMPL.R) 192.1007(b)

**12. Identify Threats - Implementation (Update)** *Since the last DIMP plan review by the regulatory agency, has the threat identification and risk assessment been updated based on newly acquired information or data relevant to system knowledge?* (GDIM.RA.IMPLEMENTTHUPDATEIMPL.R) 192.1007(c)

**13. Identify Threats - Implementation (DIMP Process)** *If the threat identification and risk evaluation and ranking have been modified, were the revisions made in accordance with the procedure in the DIMP plan?* (GDIM.RA.IMPLEMENTTHUPDATEPLANIMPL.R) 192.1007(c)

**14. Rank Risk - System Subdivision (Adequacy)** *Does the current subdivision process (grouping of materials, geographic areas, etc.) adequately meet the need to properly evaluate and rank the existing and potential threats to the integrity of the system? (GDIM.RA.SUBDIVIDEADEQIMPL.R) 192.1007(c)*

**15. Rank Risk - System Subdivision (Update)** *Have the system subdivisions within the risk evaluation and ranking been added to or modified since the last plan review by the regulatory agency? (GDIM.RA.SUBDIVIDEUPDATEIMPL.R) 192.1007(c)*

**16. Rank Risk - System Subdivision (DIMP)** *If system subdivisions have been added or modified, was it done in accordance with the procedures described in the DIMP plan? (GDIM.RA.SUBDIVIDEDIMPIMPL.R) 192.1007(c)*

**17. Rank Risk - System Subdivision (Result)** *If system subdivisions have been added or modified, did the new system subdivision result in modifications to the risk evaluation and ranking? (GDIM.RA.SUBDIVIDERESULTIMPL.R) 192.1007(c)*

**18. Measures to Reduce Risk - Implementation (Update)** *Does documentation reviewed demonstrate that measures to reduce risks per the DIMP plan are being implemented? (GDIM.PM.IMPLEMENTPMIMPL.R) 192.1007(d)*

**19. Measures to Reduce Risk - Implementation (Completion)** *Have any measures to reduce risks resulting in the elimination/mitigation of the associated identified threat been completed (e.g., pipe replacement program completed, etc.)? (GDIM.PM.IMPLEMENTPMCOMPLETEIMPL.R) 192.1007(d)*

**20. Measures to Reduce Risk - Implementation (Re-Evaluate)** *Have risks been re-evaluated and re-ranked because of the elimination/mitigation of an identified threat? (GDIM.PM.IMPLEMENTPMREEVALIMPL.R) 192.1007(d)*

**21. Measures to Reduce Risk - Implementation (Specific Risk)** *Does each implemented risk reduction measure identified in the DIMP plan address a specific risk or group of risks? (GDIM.PM.IMPLEMENTPMSPECIFRISKIMPL.R) 192.1007(d)*

**22. Measures to Reduce Risk - Leak Management** *Can the operator provide documentation to demonstrate that an effective leak management program is being implemented (answer "N/A" if all leaks are repaired when found)? (GDIM.PM.LEAKMANAGEMENTIMPL.R) 192.1007(d)*

**23. Measure Performance - Implementation (Data)** *Is data being collected for the required performance measures in 192.1007(e)?* (GDIM.QA.IMPLEMENTEVDATAIMPL.R) 192.1007(e)

**24. Measure Performance - Implementation (DIMP)** *Based on field observations and/or record reviews, is the data used to measure performance being accurately collected in accordance with the procedures in its DIMP plan?* (GDIM.QA.IMPLEMENTEVDATADIMPIMPL.R) 192.1007(e)

**25. Measure Performance - Implementation (Baseline)** *Is each performance measure being monitored from an established baseline?* (GDIM.QA.IMPLEMENTEVBASELINEIMPL.R) 192.1007(e)

**26. Measure Performance - Implementation (Specific Risk)** *Is each performance measure added since the DIMP plan was last updated tied to a specific risk reduction measure or group of measures?* (GDIM.QA.IMPLEMENTEVRISKIMPL.R) 192.1007(e)

**27. Periodic Evaluation - Implementation (Frequency)** *Have periodic evaluations of the DIMP plan been performed on the frequency specified in the plan? [If a periodic evaluation has not been required since plan implementation or the last inspection, mark questions 27-32 as "N/A".]* (GDIM.CA.PERIODICEVALFREQIMPL.R) 192.1007(f)

**28. Periodic Evaluation - Implementation (Requirements)** *Did the periodic evaluation include all required elements?* (GDIM.CA.PERIODICEVALREQTSIMPL.R) 192.1007(f)

**29. Periodic Evaluation - Implementation (High Risk)** *If any established performance measures indicated an increase in risk beyond an acceptable level (as established in the DIMP plan), were new risk reduction measures implemented along with their associated performance measures?* (GDIM.CA.PERIODICEVALHIRISKIMPL.R) 192.1007(f) (192.1007(e))

**30. Periodic Evaluation - Implementation (Risk Reduction Measures)** *If the periodic evaluation indicates that implemented measures to reduce risks are NOT effective, were risk reduction measures modified, deleted or added?* (GDIM.CA.PERIODICEVALRISKREDIMPL.R) 192.1007(f)

**31. Periodic Evaluation - Implementation (Performance Measures)** *Did the periodic evaluation indicate that the selected performance measures are assessing the effectiveness of risk reduction measures, and, if not, were performance measures modified, deleted or added?* (GDIM.CA.PERIODICEVALPRFMESIMPL.R) 192.1007(f)

**32. Periodic Evaluation - Implementation (DIMP Plan)** *Were procedures followed in conducting periodic evaluations and program improvements?* (GDIM.CA.PERIODICEVALDIMPIMPL.R) 192.1007(f)

**33. Report Results - Submittal** *Were Parts C and D of the PHMSA Distribution Annual Report (Form 7100.1-1) completed in the submission to PHMSA and the state regulatory authority having jurisdiction, if required, for each year since the last inspection?* (GDIM.RR.SUBMITREPORTSIMPL.R) 192.1007(g)

**34. Mechanical Fitting Failures - Information Collection (Data)** *Have accurate records been maintained documenting mechanical fitting failures that resulted in hazardous leaks?* (GDIM.RR.MECHANICALFITTINGDATAIMPL.R) 192.1009 (191.12)

**35. Mechanical Fitting Failures - Information Collection (Reporting)** *Did the operator report all mechanical fitting failures that resulted in a hazardous leak for the previous calendar year to PHMSA and State authorities, as appropriate, by March 15th of the next calendar year, and did the reports contain the information required by Department of Transportation Form PHMSA F-7100.1-2?* (GDIM.RR.MECHANICALFITTINGRPTIMPL.R) 192.1009 (191.12)

**36. Mechanical Fitting Failures - Information Collection (DIMP)** *Were procedure(s) followed for collecting the appropriate information and submitting PHMSA Form F-7100.1-2?* (GDIM.RR.MECHANICALFITTINGDIMPIMPL.O) 192.1009 (191.12)

**37. Records - Implementation** *Are records retained demonstrating compliance with Subpart P, as specified in its DIMP plan, for 10 years (or since 08/02/2011)?* (GDIM.QA.RECORDREQUIREMENTSIMPL.R) 192.1011

**38. Records - Implementation (Plan Retention)** *Were copies of superseded DIMP plans retained for 10 years (or since 08/02/2011)?* (GDIM.QA.RECORDREQTSRETAINIMPL.R) 192.1011

**39. Records - Implementation (DIMP)** *Were DIMP procedures followed as applicable to records retention?* (GDIM.QA.RECORDREQTSDIMPIMPL.R) 192.1011

**40. Deviation from Periodic Inspections - Approval** *Has approval been requested or received from PHMSA or the appropriate State Regulatory Authority for alternate (less strict than code) periodic inspection intervals? [If no, mark Subgroup GDIM.IMPL questions 40-44 "N/A".]* (GDIM.PI.PERIODICINSPDEVAPPRVIMPL.R) 192.1013(c)

**41. Deviation from Periodic Inspections - Implementation** *Have the periodic inspections been implemented and have they been conducted at the specified (approved) alternate intervals?* (GDIM.PI.PERIODICINSPDEVPERFRMIMPL.R) 192.1013(c)

**42. Deviation from Periodic Inspections - Requirements or Conditions** *Have all conditions been complied with that were required as part of the alternate inspection interval approval?* (GDIM.PI.PERIODICINSPDEVREQTIMPL.R) 192.1013(c)

**43. Deviation from Periodic Inspections - Performance Measures** *Do performance measure records indicate that deviation inspection resources were assigned to higher risk threat(s) and/or that that decreased inspection intervals contributed to an equal or greater overall level of safety has been achieved since the alternate inspection frequency was implemented?* (GDIM.PI.PERIODICINSPDEVPRFMESIMPL.R) 192.1013(c)

**44. Deviation from Periodic Inspections - Corrective Action** *If that an equal or greater overall level of safety has not been achieved, has corrective action been taken?* (GDIM.PI.PERIODICINSPDEVACTIONIMPL.R) 192.1013(c)

## Maintenance and Operations - Gas Pipeline Abnormal Operations

**1. Abnormal Operations (Review)** *Do records indicate periodic review of work done by operator personnel to determine the effectiveness of the abnormal operation processes and corrective action taken where deficiencies are found?* (MO.GOABNORMAL.ABNORMALREVIEW.R) 192.605(a) (192.605(c)(4))

