Assessment and Repair - Repair Criteria (O&M)

1. Repair Criteria in Non-Covered Segments *Does the integrity assessment and maintenance processes include adequate criteria for determining the need for, and timeliness of, pipeline defect repairs in non-covered segments?* (AR.RCOM.NONCOVERED.P) 192.485(a) (192.485(b);192.485(c);192.703(b);192.710;192.711;192.713;192.714)

2. Repair Criteria in Non-Covered Segments *From the review of the results of integrity assessments, did the operator repair conditions that posed a threat to pipeline integrity on Non-Covered segments?* (AR.RCOM.NONCOVERED.R) 192.485(a) (192.485(b);192.485(c);191.23(a)(1);192.703(b);192.710;192.711;192.713)

3. Field Inspection - Remedial Actions (OM) *Is anomaly remediation and documentation of remediation adequate for all segments?* (AR.RCOM.REMEDIATIONOM.O) 192.485(a) (192.485(b);192.485(c);192.710;192.711;192.713)

4. Alternative Maximum Allowable Operating Pressure per 192.620 (80% SMYS Rule)? *If the pipeline operates using an alternative maximum allowable operating pressure per 192.620 (80% SMYS Rule), do the processes meet the requirements of the permit or 192.620?* (AR.RCOM.RCAMAOP.P) 192.620(d)

5. Alternative Maximum Allowable Operating Pressure per 192.620 (80% SMYS Rule)? *If the pipeline operates using an alternative maximum allowable operating pressure per 192.620 (80% SMYS Rule), from a review of selected records, were required repairs performed?* (AR.RCOM.RCAMAOP.R) 192.620(d)

6. Repair Criteria in Type B and C Gas Gathering Pipelines *Do maintenance procedures include adequate criteria for determining the need for, and timeliness of, pipeline repairs in gas gathering pipelines?* (AR.RCOM.GGREMEDIATION.P) 192.485(a) (192.9(d)(2);192.9(e)(1)(ii);192.453;192.485(b))

7. Repair Criteria in Type B and C Gas Gathering Pipelines *From the review of records, did the operator repair or replace pipe to permanently restore the serviceability of the pipe?* (AR.RCOM.GGREMEDIATION.R) 192.485(a) (191.23(a)(1);191.23(b)(1);192.9(d)(2);192.9(e)(1)(ii);192.453;192.485(b))

8. Field Inspection - Gas Gathering Remedial Actions *Is operator's remediation and documentation of remediation adequate?* (AR.RCOM.GGREMEDIATION.O) 192.485(a) (192.453;192.459;192.485(b))

Assessment and Repair - Confirmatory Direct Assessment

1. Qualification of Operator/Vendor Personnel Who Evaluate CDA Results *Does the process require that operator/vendor personnel (including supervisors) who review and evaluate CDA assessment results meet appropriate training, experience, and qualification criteria?* (AR.CDA.CDAREVQUAL.P) 192.915(a) (192.915(b))

2. Qualification of Operator/Vendor Personnel Who Evaluate CDA Results *Do records demonstrate that operator/vendor personnel, including supervisors, who conduct assessments or review assessment results, are qualified for the tasks they perform?* (AR.CDA.CDAREVQUAL.R) 192.947(h) (192.915(a);192.915(b))

3. Qualification of Operator/Vendor Personnel Who Evaluate CDA Results *From the observation of selected integrity assessments, are operator and vendor personnel, including supervisors, who conduct assessments or review assessment results, qualified for the tasks they perform?* (AR.CDA.CDAREVQUAL.O) 192.915(a) (192.915(b))

4. CDA Plan *Is an adequate Confirmatory Direct Assessment Plan in place?* (AR.CDA.CDAPLAN.P) 192.931(a) (192.931(b);192.931(c);192.931(d))

5. External Corrosion Plan *Do records indicate that the external corrosion plan was properly implemented?* (AR.CDA.CDAEXTCORR.R) 192.947(h) (192.931(b))

6. Internal Corrosion Plan *Do records demonstrate that the internal corrosion plan was properly implemented?* (AR.CDA.CDAINTCORR.R) 192.947(h) (192.931(c))

7. Remediation of Indications *Do records demonstrate that the next assessment should have been accelerated?* (AR.CDA.CDAINDICATION.R) 192.947(h) (192.931(d))

8. CDA *Does the process adequately account for taking required actions to address significant corrosion threats identified using confirmatory direct assessment?* (AR.CDA.CDACORR.P) 192.933 (192.917(e)(5))

9. CDA *Do records demonstrate that required actions are being taken to address significant corrosion threats identified by CDA as required?* (AR.CDA.CDACORR.R) 192.933 (192.917(e)(5))