## Maintenance and Operations - Gas Pipeline Class Location

**1. Change in Class Location Confirmation or Revision of MAOP** *Does the process include a requirement that the MAOP of a pipeline segment be confirmed or revised within 24 months whenever the hoop stress corresponding to the established MAOP is determined not to be commensurate with the existing class location?* (MO.GOCLASS.CLASSLOCATEREV.P) 192.605(b)(1) (192.611(a);192.611(b);192.611(c);192.611(d))

**2. Change in Class Location - Required Study** *Does the process include a requirement that the operator conduct a study whenever an increase in population density indicates a change in the class location of a pipeline segment operating at a hoop stress that is more than 40% SMYS?* (MO.GOCLASS.CLASSLOCATESTUDY.P) 192.605(b)(1) (192.609(a);192.609(b);192.609(c);192.609(d);192.609(e);192.609(f))

**3. Change in Class Location Required Study** *Do records indicate performance of the required study whenever the population along a pipeline increased or there was an indication that the pipe hoop stress was not commensurate with the present class location?* (MO.GOCLASS.CLASSLOCATESTUDY.R) 192.605(b)(1) (192.609(a);192.609(b);192.609(c);192.609(d);192.609(e);192.609(f))

## Maintenance and Operations - Gas Pipeline MAOP

**1. Maximum Allowable Operating Pressure Determination** *Does the process include requirements for determining the maximum allowable operating pressure for a pipeline segment in accordance with 192.619?* (MO.GOMAOP.MAOPDETERMINE.P) 192.605(b)(1) (192.619(a);192.619(b);192.621(a);192.621(b);192.623(a);192.623(b))

**2. Maximum Allowable Operating Pressure** *Do records indicate determination of the MAOP of pipeline segments in accordance with 192.619 and limiting of the operating pressure as required?* (MO.GOMAOP.MAOPDETERMINE.R) 192.619(a) (192.619(b);192.621(a);192.621(b);192.623(a);192.623(b))

**3. Normal Operations and Maintenance Procedures** *Does the process include requirements for starting up and shutting down any part of the pipeline in a manner to assure operation with the MAOP limits, plus the build-up allowed for operation of pressure-limiting and control devices?* (MO.GOMAOP.MAOPLIMIT.P) 192.605(a) (192.605(b)(5))

## Maintenance and Operations - Gas Pipeline Maintenance

**1. Abandonment or Deactivation of Pipe and Facilities** *Does the process include adequate requirements for the abandonment and deactivation of pipelines and facilities?* (MO.GM.ABANDONPIPE.P) 192.605(b)(1) (192.727(a);192.727(b);192.727(c);192.727(d);192.727(e);192.727(f);192.727(g))

**2. Abandonment or Deactivation of Pipeline and Facilities** *Do records indicate pipelines and facilities were abandoned or deactivated in accordance with requirements?* (MO.GM.ABANDONPIPE.R) 192.709(c) (192.727(a);192.727(b);192.727(c);192.727(d);192.727(e);192.727(f);192.727(g))

**3. Prevention of Accidental Ignition** *Are there processes for minimizing the danger of accidental ignition where gas constitutes a hazard of fire or explosion?* (MO.GM.IGNITION.P) 192.605(b)(1) (192.751(a);192.751(b);192.751(c))

**4. Prevention of Accidental Ignition** *Do records indicate personnel followed processes for minimizing the danger of accidental ignition where the presence of gas constituted a hazard of fire or explosion?* (MO.GM.IGNITION.R) 192.709 (192.751(a);192.751(b);192.751(c))

**5. Transmission Lines Record Keeping** *Do records indicate that records are maintained of each pipe/"other than pipe" repair, NDT required record, and (as required by subparts L or M) patrol, survey, inspection or test?* (MO.GM.RECORDS.R) 192.605(b)(1) (192.243(f);192.709(a);192.709(b);192.709(c))

**6. Valve Maintenance Distribution Lines** *Does the process include procedures for inspecting and partially operating each distribution system valve that might be required in an emergency at intervals not exceeding 15 months, but at least once each calendar year and for taking prompt remedial action to correct any valve found inoperable?* (MO.GM.DISTVALVEINSPECT.P) 192.605(b)(1) (192.747(a);192.747(b))

**7. Valve Maintenance Distribution Lines** *Do records indicate proper inspection of each distribution system valve that might be required in an emergency at intervals not exceeding 15 months, but at least once each calendar year, and prompt remedial action to correct any valve found inoperable?* (MO.GM.DISTVALVEINSPECT.R) 192.603(b) (192.747(a);192.747(b))

**8. Valve Maintenance Distribution Lines** *Is proper inspection being performed for each distribution system valve that might be required in an emergency, and prompt remedial action to correct any valves found inoperable?* (MO.GM.DISTVALVEINSPECT.O) 192.747(a) (192.747(b))



**9. Bell and Spigot Joints** *Does the process require that caulked bell and spigot joints be correctly sealed?*  
(MO.GM.BELLSPIGOTJOINT.P) 192.753(a) (192.753(b))

**10. Bell and Spigot Joints** *Do records indicate that caulked bell and spigot joints were correctly sealed?*  
(MO.GM.BELLSPIGOTJOINT.R) 192.603(b) (192.753(a);192.753(b))

**11. Bell and Spigot Joints** *Do records indicate that caulked bell and spigot joints were correctly sealed?*  
(MO.GM.BELLSPIGOTJOINT.O) 192.753(a) (192.753(b))

**12. Protecting Cast-Iron Pipeline** *Does the process require adequate protection for segments of a buried cast-iron pipeline for which support has been disturbed?* (MO.GM.CASTIRONPROTECT.P) 192.755(a) (192.755(b))

**13. Protecting Cast-Iron Pipeline** *Is adequate protection in place for segments of a buried cast-iron pipeline for which support has been disturbed?* (MO.GM.CASTIRONPROTECT.O) 192.755(a) (192.755(b))

**14. Holders** *Does the process include systematic and routine testing and inspection of pipe-type or bottle-type holders?*  
(MO.GM.HOLDER.P) 192.605(a) (192.605(b)(10))

**15. Maintenance of Equipment Used in Joining of Plastic Pipe by Heat Fusion** *Does the process require maintaining equipment used in joining of plastic pipe using heat fusion in accordance with the manufacturer's recommended practices or with written procedures that have been proven by test and experience to produce acceptable joints?*  
(MO.GM.EQUIPPLASTICJOINT.P) 192.605(b)(1) (192.756)

**16. Maintenance of Equipment Used in Joining of Plastic Pipe by Heat Fusion** *Do records indicate equipment used in joining plastic pipe by heat fusion was maintained in accordance with the manufacturer's recommended practices or with written procedures that have been proven by test and experience to produce acceptable joints?*  
(MO.GM.EQUIPPLASTICJOINT.R) 192.603(b) (192.756)

**17. Maintenance of Equipment Used in Joining of Plastic Pipe by Heat Fusion** *Is proper maintenance being performed on equipment used in joining plastic pipe by heat fusion in accordance with the manufacturer's recommended practices or with written procedures that have been proven by test and experience to produce acceptable joints?* (MO.GM.EQUIPPLASTICJOINT.O) 192.756

## Maintenance and Operations - Gas Pipeline Odorization

**1. Odorization of Gas** *Does the process ensure appropriate odorant levels are contained in its combustible gases in accordance with 192.625? (MO.GOODOR.ODORIZE.P) 192.605(b)(1) (192.625(a);192.625(b);192.625(c);192.625(d);192.625(e);192.625(f))*

**2. Odorization of Gas** *Do records indicate appropriate odorization of its combustible gases in accordance with its processes and conduct of the required testing to verify odorant levels met requirements? (MO.GOODOR.ODORIZE.R) 192.709(c) (192.625(a);192.625(b);192.625(c);192.625(d);192.625(e);192.625(f))*

**3. Odorization of Gas** *Is sampling of combustible gases adequate using an instrument capable of determining the percentage of gas in air at which it becomes readily detectable? (MO.GOODOR.ODORIZE.O) 192.625(a) (192.625(c);192.625(d);192.625(e);192.625(f))*

## Maintenance and Operations - Gas Pipeline Operations

**1. Continuing Surveillance** *Are there processes for performing continuing surveillance of pipeline facilities, and also for reconditioning, phasing out, or reducing the MAOP in a pipeline segment that is determined to be in unsatisfactory condition but on which no immediate hazard exists? (MO.GO.CONTSURVEILLANCE.P) 192.605(e) (192.613(a);192.613(b);192.703(b);192.703(c))*

**2. Pipeline Purging** *Does the process include requirements for purging of pipelines in accordance with 192.629? (MO.GO.PURGE.P) 192.605(b)(1) (192.629(a);192.629(b))*

**3. Pipeline Purging** *Are lines being purged in accordance with 192.629? (MO.GO.PURGE.O) 192.629(a) (192.629(b))*

**4. Normal Maintenance and Operations** *Does the process include a requirement to review the manual at intervals not exceeding 15 months, but at least once each calendar year?* (MO.GO.OMANNUALREVIEW.P) 192.605(a)

**5. Normal Maintenance and Operations** *Have annual reviews of the written procedures or processes in the manual been conducted as required?* (MO.GO.OMANNUALREVIEW.R) 192.605(a)