Assessment and Repair - External Corrosion Direct Assessment (ECDA)

1. Qualification of Operator/Vendor Personnel Who Evaluate ECDA Results *Does the process require that operator/vendor personnel (including supervisors) who review and evaluate ECDA assessment results meet appropriate training, experience, and qualification criteria?* (AR.EC.ECDAREVQUAL.P) 192.915(a) (192.915(b))

2. ECDA Pre-Assessment *Do records demonstrate that the ECDA pre-assessment process complied with NACE SP0502-2010 Section 3 and 192.925(b)(1)?* (AR.EC.ECDAPREASSESS.R) 192.947(g) (192.925(b)(1))

3. Qualification of Operator/Vendor Personnel Who Evaluate ECDA Results *Do records demonstrate that operator/vendor personnel, including supervisors, who conduct ECDA assessments or review and analyze assessment results are qualified for the tasks they perform?* (AR.EC.ECDAREVQUAL.R) 192.947(g) (192.915(a);192.915(b))

4. Qualification of Operator/Vendor Personnel Who Evaluate ECDA Results *From the observation of selected integrity assessments, are operator and vendor personnel, including supervisors, who conduct assessments or review assessment results, qualified for the tasks they perform?* (AR.EC.ECDAREVQUAL.O) 192.915(a) (192.915(b))

5. ECDA Plan *Is an adequate ECDA plan and process in place for conducting ECDA?* (AR.EC.ECDAPLAN.P) 192.925(a) (192.925(b))

6. Integration of ECDA Results with other Information *Is the process for integrating ECDA results with other information adequate?* (AR.EC.ECDAINTEGRATION.P) 192.917(b) (ASME B31.8S-2018 Section 4.5)

7. Integration of ECDA Results with other Information *Do records demonstrate that the operator integrated other data/information when evaluating data/results?* (AR.EC.ECDAINTEGRATION.R) 192.947(g) (192.917(b))

8. ECDA Region Identification *Do records demonstrate that the operator identified ECDA Regions?* (AR.EC.ECDAREGION.R) 192.947(g) (192.925(b)(1))

9. ECDA Indirect Examination *Do records demonstrate that ECDA indirect inspection process complied with NACE SP 0502-2010 Section 4 and ASME B31.8S-2018, Section 6.4?* (AR.EC.ECDAINDIRECT.R) 192.947(g) (192.925(b)(2))

10. ECDA Direct Examination *Do records demonstrate that excavations, direct examinations, and data collection were performed in accordance with NACE SP 0502-2010, Sections 5 and 6.4.2 and ASME B31.8S-2018, Section 6.4?* (AR.EC.ECDADIRECT.R) 192.947(g) (192.925(b)(3))

11. ECDA Direct Examination *Were ECDA direct examinations adequately conducted?* (AR.EC.ECDADIRECT.O) 192.925(b)(3)

12. Quality of ECDA Data Analysis *Do records demonstrate that an analysis of the ECDA data and other information was adequate to identify areas where external corrosion activity is most likely?* (AR.EC.ECDAANALYSIS.R) 192.947(g) (192.925(b)(4);192.933(b))

13. ECDA Change Control *Have criteria and internal notification processes been established and implemented for any changes in the ECDA plan?* (AR.EC.ECDAPLANMOC.P) 192.947(g) (192.925(b)(3)(iii);192.911(k))

14. ECDA Change Control *Do records demonstrate that changes in the ECDA plan have been implemented and documented?* (AR.EC.ECDAPLANMOC.R) 192.947(g) (192.925(b)(3)(iii))

15. ECDA Post-Assessment *Do records demonstrate that the requirements for post-assessment were met?* (AR.EC.ECDAPOSTASSESS.R) 192.947(g) (192.925(b)(4))

16. AMAOP ECDA *If ECDA was performed on segments (as allowed by §192.620(d)(9)(iii)), were all ECDA assessment requirements completed?* (AR.EC.ECDAMAOP.R) 192.947(g) (192.620(d)(9)(iii);192.620(d)(10)(i);192.620(d)(10)(iii))

17. AMAOP ECDA *If ECDA was performed on segments (as allowed by §192.620(d)(9)(iii)), were all ECDA assessment requirements completed?* (AR.EC.ECDAMAOP.O) 192.620(d)(9)(iii) (192.620(d)(10)(i);192.620(d)(10)(iii))

18. External Corrosion *Does the process adequately account for taking required actions to address significant external corrosion threats?* (AR.EC.ECCORR.P) 192.933 (192.917(e)(5))

19. External Corrosion *Do records demonstrate that required actions are being taken to address significant external corrosion threats as required?* (AR.EC.ECCORR.R) 192.933 (192.917(e)(5))

Assessment and Repair - Internal Corrosion Direct Assessment (ICDA)

1. ICDA Plan Pre-Assessment *Is an ICDA plan and process in place prior to conducting the pre-assessment step of ICDA?* (AR.IC.ICDAPLANPRE.P) 192.927(c) (192.927(a);192.927(b))

2. ICDA Plan Indirect Inspection *Is an ICDA plan and process in place prior to conducting the indirect inspection step in the ICDA process?* (AR.IC.ICDAPLANINDIRECT.P) 192.927(c) (192.927(a);192.927(b))

3. ICDA Plan Detailed Examination *Is an ICDA plan and process in place prior to conducting the detailed examination step of the ICDA process?* (AR.IC.ICDAPLANEXAM.P) 192.927(c) (192.927(a);192.927(b);192.485;192.712;192.714;192.933)

4. ICDA Plan Post Assessment *Is an ICDA plan and process in place prior to conducting the post assessment monitoring?* (AR.IC.ICDAPLANPOST.P) 192.927(c) (192.927(a);192.927(b);192.478;192.485;192.712;192.714;192.933)

5. Pre-Assessment *Do records demonstrate that the requirements for an ICDA pre-assessment were met?* (AR.IC.ICDAPREASSESS.R) 192.947(g)

6. ICDA Region Identification *Do records demonstrate that ICDA Regions were adequately identified?* (AR.IC.ICDAREGION.R) 192.947(g) (192.927(c)(2);192.927(c)(5))

7. Identification of Locations for Indirect Inspection *Do records demonstrate that sites where internal corrosion may be present were properly identified?* (AR.IC.ICDAINDIRECT.R) 192.947(g) (192.927(c)(2);192.927(c)(5))

8. Identification of Locations for Excavation and Direct Examination *Do records demonstrate the operator performed detailed examinations of locations identified during the Indirect Inspection?* (AR.IC.ICDADIRECT.R) 192.947(g) (192.927(c)(3);192.927(c)(5))

9. Post-Assessment Evaluation and Monitoring *Do records demonstrate that the operator assessed the effectiveness of the ICDA process?* (AR.IC.ICDAPOSTASSESS.R) 192.947(g) (192.927(c)(4)(i);192.927(c)(4)(ii);192.927(c)(4)(iii)(A);192.477)

10. Quality of ICDA Data Analysis *Do records demonstrate that sufficient data was used to complete the ICDA analysis to identify the internal corrosion threats to the pipeline?* (AR.IC.ICDAANALYSIS.R) 192.947(g) (192.927(c);192.933(b))

11. ICDA Plan *Is an ICDA plan and process in place for conducting ICDA?* (AR.IC.ICDAPLAN.P) 192.927(c) (192.927(a);192.927(b))

12. AMAOP ICDA *If the pipeline is operated using an alternative maximum allowable operating pressure per 192.620 (80% SMYS Rule) were required ICDA assessments performed?* (AR.IC.ICDAMAOP.R) 192.947(g) (192.620(d)(9);192.620(d)(10);192.927)

13. P&M Measures (Internal Corrosion) *Does the process adequately account for taking required actions to address significant internal corrosion threats related to internal corrosion?* (AR.IC.ICCORR.P) 192.933 (192.917(e)(5))

14. P&M Measures (Internal Corrosion) *Do records demonstrate that required actions are being taken to address significant internal corrosion threats as required?* (AR.IC.ICCORR.R) 192.933 (192.917(e)(5))

15. Qualification of Operator/Vendor Personnel Who Evaluate ICDA Results *Does the process require that operator/vendor personnel (including supervisors) who review and evaluate ICDA assessment results meet appropriate training, experience, and qualification criteria?* (AR.IC.ICDAREVQUAL.P) 192.915(a) (192.915(b))

16. Qualification of Operator/Vendor Personnel Who Evaluate ICDA Results *Do records demonstrate that operator/vendor personnel, including supervisors, who conduct ICDA assessments or review and analyze assessment results, are qualified for the tasks they perform?* (AR.IC.ICDAREVQUAL.R) 192.947(g) (192.915(a);192.915(b))

17. Qualification of Operator/Vendor Personnel Who Evaluate ICDA Results *From the observation of selected integrity assessments, are operator and vendor personnel, including supervisors, who conduct assessments or review assessment results, qualified for the tasks they perform?* (AR.IC.ICDAREVQUAL.O) 192.915(a) (192.915(b))

Assessment and Repair - Stress Corrosion Cracking Direct Assessment (SCCDA)

1. SCCDA Preassessment Plan *Does the SCCDA plan include requirements for preassessment?* (AR.SCC.SCCDAPLANPRE.P) 192.929(b)