**6. Normal Operations and Maintenance Procedures - Review** *Does the process include requirements for periodically reviewing the work done by operator personnel to determine the effectiveness, and adequacy of the processes used in normal operations and maintenance and modifying the processes when deficiencies are found?* (MO.GO.OMEFFECTREVIEW.P) 192.605(a) (192.605(b)(8))

**7. Normal Operations and Maintenance Procedures - Review** *Do records indicate periodic review of the work done by operator personnel to determine the effectiveness, and adequacy of the processes used in normal operations and maintenance and modifying the processes when deficiencies are found?* (MO.GO.OMEFFECTREVIEW.R) 192.605(a) (192.605(b)(8))

**8. Normal Operations and Maintenance Procedures - History** *Does the process include requirements for making construction records, maps and operating history available to appropriate operating personnel?* (MO.GO.OMHISTORY.P) 192.605(a) (192.605(b)(3))

**9. Normal Operations and Maintenance Procedures - History** *Are construction records, maps and operating history available to appropriate operating personnel?* (MO.GO.OMHISTORY.R) 192.605(a) (192.605(b)(3))

**10. Safety Related Conditions** *Does the process include instructions enabling personnel who perform operation and maintenance activities to recognize conditions that may potentially be safety-related conditions?* (MO.GO.SRC.P) 192.605(a) (192.605(d);191.23(a))

**11. Customer Notification** *Is a customer notification process in place that satisfies the requirements of 192.16?* (MO.GO.CUSTNOTIFY.P) 192.13(c) (192.16(a);192.16(b);192.16(c);192.16(d))

**12. Customer Notification** *Do records indicate the customer notification process satisfies the requirements of 192.16?*  
(MO.GO.CUSTNOTIFY.R) 192.16(d) (192.16(a);192.16(b);192.16(c))

**13. EFV Installation** *Is there an adequate excess flow valve (EFV) installation and performance program in place?*  
(MO.GO.EFVINSTALL.P) 192.383(b) (192.381(a);192.381(b);192.381(c);192.381(d);192.381(e);192.383(a);192.383(c))

**14. Gas Odor Response** *Does the process require prompt response to the report of a gas odor inside or near a building?*  
(MO.GO.ODDOR.P) 192.605(a) (192.605(b)(11))

## Maintenance and Operations - Gas Pipeline Overpressure Protection

**1. Pressure Limiting and Regulating Stations Capacity of Relief Devices** *Does the process include procedures for ensuring that the capacity of each pressure relief device at pressure limiting stations and pressure regulating stations is sufficient?* (MO.GMOPP.PRESSREGCAP.P) 192.605(b)(1) (192.743(a);192.743(b);192.743(c))

**2. Pressure Limiting and Regulating Stations Capacity of Relief Devices** *Do records indicate testing or review of the capacity of each pressure relief device at each pressure limiting station and pressure regulating station as required?*  
(MO.GMOPP.PRESSREGCAP.R) 192.709(c) (192.743(a);192.743(b);192.743(c))

**3. Pressure Limiting and Regulating Stations Inspection and Testing** *Does the process include procedures for inspecting and testing each pressure limiting station, relief device, and pressure regulating station and their equipment?* (MO.GMOPP.PRESSREGTEST.P) 192.605(b)(1) (192.739(a);192.739(b))

**4. Pressure Limiting and Regulating Stations Inspection and Testing** *Do records indicate inspection and testing of pressure limiting, relief devices, and pressure regulating stations?* (MO.GMOPP.PRESSREGTEST.R) 192.709(c) (192.739(a);192.739(b))

**5. Pressure Limiting and Regulating Stations Inspection and Testing** *Are field or bench tests or inspections of regulating stations, pressure limiting stations or relief devices adequate?* (MO.GMOPP.PRESSREGTEST.O) 192.739(a) (192.739(b))

**6. Pressure Telemetry or Recording Gauges** *Does the process require telemetry or recording gauges be utilized as required for distribution systems?* (MO.GMOPP.PRESSREGMETER.P) 192.605(b)(1) (192.741(a);192.741(b);192.741(c))

**7. Pressure Telemetry or Recording Gauges** *Are telemetry or recording gauges properly utilized as required for distribution systems?* (MO.GMOPP.PRESSREGMETER.O) 192.741(a) (192.741(b);192.741(c))

**8. Transmission Lines Record Keeping** *Do records indicate that records are maintained of each pipe/"other than pipe" repair, NDT required record, and (as required by subparts L or M) patrol, survey, inspection or test?* (MO.GM.RECORDS.R) 192.605(b)(1) (192.243(f);192.709(a);192.709(b);192.709(c))

## Maintenance and Operations - ROW Markers, Patrols, Leakage Survey and Monitoring

**1. Transmission Patrolling Requirements** *Does the process adequately cover the requirements for transmission line patrolling the ROW and conditions reported?* (MO.RW.TRANSPATROL.P) 192.705(a) (192.705(b);192.705(c))

**2. Transmission Patrolling Requirements** *Do records indicate that transmission line ROW surface conditions have been patrolled as required?* (MO.RW.TRANSPATROL.R) 192.709(c) (192.705(a);192.705(b);192.705(c))

**3. Transmission Leakage Surveys** *Does the process require transmission leakage surveys to be conducted?* (MO.RW.TRANSLEAKAGE.P) 192.706 (192.706(a);192.706(b))

**4. Transmission Leakage Surveys** *Do records indicate transmission leakage surveys conducted as required?* (MO.RW.TRANSLEAKAGE.R) 192.709(c) (192.706;192.706(a);192.706(b))

**5. Business District Definition** *Do the procedures define a "Business District"?* (MO.RW.BUSINESSDIST.P) 192.723(b)(1) (192.721(b)(1);192.723(a);192.613)

**6. Business District Definition** *Do the records clearly identify the areas of operator's distribution system that are considered Business Districts?* (MO.RW.BUSINESSDIST.R) 192.723(b)(1) (192.721(b)(1);192.723(a);192.613)

**7. Business District Definition** *Do field observations indicate Business Districts are properly identified?* (MO.RW.BUSINESSDIST.O) 192.723(b)(1) (192.721(b)(1);192.723(a);192.613)

**8. Distribution Patrolling** *Does the process require distribution system patrolling to be conducted?* (MO.RW.DISTPATROL.P) 192.721(a) (192.721(b))

**9. Distribution Patrolling** *Do records indicate distribution patrolling was conducted as required?* (MO.RW.DISTPATROL.R) 192.603(b) (192.721(a);192.721(b))

**10. Distribution Leakage Surveys** *Does the process require distribution system leakage surveys to be conducted?* (MO.RW.DISTLEAKAGE.P) 192.723(a) (192.723(b))

**11. Distribution Leakage Surveys** *Do records indicate distribution leakage surveys were conducted as required?* (MO.RW.DISTPATROLLEAKAGE.R) 192.603(b) (192.723(a);192.723(b))

**12. ROW Markers Requirements** *Does the process adequately cover the requirements for placement of ROW markers?* (MO.RW.ROWMARKER.P) 192.707(a) (192.707(b);192.707(d);CGA Best Practices, v4.0, Practice 2-5;CGA Best Practices, v4.0, Practice 4-20)

**13. Placement of ROW Markers** *Are line markers placed and maintained as required?* (MO.RW.ROWMARKER.O) 192.707(a) (192.707(b);192.707(d);CGA Best Practices, v4.0, Practice 2-5;CGA Best Practices, v4.0, Practice 4-20)

**14. Placement of ROW Markers** *Are line markers placed and maintained as required for above ground pipelines?* (MO.RW.ROWMARKERABOVE.O) 192.707(c) (CGA Best Practices, v4.0, Practice 2-5;CGA Best Practices, v4.0, Practice 4-20)

## Maintenance and Operations - Uprating

**1. Maximum Allowable Operating Pressure Increase** *Do records indicate that increases in MAOP of pipeline were determined in accordance with 192.553?* (MO.GOUPRATE.MAOPINCREASE.R) 192.553(a) (192.553(b);192.553(c))

**2. Maximum Allowable Operating Pressure Increase Limit** *Do records indicate that increases in MAOP are limited in accordance with 192.619 and 192.621?* (MO.GOUPRATE.MAOPINCREASELIMIT.R) 192.553(b) (192.553(c);192.553(d);192.557(a))

**3. Maximum Allowable Operating Pressure Increase Preparation** *Do records indicate that increases in MAOP were preceded by the actions specified in 192.557?* (MO.GOUPRATE.MAOPINCREASEPREP.R) 192.553(b) (192.553(c);192.553(a);192.557(b);192.557(c))

**4. Maximum Allowable Operating Pressure Increase - Cast or Ductile Iron** *Do records indicate that requirements were followed for increasing the MAOP for cast iron or ductile iron pipe where records are inadequate for evaluating the level of safety of the pipeline when operating at the proposed increased pressure?* (MO.GOUPRATE.MAOPINCREASECASTDUCTILE.R) 192.553(b) (192.553(c);192.557(d))

## Master Meter and Small LPG Distribution Integrity Management - Plan Implementation

**1. Plan Implementation - Implement Date** *Was the plan written and implemented per the requirement of 192.1015 by 08/02/2011?* (MMLPGIM.QA.PLANIMPLEMENT.P) 192.1015(a)

## Master Meter and Small LPG Distribution Integrity Management - Knowledge of the System

**1. System Knowledge - Information Considered** *Does the plan include an explanation of the mechanisms or procedures to address how the operator will demonstrate knowledge of its pipeline which, to the extent known, should include the approximate location and material of its pipeline?* (MMLPGIM.RA.INFORMATION.P) 192.1015(b)(1)

**2. System Knowledge - Gaps** *Does the plan include an explanation of the mechanisms or procedures to identify additional information that is needed to fill gaps due to missing, inaccurate, or incomplete records?* (MMLPGIM.RA.GAPS.P) 192.1015(b)(1)

**3. System Knowledge - Information Needed** *Do the written mechanisms or procedures specify the means to collect the additional information over time through normal activities conducted on the pipeline (e.g. design, construction, operations or maintenance activities)?* (MMLPGIM.RA.INFONEEDS.P) 192.1015(b)(1)

**4. System Knowledge - Information Needed** *Does the plan list the additional information needed to fill gaps due to missing, inaccurate, or incomplete records?* (MMLPGIM.RA.INFONEEDS.R) 192.1015(b)(1)

**5. System Knowledge - New Pipe Data** *Do the written mechanisms or procedures require the capture and retention of data on any new pipeline installed?* (MMLPGIM.RA.NEWPIPEDATA.P) 192.1015(c)(3)

**6. System Knowledge - New Pipe Data** *Does the captured and retained data on any new pipeline include, at a minimum, the location where the new pipeline is installed and the material from which it is constructed?* (MMLPGIM.RA.NEWPIPEDATA.R) 192.1015(c)(3)

**7. System Knowledge - Understanding** *Has the operator demonstrated an adequate understanding of the system, which, to the extent known, should include the approximate location and material of its pipelines?* (MMLPGIM.RA.DEMOUNDERSTANDING.R) 192.1015(b)(1)



## Master Meter and Small LPG Distribution Integrity Management - Identify Threats

**1. Identify Threats - Information Considered** *Did the operator consider the information that was reasonably available to identify existing and potential threats?* (MMLPGIM.RA.INFOCONSIDERED.R) 192.1015(b)(2)

**2. Identify Threats - Threats Considered** *In identifying threats, do the written mechanisms or procedures include consideration of all of the required categories of threats to each gas distribution pipeline?* (MMLPGIM.RA.THREATCATEGORIES.P) 192.1015(b)(2)

**3. Identify Threats - Implementation** *Do records demonstrate implementation of the element "Identify Threats"?* (MMLPGIM.RA.IMPLEMENTTH.R) 192.1015(b)(2)

## Master Meter and Small LPG Distribution Integrity Management - Evaluate and Rank Risk

**1. Rank Risk - Methodology** *Do the written mechanisms or procedures contain the method(s) and/or a model used to determine the relative importance of each threat and estimate and rank the risks posed?* (MMLPGIM.RA.RISKRANKING.P) 192.1015(b)(3)

**2. Rank Risk - Validation** *Were the results generated by the risk evaluation model/method validated?* (MMLPGIM.RA.RESULTSVALIDATION.R) 192.1015(b)(3)

**3. Rank Risk - Implementation** *Do records demonstrate implementation of the element "Evaluate and Rank Risk"?* (MMLPGIM.RA.IMPLEMENTRR.R) 192.1015(b)(3)

## Master Meter and Small LPG Distribution Integrity Management - Preventive and Mitigative Actions

**1. Measures to Reduce Risk - Identification** *Do the written mechanisms or procedures identify when measures, beyond minimum code requirements specified outside of Part 192 Subpart P, are required to reduce risk?* (MMLPGIM.PM.IDENTIFYMEASURES.P) 192.1015(b)(4)

**2. Measures to Reduce Risk - Identification** *When measures, beyond minimum code requirements specified outside of Part 192 Subpart P, are required to reduce risk, does the plan identify the measures selected, how they will be implemented, and the risks they are addressing?* (MMLPGIM.PM.IDENTIFYMEASURES.R) 192.1015(b)(4)

**3. Measures to Reduce Risk - Implementation** *Do records demonstrate implementation of those measures to reduce risk required by Part 192 Subpart P?* (MMLPGIM.PM.IMPLEMENTPM.R) 192.1015(b)(4)

## Master Meter and Small LPG Distribution Integrity Management - Measure Performance and Evaluate Effectiveness

**1. Measure Performance - Monitoring** *Does the plan contain written mechanisms or procedures for how the operator monitors the performance measure "number of leaks eliminated or repaired on its pipeline and their causes"?* (MMLPGIM.QA.PERFMEASUREMONITOR.P) 192.1015(b)(5)

**2. Measure Performance - Implementation** *Did the operator monitor the performance measure "number of leaks eliminated or repaired on its pipeline and their causes"?* (MMLPGIM.QA.PERFMEASUREMONITOR.R) 192.1015(b)(5)

## Master Meter and Small LPG Distribution Integrity Management - Periodic Evaluation

**1. Periodic Evaluation - Evaluation Period** *Do the written mechanisms or procedures provide for determination of the appropriate period for conducting IM program evaluations based on the complexity of its pipeline and changes in factors affecting the risk of failure, not to exceed 5 years?* (MMLPGIM.CA.EVALUATIONPERIOD.P) 192.1015(b)(6)

**2. Periodic Evaluation - Performance Monitoring** *Do the written mechanisms or procedures consider the results of the performance monitoring in the periodic IM program evaluation?* (MMLPGIM.CA.PERIODICEVALUATION.P) 192.1015(b)(6) (192.1015(b)(5))

**3. Periodic Evaluation - Implementation** *Do records demonstrate implementation of the element "Periodic Evaluation and Improvement"?* (MMLPGIM.CA.PERIODICEVALUATION.R) 192.1015(b)(6) (192.1015(b)(5))

## **Master Meter and Small LPG Distribution Integrity Management - Records Required to be Kept**

**1. Records - IM Plans** *Are there written mechanisms or procedures specifying that a written IM plan in accordance with 192.1015, including superseded IM plans, will be maintained for at least 10 years?* (MMLPGIM.QA.PLANRETENTION.P) 192.1015(c)(1)

**2. Records - Requirements** *Are there written mechanisms or procedures specifying that documents demonstrating compliance to support threat identification will be maintained for at least 10 years?* (MMLPGIM.QA.THREATIDRECORDS.P) 192.1015(c)(2)

**3. Records - System Records** *Are there written mechanisms or procedures specifying that documentation will be maintained for at least 10 years showing the location and material of all pipe and appurtenances that are installed after the effective date of the operator's IM program and, to the extent known, the location and material of all pipe and appurtenances that were existing on the effective date of the operator's program?* (MMLPGIM.QA.SYSTEMRECORDS.P) 192.1015(c)(3)

**4. Records - Implementation** *Has the operator maintained the required records?* (MMLPGIM.QA.RECORDREQUIREMENTS.R) 192.1015(c)

## Public Awareness and Damage Prevention - Damage Prevention

**1. Damage Prevention Program** *Is a damage prevention program approved and in place?* (PD.DP.PDPROGRAM.P) 192.614(a)

**2. Participation in Qualified One Call Systems** *Does the process require participation in qualified one-call systems?* (PD.DP.ONECALL.P) 192.614(b)

**3. Construction Marking** *Does the process require marking proposed excavation sites to the Common Ground Alliance's (CGA) Best Practices or the use of more stringent and accurate requirements?* (PD.DP.EXCAVATEMARK.P) 192.614(c)(5)

**4. Documented Damage Prevention Program - TPD** *Does the process specify how reports of Third-Party Activity and names of associated contractors or excavators are input back into the mail-outs and communications with excavators along the system?* (PD.DP.TPD.P) 192.614(c)(1)

**5. Documented Damage Prevention Program - TPD/One Call** *Does the process specify how reports of TPD are checked against One-Call tickets?* (PD.DP.TPDONECALL.P) 192.614(c)(3)

**6. Participation in Qualified One Call Systems** *Observe operator process a "One Call" ticket.* (PD.DP.ONECALL.O) 192.614(c)(3)

**7. Damage Prevention Program** *Does the damage prevention program meet minimum requirements specified in 192.614(c)?* (PD.DP.PDPROGRAM.R) 192.614(c)

## Public Awareness and Damage Prevention - Public Awareness

**1. Public Education Program** *Has the continuing public education (awareness) program been established as required?* (PD.PA.PROGRAM.P) 192.616(a) (192.616(h))

**2. Management Support of Public Awareness Program** *Does the operator's program documentation demonstrate management support?* (PD.PA.MGMTSUPPORT.P) 192.616(a) (API RP 1162 Section 2.5; API RP 1162 Section 7.1)

**3. Asset Identification** *Does the program clearly identify the specific pipeline systems and facilities to be included in the program, along with the unique attributes and characteristics of each?* (PD.PA.ASSETS.P) 192.616(b) (API RP 1162 Section 2.7 Step 4)

**4. Audience Identification** *Does the program establish methods to identify the individual stakeholders in the four affected stakeholder audience groups: (1) affected public, (2) emergency officials, (3) local public officials, and (4) excavators, as well as affected municipalities, school districts, businesses, and residents?* (PD.PA.AUDIENCEID.P) 192.616(d) (192.616(e); 192.616(f); API RP 1162 Section 2.2; API RP 1162 Section 3)