2. SCCDA Indirect Inspection Plan *Is an adequate SCCDA plan developed prior to indirect inspections?* (AR.SCC.SCCDAPLANINDIRECT.P) 192.929(b) (192.929(b)(2))

3. SCCDA Direct Examination Plan *Is an adequate plan developed prior to performing SCCDA?* (AR.SCC.SCCDAPLANDIRECT.P) 192.929(b) (192.929(b)(3))

4. SCCDA Post Assessment Plan *Is an adequate SCCDA plan developed prior to post assessment requirements?* (AR.SCC.SCCDAPLANPOST.P) 192.929(b) (192.929(b)(5))

5. SCCDA Mitigate *Is an adequate plan developed for remediating and mitigating SCC once discovered?* (AR.SCC.SCCDAMITIG.P) 192.929(b)(4) (NACE SP0204, Section 5.5.1, 6.1.2 and 6.2.1;ASME B31.8S, Appendix A4)

6. Collect and Evaluate Data *Do records demonstrate that data was collected and evaluated?* (AR.SCC.SCCDADATA.R) 192.947(g) (192.929(b)(1))

7. Indirect Inspection *Do records demonstrate that at least two Indirect Inspections were conducted using complementary measurement tools appropriate for the pipeline segment?* (AR.SCC.SCCDAINSPECTION.R) 192.947(g) (192.929(b)(2))

8. Direct Examination *Do records demonstrate that a minimum of three direct examinations for SCC were performed within the covered pipeline segment?* (AR.SCC.SCCDAEXAM.R) 192.947(g) (192.929(b)(3))

9. Assessment Method (Near Neutral and High pH SCC) *Do records demonstrate that the operator mitigated the threat of SCC, if found?* (AR.SCC.SCCDAMITIG.R) 192.947(g) (192.929(b)(4);NACE SP0204-2008, Section 5.5.1, 6.1.2, and 6.2.1;ASME B31.8S, Appendix A4)

10. Assessment Method (Near Neutral and High pH SCC) *From field observations, was SCCDA performed in accordance with 192.929 and the SCCDA plan?* (AR.SCC.SCCDAMETHOD.O) 192.929

11. Assessing for Near Neutral SCC *From the review of the results of selected integrity assessments, was the pipeline evaluated for near neutral SCC?* (AR.SCC.SCCDANEARNEUTRAL.R) 192.947(g) (192.929(b))

12. Reassessment Interval *From the review of the results of selected integrity assessments, did the operator determine a reassessment interval based on SCCDA results?* (AR.SCC.SCCDAREASSESSINTRVL.R) 192.947(d) (192.939(a)(3))

13. Alternative Maximum Allowable Operating Pressure per 192.620 (80% SMYS Rule)? *If the pipeline operates using an alternative maximum allowable operating pressure per 192.620 (80% SMYS Rule), from a review of selected records, were required SCCDA assessments performed?* (AR.SCC.SCCDAAMAOP.R) 192.620(d) (192.620(d)(9);192.620(d)(10))

14. SCC *Does the process adequately account for taking required actions to address significant corrosion threats found following SCCDA?* (AR.SCC.SCCCORR.P) 192.933 (192.917(e)(5))

15. SCC *Do records demonstrate that required actions are being taken to address significant corrosion threats as required following SCCDA?* (AR.SCC.SCCCORR.R) 192.933 (192.917(e)(5))

16. Qualification of Operator Personnel Who Evaluate SCCDA Results *Does the process require that operator/vendor personnel (including supervisors) who review and evaluate SCCDA assessment results meet appropriate training, experience, and qualification criteria?* (AR.SCC.SCCDAREVQUAL.P) 192.915(a) (192.915(b))

17. Qualification of Operator Personnel Who Evaluate SCCDA Results *Do records demonstrate that operator/vendor personnel, including supervisors, who conduct assessments or review assessment results, are qualified for the tasks they perform?* (AR.SCC.SCCDAREVQUAL.R) 192.947(e) (192.915(a);192.915(b))

18. Qualification of Operator Personnel Who Evaluate SCCDA Results *From the observation of selected integrity assessments, are operator and vendor personnel, including supervisors, who conduct assessments or review assessment results, qualified for the tasks they perform?* (AR.SCC.SCCDAREVQUAL.O) 192.915(a) (192.915(b))

Assessment and Repair - In-Line Inspection (Smart Pigs)

1. Qualification of Operator/Vendor Personnel (including Supervisors) Who Evaluate ILI Results *Does the process require that operator/vendor personnel (including supervisors) who review and evaluate ILI assessment results meet appropriate training, experience, and qualification criteria?* (AR.IL.ILIREVIEWQUAL.P) 192.915(a) (192.915(b);192.493)

2. Qualification of Operator/Vendor Personnel (including Supervisors) Who Evaluate ILI Results *Do records demonstrate that personnel who conduct assessments or review assessment results are qualified per the process requirements?* (AR.IL.ILIREVIEWQUAL.R) 192.947(g) (192.915(a);192.915(b);192.493)

3. Qualification of Operator/Vendor Personnel (including Supervisors) Who Evaluate ILI Results *From the observation of selected integrity assessments, are operator and vendor personnel, including supervisors, who conduct assessments or review assessment results, qualified for the tasks they perform?* (AR.IL.ILIREVIEWQUAL.O) 192.915(a) (192.915(b);192.493)

4. ILI Specifications *Does the process assure complete and adequate vendor ILI specifications?* (AR.IL.ILISPECS.P) 192.921(a)(1) (192.933(b);192.493;192.18)

5. ILI Specifications *Do records demonstrate that the ILI specifications were complete and adequate?* (AR.IL.ILISPECS.R) 192.947(g) (192.933(b);192.493)

6. IMP Assessment Methods *Does the process specify the assessment methods that are appropriate for the pipeline specific integrity threats?* (AR.IL.ASSESSMETHOD.P) 192.919(b) (192.921(a);192.937(c);192.917;192.493;192.506)

7. IMP Assessment Methods *Do records demonstrate that the assessment methods shown in the baseline and/or continual assessment plan were appropriate for the pipeline specific integrity threats?* (AR.IL.ASSESSMETHOD.R) 192.947 (192.919(b);192.921(a);192.937(c))

8. Validation of ILI Results *Does the process for validating ILI results ensure that accurate integrity assessment results are obtained?* (AR.IL.ILIVALIDATE.P) 192.921(a)(1) (192.937(c);192.493)

9. Validation of ILI Results *Do records demonstrate that the operator has validated ILI assessment results per their process?* (AR.IL.ILIVALIDATE.R) 192.947 (192.921(a)(1);192.493)

10. Validation of ILI Results *From observation of field activities, do the employees and vendors validate ILI assessment results per their process?* (AR.IL.ILIVALIDATE.O) 192.921(a)(1) (192.493)

11. Integration of ILI Results with other Information *Is the process for integrating ILI results with other information adequate?* (AR.IL.ILIINTEGRATION.P) 192.917(b) (192.493)

12. Integration of ILI Results with other Information *Do records demonstrate that the operator integrated other data/information when evaluating tool data/results?* (AR.IL.ILIINTEGRATION.R) 192.947 (192.917(b);192.493)

13. ILI Acceptance Criteria *Is the process for ILI survey acceptance criteria adequate to assure an effective assessment?* (AR.IL.ILIACCEPCRITERIA.P) 192.921(a) (192.493)

14. ILI Acceptance Criteria *Do records indicate adequate implementation of the process for ILI survey acceptance?* (AR.IL.ILIACCEPCRITERIA.R) 192.947 (192.921(a);192.493)

15. Integrity Assessments that were Not Performed as Scheduled or Within Required Timeframes *Do records indicate that the performance of integrity assessments has been delayed and integrity assessment delays have been justified?* (AR.IL.ILIDELAY.R) 192.947(d) (192.909(a);192.909(b);192.943(a);192.943(b);190.341;192.18)

16. Alternative Maximum Allowable Operating Pressure per 192.620 (80% SMYS Rule)? *For pipelines operating under AMAOP, do processes implement the ILI requirements of 192.620(d)(9) and (10) for the entire segment?* (AR.IL.ILIAMAOP.P) 192.620(d) (192.493)

17. Alternative Maximum Allowable Operating Pressure per 192.620 (80% SMYS Rule)? *For pipelines operating under AMAOP, do records indicate the ILI requirements of 192.620(d)(9) and (10) have been implemented for the entire segment?* (AR.IL.ILIAMAOP.R) 192.620(d) (192.493)

18. Compliance with ILI Procedures *Are O&M and IMP procedural requirements for the performance of ILI assessments followed?* (AR.IL.ILIIMPLEMENT.O) 192.921(a)(1) (192.620(d);192.605(b);192.493)

19. In-Line Inspection *Does the process adequately account for taking required actions to address significant corrosion threats identified during in-line inspections?* (AR.IL.ILCORR.P) 192.933 (192.917(e)(5))

20. In-Line Inspection *Do records demonstrate that required actions are being taken to address significant corrosion threats identified during in-line inspections?* (AR.IL.ILCORR.R) 192.933 (192.917(e)(5))

Assessment and Repair - Low Stress Reassessment

1. Low Stress Reassessment Plan *Is the process for performing low stress reassessment adequate?* (AR.LSR.LSRPLAN.P) 192.941 (192.919;192.921;192.941(b);192.941(c))