**5. Audience Identification** *Do records identify the individual stakeholders in the four affected stakeholder audience groups: (1) affected public, (2) emergency officials, (3) local public officials, and (4) excavators, as well as affected municipalities, school districts, businesses, and residents to which it sends public awareness materials and messages?* (PD.PA.AUDIENCEID.R) 192.616(d) (192.616(e); 192.616(f); API RP 1162 Section 2.2; API RP 1162 Section 3)

**6. Messages, Delivery Methods, and Frequencies** *Does the program define the combination of messages, delivery methods, and delivery frequencies to comprehensively reach all affected stakeholder audiences in all areas where gas is transported?* (PD.PA.MESSAGES.P) 192.616(c) (API RP 1162 Section 3; API RP 1162 Section 4; API RP 1162 Section 5)

**7. Consideration of Supplemental Enhancements** *Were relevant factors considered to determine the need for supplemental public awareness program enhancements for each stakeholder audience, as described in API RP 1162?* (PD.PA.SUPPLEMENTAL.P) 192.616(c) (API RP 1162 Section 6.2)

**8. Educational Provisions** *Did delivered messages specifically include provisions to educate the public, emergency officials, local public officials, and excavators on: (1) Use of a one-call notification system prior to excavation and other damage prevention activities; (2) Possible hazards associated with unintended releases from a gas pipeline facility; (3) Physical indications of a possible release; (4) Steps to be taken for public safety in the event of a gas pipeline release; and (5) Procedures to report such an event?* (PD.PA.EDUCATE.R) 192.616(d) (192.616(f))

**9. Messages on Pipeline Facility Locations** *Were messages developed and delivered to advise affected municipalities, school districts, businesses, and residents of pipeline facility locations?* (PD.PA.LOCATIONMESSAGE.R) 192.616(e) (192.616(f))

**10. Baseline Message Delivery Frequency** *Did the delivery of materials and messages meet or exceed the baseline delivery frequencies specified in API RP 1162, Table 2-1 through Table 2.3?* (PD.PA.MESSAGEFREQUENCY.R) 192.616(c) (API RP 1162 Table 2-1; API RP 1162 Table 2-2; API RP 1162 Table 2-3)

**11. Liaison with Public Officials** *Do records indicate liaisons established and maintained with appropriate fire, police and other public officials and utility owners in accordance with procedures?* (EP.ERG.LIAISON.R) 192.605(a) (192.615(c)(1); 192.615(c)(2); 192.615(c)(3); 192.615(c)(4); 192.616(c); ADB-05-03)

**12. Other Languages** *Does the program require that materials and messages be provided in other languages commonly understood by a significant number and concentration of non-English speaking populations in the operator's areas?* (PD.PA.LANGUAGE.P) 192.616(g) (API RP 1162 Section 2.3.1)

**13. Other Languages** *Were materials and messages developed and delivered in other languages commonly understood by a significant number and concentration of non-English speaking populations in the operator's areas?* (PD.PA.LANGUAGE.R) 192.616(g) (API RP 1162 Section 2.3.1)

**14. Evaluation Plan** *Does the program include a process that specifies how program implementation and effectiveness will be periodically evaluated?* (PD.PA.EVALPLAN.P) 192.616(i) (192.616(c); API RP 1162 Section 8; API RP 1162 Appendix E)

**15. Evaluate Program Implementation** *Has an audit or review of the operator's program implementation been performed annually since the program was developed?* (PD.PA.EVALIMPL.R) 192.616(c) (192.616(i); API RP 1162 Section 8.3)

**16. Acceptable Methods for Program Implementation Audits** *Was one or more of the three acceptable methods (i.e., internal assessment, 3rd-party contractor review, or regulatory inspections) used to complete the annual audit or review of program implementation?* (PD.PA.AUDITMETHODS.R) 192.616(c) (192.616(i); API RP 1162 Section 8.3)

**17. Program Changes and Improvements** *Were changes made to improve the program and/or the implementation process based on the results and findings of the annual audit(s)?* (PD.PA.PROGRAMIMPROVE.R) 192.616(c) (API RP 1162 Section 8.3)

**18. Evaluating Program Effectiveness** *Have effectiveness evaluation(s) of the program been performed for all stakeholder groups in all notification areas along all systems covered by the program?* (PD.PA.EVALEFFECTIVENESS.R) 192.616(c) (API RP 1162 Section 8.4)

**19. Measure Program Outreach** *In evaluating effectiveness, was actual program outreach for each stakeholder audience tracked?* (PD.PA.MEASUREOUTREACH.R) 192.616(c) (API RP 1162 Section 8.4.1)

**20. Measure Understandability of Message Content** *In evaluating program effectiveness, was the percentage of each stakeholder audience that understood and retained the key information from the messages determined?* (PD.PA.MEASUREUNDERSTANDABILITY.R) 192.616(c) (API RP 1162 Section 8.4.2)

**21. Measure Desired Stakeholder Behavior** *In evaluating program effectiveness, was evaluation made of whether appropriate preventive, response, and mitigative behaviors were understood and likely to be exhibited?* (PD.PA.MEASUREBEHAVIOR.R) 192.616(c) (API RP 1162 Section 8.4.3)

**22. Measure Bottom-Line Results** *Were bottom-line results of the program measured by tracking third-party incidents and consequences including: (1) near misses, (2) excavation damages resulting in pipeline failures, (3) excavation damages that do not result in pipeline failures?* (PD.PA.MEASUREBOTTOM.R) 192.616(c) (API RP 1162 Section 8.4.4)

**23. Program Changes** *Were needed changes and/or modifications to the program identified and documented based on the results and findings of the program effectiveness evaluations?* (PD.PA.CHANGES.R) 192.616(c) (API RP 1162 Section 2.7 (Step 12);API RP 1162 Section 8.5)

**24. Master Meter and Petroleum Gas Systems** *Does the public awareness program for a master meter or petroleum gas system meet the requirements of Part 192?* (PD.PA.MSTRMETER.P) 192.616(j) (192.616(h))

**25. Master Meter and Petroleum Gas Systems** *Do records indicate the public awareness program for a master meter or petroleum gas system operator has met the requirements of Part 192?* (PD.PA.MSTRMETER.R) 192.616(j) (192.616(h);API RP 1162 Section 2.7 (Step 12);API RP 1162 Section 8.5)

## Public Awareness and Damage Prevention - ROW Markers, Patrols, Leakage Survey and Monitoring

**1. Transmission Patrolling Requirements** *Does the process adequately cover the requirements for transmission line patrolling the ROW and conditions reported?* (MO.RW.TRANSPATROL.P) 192.705(a) (192.705(b);192.705(c))

**2. Transmission Patrolling Requirements** *Do records indicate that transmission line ROW surface conditions have been patrolled as required?* (MO.RW.TRANSPATROL.R) 192.709(c) (192.705(a);192.705(b);192.705(c))

**3. Transmission Leakage Surveys** *Does the process require transmission leakage surveys to be conducted?* (MO.RW.TRANSLEAKAGE.P) 192.706 (192.706(a);192.706(b))

**4. Transmission Leakage Surveys** *Do records indicate transmission leakage surveys conducted as required?* (MO.RW.TRANSLEAKAGE.R) 192.709(c) (192.706;192.706(a);192.706(b))

**5. Distribution Patrolling** *Does the process require distribution system patrolling to be conducted?* (MO.RW.DISTPATROL.P) 192.721(a) (192.721(b))

**6. Distribution Patrolling** *Do records indicate distribution patrolling was conducted as required?* (MO.RW.DISTPATROL.R) 192.603(b) (192.721(a);192.721(b))

**7. Distribution Leakage Surveys** *Does the process require distribution system leakage surveys to be conducted?* (MO.RW.DISTLEAKAGE.P) 192.723(a) (192.723(b))

**8. Distribution Leakage Surveys** *Do records indicate distribution leakage surveys were conducted as required?* (MO.RW.DISTPATROLLEAKAGE.R) 192.603(b) (192.723(a);192.723(b))

**9. ROW Markers Requirements** *Does the process adequately cover the requirements for placement of ROW markers?* (MO.RW.ROWMARKER.P) 192.707(a) (192.707(b);192.707(d);CGA Best Practices, v4.0, Practice 2-5;CGA Best Practices, v4.0, Practice 4-20)



**10. Placement of ROW Markers** *Are line markers placed and maintained as required?* (MO.RW.ROWMARKER.O) 192.707(a) (192.707(b);192.707(d);CGA Best Practices, v4.0, Practice 2-5;CGA Best Practices, v4.0, Practice 4-20)

**11. Placement of ROW Markers** *Are line markers placed and maintained as required for above ground pipelines?* (MO.RW.ROWMARKERABOVE.O) 192.707(c) (CGA Best Practices, v4.0, Practice 2-5;CGA Best Practices, v4.0, Practice 4-20)

## Reporting - Regulatory Reporting (Traditional)

**1. Annual Report Records** *Have complete and accurate Annual Reports been submitted?* (RPT.RR.ANNUALREPORT.R) 191.11(a)

**2. Immediate Reporting: Incidents** *Is there a process to immediately report incidents to the National Response Center?* (RPT.RR.IMMEDREPORT.P) 191.5(b) (191.7(a);191.7(d))