2. Baseline Assessment *Do records demonstrate that a baseline assessment meeting the requirements of 192.919 and 192.921 was performed prior to performing a low stress reassessment?* (AR.LSR.LSRBA.R) 192.947(d) (192.919(c);192.921(d);192.941(a);192.506)

3. External Corrosion *Do records demonstrate that the requirements of §192.941(b) were implemented when performing low stress reassessment for external corrosion?* (AR.LSR.LSREXTCORR.R) 192.947(d) (192.941(b))

4. Internal Corrosion *Do records demonstrate that the requirements of §192.941(c) were implemented when performing low stress reassessment for internal corrosion?* (AR.LSR.LSRINTCORR.R) 192.947(d) (192.941(c))

5. LSR - Corrosion *Does the process adequately account for taking required actions to address significant corrosion threats following a LSR?* (AR.LSR.LSRCORR.P) 192.933 (192.917(e)(5))

6. LSR - Corrosion *Do records demonstrate that required actions are being taken to address significant corrosion threats as required following a LSR?* (AR.LSR.LSRCORR.R) 192.933 (192.917(e)(5))

Assessment and Repair - Integrity Assessment Via Pressure Test

1. Qualification of Operator/Vendor Personnel Who Evaluate Pressure Test Results *Does the process require that operator/vendor personnel (including supervisors) who review and evaluate pressure test assessment results meet appropriate training, experience, and qualification criteria?* (AR.PTI.PRESSTESTREVQUAL.P) 192.915(a) (192.915(b);192.921(a)(4))

2. Qualification of Operator/Vendor Personnel Who Evaluate Pressure Test Results *Do records demonstrate that operator/vendor personnel, including supervisors, who conduct or review pressure test assessment results are qualified for the tasks they perform?* (AR.PTI.PRESSTESTREVQUAL.R) 192.947(g) (192.915(a);192.915(b))

3. Test Acceptance Criteria and Procedures *Were test acceptance criteria and 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);192.505(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);192.921(a)(2))

4. Pressure Test Results *Do the test records validate the pressure test?* (AR.PTI.PRESSTESTRESULT.R) 192.517(a) (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);192.517(b);192.617;192.619(a);192.919(e);192.921(a)(2))

5. Alternative Maximum Allowable Operating Pressure per 192.620 (80% SMYS Rule)? *If the pipeline operates using an alternative maximum allowable operating pressure per 192.620 (80% SMYS Rule), from a review of selected records, were required pressure test assessments performed?* (AR.PTI.PRESSTESTAMAOP.R) 192.517(a) (192.505(a);192.517(b);192.620(c)(4);192.620(d)(9);192.620(d)(10))

6. Pressure Test Completion *From field operations was the pressure test performed in accordance with Subpart J requirements and the process requirements?* (AR.PTI.PRESSTESTCOMPLETE.O) 192.503(a) (192.503(b);192.503(c);192.503(d);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))

7. PTI *Does the process adequately account for taking required actions to address significant corrosion threats?* (AR.PTI.PTICORR.P) 192.933 (192.917(e)(5))

8. PTI *Do records demonstrate that required actions are being taken to address significant corrosion threats as required?* (AR.PTI.PTICORR.R) 192.933 (192.917(e)(5))

9. Assessments - Spike Hydrotests *Do the procedures for selecting pipeline assessment methods specifically include spike hydrotests as the assessment method for detecting time-dependent threats?* (AR.PTI.SPIKEHYDRO.P) 192.506(a) (192.505;192.710(c)(3);192.921(a)(3))

10. Assessments - Spike Hydrotests *Where time-dependent threats were an identified risk, do the records indicate that a spike hydrotest was performed to "clear" any cracks that might otherwise grow during pressure reductions after the hydrostatic test?* (AR.PTI.SPIKEHYDRO.R) 192.506(a) (192.505;192.710(c)(3);192.921(a)(3))

Assessment and Repair - Other Technology

1. Other Technology *Has a process been developed for "other technologies" that provide an equivalent understanding of the condition of the pipe?* (AR.OT.OTPLAN.P) 192.921(a)(7) (192.18)

2. Other Technology *Do records demonstrate that the assessments were performed in accordance with the process and vendor recommendations and that defects were identified and categorized within 180 days, if applicable?* (AR.OT.OTPLAN.R) 192.947(d) (192.921(a)(7);192.933(b))

3. Qualification of Operator/Vendor Personnel Who Evaluate Other Technology Results *Does the process require that operator/vendor personnel (including supervisors) who review and evaluate assessment results meet acceptable qualification standards?* (AR.OT.OTREVQUAL.P) 192.915(a) (192.915(b);192.921(a)(7);192.493)