**3. Immediate Reporting: Incidents** *Do records indicate immediate notifications of incidents were made in accordance with 191.5?* (RPT.RR.IMMEDREPORT.R) 191.5(a) (191.7(a);191.7(d))

**4. Incident Reports** *Does the process require preparation and filing of an incident report as soon as practicable but no later than 30 days after discovery of a reportable incident?* (RPT.RR.INCIDENTREPORT.P) 191.9(a)

**5. Mechanical Fitting Failures - Information Collection (Data)** *Have accurate records been maintained documenting mechanical fitting failures that resulted in hazardous leaks?* (GDIM.RR.MECHANICALFITTINGDATAIMPL.R) 192.1009 (191.12)

**6. Supplemental Incident Reports** *Does the process require preparation and filing of supplemental incident reports?* (RPT.RR.INCIDENTREPORTSUPP.P) 191.9(b)

**7. Incident Reports** *Do records indicate reportable incidents were identified and reports were submitted to DOT on Form 7100.1 within the required time frame?* (RPT.RR.INCIDENTREPORT.R) 191.9(a)

**8. Supplemental Incident Reports** *Do records indicate accurate supplemental incident reports were filed and within the required timeframe?* (RPT.RR.INCIDENTREPORTSUPP.R) 191.9(b)

**9. Safety Related Condition Reports** *Do the procedures require reporting of safety-related conditions?* (RPT.RR.SRCR.P) 192.605(a) (191.23(a);191.23(b);191.25(a);191.25(c))

**10. Safety Related Condition Reports** *Do records indicate safety-related condition reports were filed as required?* (RPT.RR.SRCR.R) 191.23(a) (191.23(b);191.25(a);191.25(c))

**11. National Registry of Pipeline and LNG Operators (OPID)** *Does the process require the obtaining, and appropriate control, of Operator Identification Numbers (OPIDs), including changes in entity, acquisition/divestiture, and construction/update/uprate?* (RPT.RR.OPID.P) 191.22(a) (191.22(c);191.22(d))

**12. National Registry of Pipeline and LNG Operators (OPID)** *Do records indicate appropriate control of Operator Identification Numbers (OPIDs), including changes in entity, acquisition/divestiture, and construction/update/uprate, and the National Registry of Pipeline and LNG Operators has been notified of applicable changes?* (RPT.RR.OPID.R) 191.22(a) (191.22(c);191.22(d))

## Time-Dependent Threats - Atmospheric Corrosion

**1. Atmospheric Corrosion** *Does the process give adequate guidance identifying atmospheric corrosion and for protecting above ground pipe from atmospheric corrosion?* (TD.ATM.ATMCORRODE.P) 192.605(b)(2) (192.479(a);192.479(b);192.479(c))

**2. Atmospheric Corrosion Monitoring** *Does the process give adequate instruction for the inspection of aboveground pipeline segments, including inside meter and pressure regulator installations, for atmospheric corrosion?* (TD.ATM.ATMCORRODEINSP.P) 192.605(b)(2) (192.481(a);192.481(b);192.481(c))

**3. Atmospheric Corrosion Monitoring** *Do records document inspection of aboveground pipe for atmospheric corrosion?* (TD.ATM.ATMCORRODEINSP.R) 192.491(c) (192.481(a);192.481(b);192.481(c))

**4. Atmospheric Corrosion Monitoring** *Do field observations confirm pipe exposed to atmospheric corrosion is protected?* (TD.ATM.ATMCORRODEINSP.O) 192.481(b) (192.481(c);192.479(a);192.479(b);192.479(c))

## Time-Dependent Threats - External Corrosion - CP Monitoring

**1. Rectifier or other Impressed Current Sources** *Do records document details of electrical checks of sources of rectifiers or other impressed current sources?* (TD.CPMONITOR.CURRENTTEST.R) 192.491(c) (192.465(b))

**2. Cathodic Protection Monitoring Criteria** *Are methods used for taking CP monitoring readings that allow for the application of appropriate CP monitoring criteria?* (TD.CPMONITOR.MONITORCRITERIA.O) 192.465(a) (192.463(b);192.463(c);192.463(a))

**3. Cathodic Protection Monitoring** *Does the process adequately describe how to monitor CP that has been applied to pipelines?* (TD.CPMONITOR.TEST.P) 192.605(b)(2) (192.465(a))

**4. Cathodic Protection Monitoring** *Do records adequately document cathodic protection monitoring tests have occurred as required?* (TD.CPMONITOR.TEST.R) 192.491(c) (192.465(a))

**5. Rectifiers or other Impressed Current Sources** *Does the process give sufficient details for making electrical checks of rectifiers or impressed current sources?* (TD.CPMONITOR.CURRENTTEST.P) 192.605(b)(2) (192.465(b))

**6. Rectifier or other Impressed Current Sources** *Do field observations confirm impressed current sources are properly maintained and are functioning properly?* (TD.CPMONITOR.CURRENTTEST.O) 192.465(b)

**7. Bonds, Diodes and Reverse Current Switches** *Does the process give sufficient details for making electrical checks of interference bonds, diodes, and reverse current switches?* (TD.CPMONITOR.REVCURRENTTEST.P) 192.605(b)(2) (192.465(c))

**8. Bonds, Diodes and Reverse Current Switches** *Do records document details of electrical checks interference bonds, diodes, and reverse current switches?* (TD.CPMONITOR.REVCURRENTTEST.R) 192.491(c) (192.465(c))

**9. Correction of Corrosion Control Deficiencies** *Does the process require that the operator promptly correct any identified deficiencies in corrosion control?* (TD.CPMONITOR.DEFICIENCY.P) 192.605(b)(2) (192.465(d))

**10. Correction of Corrosion Control Deficiencies** *Do records adequately document actions taken to correct any identified deficiencies in corrosion control?* (TD.CPMONITOR.DEFICIENCY.R) 192.491(c) (192.465(d))

**11. Test Stations** *Does the process contain provisions to assure that each pipeline has sufficient test stations or other contact points to determine the adequacy of cathodic protection?* (TD.CPMONITOR.TESTSTATION.P) 192.469

**12. Test Stations** *Do records identify the location of test stations and show a sufficient number of test stations?* (TD.CPMONITOR.TESTSTATION.R) 192.469

**13. Test Stations** *Do cathodically protected pipelines have a sufficient number of test stations?* (TD.CPMONITOR.TESTSTATION.O) 192.469

**14. Test Leads** *Does the process provide adequate instructions for the installation of test leads?* (TD.CPMONITOR.TESTLEAD.P) 192.605(b)(2) (192.471(a);192.471(b);192.471(c))

**15. Test Leads** *Do records document that pipelines with cathodic protection have electrical test leads installed in accordance with requirements of Subpart I?* (TD.CPMONITOR.TESTLEAD.R) 192.491(c) (192.471(a);192.471(b);192.471(c))

**16. Test Leads** *Do pipelines with cathodic protection have electrical test leads installed in accordance with requirements of Subpart I?* (TD.CP.MONITOR.TESTLEAD.O) 192.471(a)

**17. Interference Currents** *Does the operator have a program in place to minimize detrimental effects of interference currents on its pipeline system and does the process for designing and installing cathodic protection systems provide for the minimization of detrimental effects of interference currents on existing adjacent metallic structures?* (TD.CP.MONITOR.INTFRCURRENT.P) 192.605(b)(2) (192.473(a))

**18. Interference Currents** *Do records document an effective program is in place to minimize detrimental effects of interference currents and that detrimental effects of interference currents from CP systems on other underground metallic structures are minimized?* (TD.CP.MONITOR.INTFRCURRENT.R) 192.491(c) (192.473(a))

**19. Interference Currents** *Are areas of potential stray current identified, and if found, the detrimental effects of stray currents minimized?* (TD.CP.MONITOR.INTFRCURRENT.O) 192.473(a)

**20. Corrosion Control Records** *Does the process include records requirements for the corrosion control activities listed in §192.491?* (TD.CP.RECORDS.P) 192.605(b)(2) (192.491(a);192.491(b);192.491(c))

**21. Corrosion Control Records** *Do records indicate the location of all corrosion control items listed in §192.491(a)?* (TD.CP.RECORDS.R) 192.491(a) (192.491(b);192.491(c))

## Time-Dependent Threats - External Corrosion - Cathodic Protection

**1. Cathodic Protection post-July 1971** *Does the process require that each buried or submerged pipeline installed after July 31, 1971, be protected against external corrosion with a cathodic protection system within 1 year after completion of construction, conversion to service, or becoming jurisdictional onshore gathering?* (TD.CP.POST1971.P) 192.605(b)(2) (192.455(a);192.457(a);192.452(a);192.452(b);192.455(c);192.455(d))

**2. Cathodic Protection pre-August 1971** *Does the process require that pipelines installed before August 1, 1971 (except for cast and ductile iron lines) which are 1) bare or ineffectively coated transmission lines, or 2) bare or coated pipes in compressor, regulator or meter stations, or 3) bare or coated distribution lines, must be cathodically protected in areas where active corrosion is found?* (TD.CP.PRE1971.P) 192.605(b)(2) (192.457(b))