4. Qualification of Operator Personnel Who Evaluate Other Technology Results *Do records demonstrate that operator/vendor personnel, including supervisors, who conduct assessments or review assessment results are qualified for the tasks they perform?* (AR.OT.OTREVQUAL.R) 192.947(d) (192.915(a);192.915(b))

5. Qualification of Operator Personnel Who Evaluate Other Technology Results *From the observation of selected integrity assessments, are operator and vendor personnel, including supervisors, who conduct assessments or review assessment results, qualified for the tasks they perform?* (AR.OT.OTREVQUAL.O) 192.915(a) (192.915(b))

6. Other Technology *Were assessments conducted using "other technology" adequately performed in accordance with the OT process?* (AR.OT.OTPLAN.O) 192.921(a)(7)

7. Other Technology - Corrosion *Does the process adequately account for taking required actions to address significant corrosion threats identified using Other Technology?* (AR.OT.OTCORR.P) 192.933 (192.917(e)(5))

8. Other Technology - Corrosion *Do records demonstrate that required actions are being taken to address significant corrosion threats as required following the use of Other Technology?* (AR.OT.OTCORR.R) 192.933 (192.917(e)(5))

Assessment and Repair - Predicted Failure Pressure

1. Anomaly Analysis - Corrosion Metal Loss *Do the procedures for evaluating corrosion metal loss anomalies or defects, ensure that a determination of the predicted failure pressure and the remaining life of the pipeline segment is established at the location of each anomaly or defect?* (AR.PFP.ANOMALYMETALLOSS.P) 192.605 (192.607;192.712(a);192.917(b);192.933(d);192.485;192.712(b))

2. Anomaly Analysis - Dents *Do the procedures for evaluating dents and other mechanical damage anomalies or defects, ensure that a determination of the predicted failure pressure and the remaining life of the pipeline segment is established at the location of each anomaly or defect?* (AR.PFP.ANOMALYDENTS.P) 192.605 (192.607;192.712(a);192.712(b);192.933(d);192.485;192.712(c);192.712(h))

3. Anomaly Analysis - Crack Models *Do the procedures for evaluating cracks and crack like defects ensure that a determination of the predicted failure pressure and the remaining life of the pipeline segment is established at the location of each anomaly or defect, in accordance with §192.712(d)(1)?* (AR.PFP.ANOMALYCRACKMODEL.P) 192.605 (192.607;192.712(a);192.712(d)(1))

4. Anomaly Analysis - Crack Growth *Do the procedures detail the performance of fatigue analysis and remaining life calculations for pipeline segments susceptible to cyclic fatigue or other loading conditions that could lead to fatigue crack growth?* (AR.PFP.ANOMALYCRACKGROWTH.P) 192.605 (192.607;192.712(d)(2))

5. Anomaly Analysis - Crack Survives Press Test *Do procedures call for the calculation of the largest potential crack defect sizes when analyzing potential cracks that could have survived a pressure test, specifically in the absence of any in-line inspection data in accordance with §192.712(d)(3)?* (AR.PFP.ANOMALYCRACKSURVIVEPT.P) 192.712(d)(3) (192.607;192.712(a);192.712(d)(1))

6. Anomaly Analysis - Required Data Use *Do the procedures detail the use of data when performing analyses of predicted or assumed anomalies or defects, in accordance with §192.712(e)?* (AR.PFP.ANOMALYDATAUSE.P) 192.605 (192.607;192.712(e))

7. Anomaly Analysis - Records Process *Do procedures detail the collection, creation and retention of records including all investigations, analyses, and other actions taken in performing analyses of predicted or assumed anomalies or defects, in accordance with 192.712(g)?* (AR.PFP.ANOMALYRECORDS.P) 192.605 (192.607;192.712(g))

8. Anomaly Analysis - Records Process *Do procedures detail the reassessment of anomalies when an operator used an Engineering Critical Assessment method?* (AR.PFP.ANOMALYREASSESS.P) 192.605 (192.712(h))

9. Anomaly Analysis - Records *Do the records capture all investigations, analyses and other actions taken to support the analysis of predicted failure pressure in accordance with §192.712(g)?* (AR.PFP.ANOMALYRECORDS.R) 192.712(g) (192.712(e))

Assessment and Repair - Repair Criteria (HCA)

1. General Requirements *Do the repair procedures detail what actions must be taken to address integrity issues?* (AR.RCHCA.GENERAL.P) 192.907(a) (192.933(a))

2. General Requirements *Do the repair records show what actions the operator took to address integrity issues?* (AR.RCHCA.GENERAL.R) 192.947(a) (192.933(a))