**3. Use of Aluminum** *Does the process give adequate guidance for the installation of aluminum in a submerged or buried pipeline?* (TD.CP.ALUMINUM.P) 192.605(b)(2) (192.455(e))

**4. Cathodic Protection of Amphoteric Metals** *Does the process describe criteria to be used for cathodic protection of amphoteric metals (aluminum) that are included in a steel pipeline?* (TD.CP.AMPHOTERIC.P) 192.605(b)(2) (192.463(b);192.463(c))

**5. Unprotected Buried Pipelines (typically bare pipelines)** *Does the process give sufficient direction for the monitoring of external corrosion on buried pipelines that are not protected by cathodic protection?* (TD.CP.UNPROTECT.P) 192.605(b)(2) (192.465(e))

**6. Unprotected Buried Pipelines (typically bare pipelines)** *Do records adequately document that exposed buried piping was examined for corrosion and deteriorated coating?* (TD.CP.UNPROTECT.R) 192.491(c) (192.465(e))

**7. Isolation from Other Metallic Structures** *Does the process give adequate guidance for electrically isolating each buried or submerged pipeline from other metallic structures unless they electrically interconnect and cathodically protect the pipeline and the other structures as a single unit?* (TD.CP.ELECISOLATE.P) 192.605(b)(2) (192.467(a);192.467(b);192.467(c);192.467(d);192.467(e))

**8. Isolation from Other Metallic Structures** *Do records adequately document electrical isolation of each buried or submerged pipeline from other metallic structures unless they electrically interconnect and cathodically protect the pipeline and the other structures as a single unit?* (TD.CP.ELECISOLATE.R) 192.491(c) (192.467(a);192.467(b);192.467(c);192.467(d);192.467(e))

**9. Isolation from Other Metallic Structures** *Are measures performed to ensure electrical isolation of each buried or submerged pipeline from other metallic structures unless they electrically interconnect and cathodically protect the pipeline and the other structures as a single unit?* (TD.CP.ELECISOLATE.O) 192.467(a) (192.467(b);192.467(c);192.467(d);192.467(e))

**10. Impressed Current or Galvanic Anode Systems** *Do field observations confirm impressed current type cathodic protection systems and galvanic anode systems are installed so as to minimize any adverse effect on existing adjacent underground metallic structures?* (TD.CP.ADJACENTMETAL.O) 192.473(b)

**11. Graphitization of Cast Iron and Ductile Iron** *Does the process give adequate guidance for remediation of graphitization of cast iron or ductile iron pipe?* (TD.CP.GRAPHITIZE.P) 192.605(b)(2) (192.489(a);192.489(b))

**12. Graphitization of Cast Iron and Ductile Iron** *Has there been adequate remediation for the graphitization of cast iron or ductile iron pipe?* (TD.CP.GRAPHITIZE.O) 192.489(a) (192.489(b))

**13. Corrosion Control Records** *Does the process include records requirements for the corrosion control activities listed in §192.491?* (TD.CP.RECORDS.P) 192.605(b)(2) (192.491(a);192.491(b);192.491(c))

**14. Corrosion Control Records** *Do records indicate the location of all corrosion control items listed in §192.491(a)?* (TD.CP.RECORDS.R) 192.491(a) (192.491(b);192.491(c))

## Time-Dependent Threats - External Corrosion - Coatings

**1. New Buried Pipe Coating** *Does the process require that each buried or submerged pipeline installed after July 31, 1971 be externally coated with a material that is adequate for underground service on a cathodically protected pipeline?* (TD.COAT.NEWPIPE.P) 192.605(b)(2) (192.455(a);192.455(b);192.455(c);192.455(d);192.461(a);192.461(b);192.463;192.483(a))

**2. New Buried Pipe Coating** *Do records document that each buried or submerged pipeline installed after July 31, 1971 has been externally coated with a suitable coating material?* (TD.COAT.NEWPIPE.R) 192.491(c) (192.455(a);192.461(a);192.461(b);192.483(a))

**3. New Buried Pipe Coating Installation** *Is external protective coating being protected from damage that could result from adverse ditch conditions or supporting blocks?* (TD.COAT.NEWPIPEINSTALL.O) 192.461(d)

**4. Conversion to Service - Pipe Coating** *Does the process require that each buried or submerged pipeline that has been converted to gas service and was installed after July 31, 1971, be protected against external corrosion with an adequate coating unless exempted by 192.455(b)?* (TD.COAT.CONVERTPIPE.P) 192.605(b)(2) (192.452(a);192.455(a);192.455(b);192.455(c);192.455(d);192.461(a))

## Time-Dependent Threats - External Corrosion - Exposed Pipe

**1. Examination of Exposed Portions of Buried Pipe** *Does the process require that exposed portions of buried pipeline must be examined for external corrosion?* (TD.CPEXPOSED.EXPOSEINSPECT.P) 192.605(b)(2) (192.459)

**2. Further Examination of Exposed Portions of Buried Pipe** *Does the process require further examination of exposed buried pipe if corrosion is found?* (TD.CPEXPOSED.EXPOSECORRODE.P) 192.605(b)(2) (192.459)

**3. Examination of Exposed Portions of Buried Pipe** *Do records adequately document that exposed buried piping was examined for corrosion?* (TD.CPEXPOSED.EXPOSEINSPECT.R) 192.491(c) (192.459)

**4. Cathodic Protection Monitoring Criteria** *Does the process require CP monitoring criteria to be used that is acceptable?* (TD.CPEXPOSED.MONITORCRITERIA.P) 192.605(b)(2) (192.463(a);192.463(c))

**5. Corrosion Control Records** *Does the process include records requirements for the corrosion control activities listed in §192.491?* (TD.CP.RECORDS.P) 192.605(b)(2) (192.491(a);192.491(b);192.491(c))

**6. Corrosion Control Records** *Do records indicate the location of all corrosion control items listed in §192.491(a)?* (TD.CP.RECORDS.R) 192.491(a) (192.491(b);192.491(c))



## Time-Dependent Threats - Internal Corrosion - Preventive Measures

**1. Internal Corrosion** *Does the process require that the corrosive effect of the gas in the pipeline be investigated and if determined to be corrosive, steps be taken to minimize internal corrosion?* (TD.ICP.CORRGAS.P) 192.605(b)(2) (192.475(a))

**2. Internal Corrosion** *Do the records demonstrate that the corrosive effect of the gas in the pipeline has been investigated and if determined to be corrosive, steps be taken to minimize internal corrosion?* (TD.ICP.CORRGAS.R) 192.491(c) (192.475(a))

**3. Internal Corrosion Corrosive Gas Prevention** *If the transportation of corrosive gas is not allowed, is the transportation of corrosive gas prevented?* (TD.ICP.CORRGASPRVNT.O) 192.475(a)

**4. Internal Corrosion Corrosive Gas Actions** *Does the process give adequate direction for actions to be taken if corrosive gas is being transported by pipeline?* (TD.ICP.CORRGASACTION.P) 192.605(b)(2) (192.477)

**5. Internal Corrosion Corrosive Gas Actions** *Do records document the actions taken when corrosive gas is being transported by pipeline?* (TD.ICP.CORRGASACTION.R) 192.491(c) (192.477)

**6. Internal Corrosion Corrosive Gas Actions** *Are adequate actions taken when corrosive gas is being transported by pipeline?* (TD.ICP.CORRGASACTION.O) 192.477

**7. Internal Corrosion in Cutout Pipe** *Does the process direct personnel to examine removed pipe for evidence of internal corrosion?* (TD.ICP.EXAMINE.P) 192.605(b)(2) (192.475(a);192.475(b))

**8. Internal Corrosion in Cutout Pipe** *Do records document examination of removed pipe for evidence of internal corrosion?* (TD.ICP.EXAMINE.R) 192.491(c) (192.475(a);192.475(b))

**9. Evaluation of Internally Corroded Pipe** *Does the process give sufficient guidance for personnel to evaluate the remaining strength of pipe that has been internally corroded?* (TD.ICP.EVALUATE.P) 192.605(b)(2) (192.487)

**10. Evaluation of Internally Corroded Pipe** *Do records document adequate evaluation of internally corroded pipe?* (TD.ICP.EVALUATE.R) 192.491(c) (192.487)

**11. Bottle Type and Pipe Type Holders** *Is gas containing more than 0.25 grain of hydrogen sulfide per 100 standard cubic feet (5.8 milligrams/m<sup>3</sup>) at standard conditions (4 parts per million) being stored in pipe-type or bottle-type holders?* (TD.ICP.PIPEBOTTLE.O) 192.475(c)

**12. Repair of Corroded Pipe** *Does the process give sufficient guidance for personnel to repair or replace pipe that has corroded to an extent that there is no longer sufficient remaining strength in the pipe wall?* (AR.RCOM.REPAIR.P) 192.605(b)(2) (192.487(a);192.487(b);192.489(a);192.489(b);192.491(c))

**13. Repair of Corroded Pipe** *Do records document the repair or replacement of pipe that has been internally corroded to an extent that there is not sufficient remaining strength in the pipe wall?* (AR.RCOM.REPAIR.R) 192.487 (192.489)

**14. Field Inspection - Remedial Actions (OM)** *Is anomaly remediation and documentation of remediation adequate for all segments?* (AR.RCOM.REMEDIATIONOM.O) 192.487(a) (192.487(b);192.489)

## Training and Qualification - OQ Protocol 9

**1. Program Inspection Deficiencies** *Have potential issues identified by the OQ plan inspection process been corrected at the operational level?* (TQ.PROT9.CORRECTION.O) 192.801(a) (192.809(a))

**2. Covered Task Performance** *Verify the qualified individuals performed the observed covered tasks in accordance with the operator's procedures or operator approved contractor procedures.* (TQ.PROT9.TASKPERFORMANCE.O) 192.801(a) (192.809(a))

**3. Qualification Status** *Verify the individuals performing the observed covered tasks are currently qualified to perform the covered tasks.* (TQ.PROT9.QUALIFICATIONSTATUS.O) 192.801(a) (192.809(a))

**4. Abnormal Operating Condition Recognition and Reaction** *Verify the individuals performing covered tasks are cognizant of the AOCs that are applicable to the tasks observed.* (TQ.PROT9.AOCRECOG.O) 192.801(a) (192.809(a))

**5. Verification of Qualification** *Observe in the field (job site, local office, etc.) that the foreman/supervisor/manager has verified the qualification of the individual performing the task, that the qualification records are current, and ensure the personal identification of all individuals performing covered tasks are checked, prior to task performance.* (TQ.PROT9.VERIFYQUAL.O) 192.801(a) (192.809(a))

## Training and Qualification - Operator Qualification

**1. Notification of Significant Plan Changes** *Does the process require significant OQ program changes to be identified and the Administrator or State agency notified?* (TQ.OQ.CHANGENOTIFY.P) 192.805(i) (192.18)

**2. Records of OQ Program Changes** *Are records maintained for changes that affect covered tasks and significant OQ plan changes?* (TQ.OQ.CHANGERECD.R) 192.805(i) (192.805(f);192.18)

**3. Evaluation Methods** *Are evaluation methods established and documented appropriate to each covered task?* (TQ.OQ.EVALMETHOD.P) 192.805(b) (192.803;192.809(d);192.809(e))

**4. Management of Changes** *Does the OQ program identify how changes to procedures, tools standards and other elements used by individuals in performing covered tasks are communicated to the individuals, including contractor individuals, and how these changes are implemented in the evaluation method(s)?* (TQ.OQ.MOC.P) 192.805(f)

**5. Covered Task Performed by Non-Qualified Individual** *Are there provisions for non-qualified individuals to perform covered tasks while being directed and observed by a qualified individual, and are there restrictions and limitations placed on such activities?* (TQ.OQ.NONQUALIFIED.P) 192.805(c)

**6. Contractor Qualification Documentation Meets Operator Requirements** *Does the OQ plan document that the operator has assured that the procedures on which an OQ vendor has evaluated qualified personnel are the same or consistent with those used by the operator for employees and contractors in the field?* (TQ.OQ.OQCONTRACTOREQUIV.P) 192.805(h)

**7. Operator Qualification Plan and Covered Tasks** *Do individuals performing covered tasks demonstrate adequate skills, knowledge, and ability?* (TQ.OQ.OQPLAN.O) 192.805(h)

**8. Operator Qualification Plan and Covered Tasks** *Is there an OQ plan that includes covered tasks, and the basis used for identifying covered tasks?* (TQ.OQ.OQPLAN.P) 192.805(a) (192.801(b))

**9. Contractors Adhering to OQ Plan** *Does the OQ plan have a process to communicate the OQ plan requirements to contractors and ensure that contractors are following it?* (TQ.OQ.OQPLANCONTRACTOR.P) 192.805(b) (192.805(f);192.805(c))

**10. Personnel Performance Monitoring** *If the operator had an incident/accident where there is reason to believe that an individual contributed to the cause, do records indicate evaluation of the individual following the occurrence?* (TQ.OQ.PERFMONITOR.R) 192.805(d) (192.805(e))

**11. Qualification Records for Personnel Performing Covered Tasks** *Do records document the evaluation and qualifications of individuals performing covered tasks, and can the qualification of individuals performing covered tasks be verified?* (TQ.OQ.RECORDS.R) 192.807

**12. Training Requirements (Initial, Retraining, and Reevaluation)** *Does the OQ program provide for initial qualification, retraining and reevaluation of individuals performing covered tasks?* (TQ.OQ.TRAINING.P) 192.805(h)

**13. Management of Other Entities Performing Covered Tasks** *Does the OQ plan require other entities that perform covered tasks on behalf of the operator to be qualified?* (TQ.OQ.OQCONTRACTOR.P) 192.805(b) (192.805(c);192.805(d);192.805(e);192.805(f))

**14. Reevaluation Intervals for Covered Tasks** *Does the OQ plan establish and justify requirements for reevaluation intervals for each covered task?* (TQ.OQ.REEVALINTERVAL.P) 192.805(g)

**15. Training Requirements (Initial, Retraining, and Reevaluation)** *Does the operator have records for initial qualification, retraining and reevaluation of individuals performing covered tasks?* (TQ.OQ.TRAINING.R) 192.807(a) (192.807(b))

**16. Contractor Qualification** *Are adequate records containing the required elements maintained for contractor personnel?* (TQ.OQ.OQCONTRACTOR.R) 192.807(a) (192.807(b))

**17. Management of Other Entities Performing Covered Tasks** *If the operator employs other entities to perform covered tasks, such as mutual assistance, are adequate records containing the required elements maintained?* (TQ.OQ.OTHERENTITY.R) 192.805(b) (192.805(c);192.803)

**18. Abnormal Operating Conditions** *Does the OQ Plan contain requirements to assure that individuals performing covered tasks are able to recognize and react to abnormal operating conditions (AOCs)?* (TQ.OQ.ABNORMAL.P) 192.803

**19. Abnormal Operating Conditions** *Do records document evaluation of qualified individuals for recognition and reaction to AOCs?* (TQ.OQ.ABNORMAL.R) 192.807(a) (192.807(b);192.803)

**20. Abnormal Operating Conditions** *Do individuals performing covered tasks have adequate knowledge to recognize and react to abnormal operating conditions?* (TQ.OQ.ABNORMAL.O) 192.803

**21. Personnel Performance Monitoring** *Does the program include provisions to evaluate an individual if there is reason to believe that performance of a covered task contributed to an incident or accident as defined in Parts 192 and 195 or there is reason to believe an individual is no longer qualified to perform a covered task?* (TQ.OQ.PERFMONITOR.P) 192.805(d) (192.805(e))

## Training and Qualification - Qualification of Personnel - Specific Requirements

**1. Corrosion Control Personnel Qualification** *Does the process require corrosion control procedures to be carried out by, or under the direction of, qualified personnel?* (TQ.QU.CORROSION.P) 192.453 (192.805(b))

**2. Corrosion Control Personnel Qualification** *Do records indicate qualification of personnel implementing pipeline corrosion control methods?* (TQ.QU.CORROSION.R) 192.453 (192.807(a);192.807(b))

**3. Qualification of Personnel Tapping Pipelines under Pressure** *Does the process require taps on a pipeline under pressure (hot taps) to be performed by qualified personnel?* (TQ.QU.HOTTAPQUAL.P) 192.627 (192.805(b))

## Training and Qualification - Qualification of Personnel - Specific Requirements (O and M Construction)

**1. Qualification of Welders** *Does the process require welders to be qualified in accordance with API 1104 or the ASME Boiler & Pressure Vessel Code?* (TQ.QUOMCONST.WELDER.P) 192.227(a) (192.225(a);192.225(b);192.328(a);192.328(b))

**2. Qualification of Welders for Low Stress Pipe** *Does the process require welders who perform welding on low stress pipe on lines that operate at < 20% SMYS to be qualified under Section I of Appendix C to Part 192, and are welders who perform welding on service line connection to a main required to be qualified under Section II of Appendix C to Part 192?* (TQ.QUOMCONST.WELDERLOWSTRESS.P) 192.227(b) (192.225(a);192.225(b);192.805(b))

**3. Qualification of Welders** *Do records indicate adequate qualification of welders?* (TQ.QUOMCONST.WELDER.R) 192.227(a) (192.227(b);192.229(a);192.229(b);192.229(c);192.229(d);192.328(a);192.328(b);192.807(a);192.807(b))

**4. Qualification of Nondestructive Testing Personnel** *Do records indicate the qualification of nondestructive testing personnel?* (TQ.QUOMCONST.NDT.R) 192.243(b)(2) (192.807(a);192.807(b);192.328(a);192.328(b))

## Generic Questions - Generic Questions - Special Permits

**1. Generic Question - Special Permit** *Generic question - please provide context in result notes.*  
(GENERIC.GENERICSP.GENOBSERVE.O)

**2. Generic Question - Special Permit** *Generic question - please provide context in result notes.*  
(GENERIC.GENERICSP.GENPROCEDURE.P)

**3. Generic Question - Special Permit** *Generic question - please provide context in result notes.*  
(GENERIC.GENERICSP.GENRECORD.R)

## Generic Questions - Generic Questions

**1. Generic Question** *Generic question - please provide context in result notes.* (GENERIC.GENERIC.GENOBSERVE.O)

**2. Generic Question** *Generic question - please provide context in result notes.* (GENERIC.GENERIC.GENPROCEDURE.P)

**3. Generic Question** *Generic question - please provide context in result notes.* (GENERIC.GENERIC.GENRECORD.R)

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