3. Temporary Pressure Reduction *Do the repair procedures require a temporary pressure reduction for making repairs in covered segments?* (AR.RCHCA.PRESSUREREDUC.P) 192.907(a) (192.933(a)(1);192.933(a)(2);192.933(d)(1))

4. Temporary Pressure Reduction *Do records demonstrate that a temporary pressure reduction was taken immediately or when a repair schedule could not be met?* (AR.RCHCA.PRESSUREREDUC.R) 192.947 (192.933(a)(1);192.933(a)(2);192.933(d)(1))

5. Discovery of Condition *Do the repair procedures require properly define discovery and the required time frame for response in covered segments?* (AR.RCHCA.DISCOVERY.P) 192.907 (192.933(b))

6. Discovery of Condition *Do the records show that discovery was declared in the required timeframe?* (AR.RCHCA.DISCOVERY.R) 192.947 (192.933(b))

7. Prioritized Scheduling *Do the repair procedures discuss remediating conditions according to a prioritization schedule in covered segments?* (AR.RCHCA.SCHEDULE.P) 192.907(a) (192.933(c))

8. Prioritized Scheduling *Do records demonstrate that defects in covered segments were remediated according to a prioritization schedule?* (AR.RCHCA.SCHEDULE.R) 192.947 (192.933(c))

9. Immediate Repair Conditions *Do the repair procedures cover all of the elements for making immediate repairs in covered segments?* (AR.RCHCA.IMMEDIATE.P) 192.907 (192.933(d)(1))

10. Immediate Repair Conditions *Do records demonstrate that all conditions requiring immediate repair were repaired immediately upon discovery?* (AR.RCHCA.IMMEDIATE.R) 192.947 (192.933(d)(1))

11. One-Year Conditions *Do the repair procedures cover all of the elements for making repairs in covered segments for One-year conditions?* (AR.RCHCA.ONEYEAR.P) 192.907 (192.933(d)(2))

12. One-Year Conditions *Do records demonstrate that all conditions meeting the one-year condition requirements were repaired within one year of discovery?* (AR.RCHCA.ONEYEAR.R) 192.947 (192.712;192.933(d)(2))

13. Monitored Conditions *Do the repair procedures require the operator to record and monitor conditions that meet monitoring criteria in covered segments?* (AR.RCHCA.MONITOR.P) 192.907 (192.933(d)(3))

14. Monitored Conditions *Do records demonstrate that all defects were properly categorized?* (AR.RCHCA.MONITOR.R) 192.947 (192.712;192.933(d)(3))

15. Crack Defects *Do the repair procedures require the operator to perform direct examinations of known locations of cracks or crack-like defects?* (AR.RCHCA.CRACK.P) 192.907 (192.933(e))

16. Crack Defects *Do the records show that the operator performed direct examinations of known locations of cracks or crack-like defects?* (AR.RCHCA.CRACK.R) 192.947 (192.933(e))

17. Field Inspection - Remedial Actions *Is anomaly remediation adequate for the covered segments being observed?* (AR.RCHCA.REMEDIATION.O) 192.933

18. Repair Procedures (Temporary) *Do the repair procedures require the operator to take immediate temporary measures to protect the public?* (AR.RCHCA.CRITERIATEMP.P) 192.605(b)(1) (192.711(a))

19. Repair Procedures (Temporary) *Do the records show that the operator took immediate temporary measures to protect the public?* (AR.RCHCA.CRITERIATEMP.R) 192.709 (192.711(a))

20. Repair Procedures (Permanent) *Do the repair procedures require the operator to make permanent repairs?* (AR.RCHCA.CRITERIAPERM.P) 192.605(b)(1) (192.711(b))

21. Repair Procedures (Permanent) *Do the records show that the operator made permanent repairs on both non-integrity management and integrity management segments of the pipeline?* (AR.RCHCA.CRITERIAPERM.R) 192.709 (192.711(b))

22. Repair Procedures (Weld Patch) *Do the repair procedures prohibit the operator from using welded patches?* (AR.RCHCA.CRITERIAWELD.P) 192.605(b)(1) (192.711(c))

23. Repair Procedures (Weld Patch) *Do the records show that the operator made repairs using welded patches?* (AR.RCHCA.CRITERIAWELD.R) 192.709 (192.711(c))

24. Repair Procedures (Observations) *Is the anomaly remediation adequate for segment being observed?* (AR.RCHCA.CRITERIAOBSERVE.O) 192.711

Assessment and Repair - Repair Criteria (Non-HCA)

1. General Requirements *Do the repair procedures detail making repairs in a safe manner in non-covered segments?* (AR.RCNONHCA.GENERAL.P) 192.605(a) (192.714(a);192.714(b);192.714(h))

2. General Requirements *Do records demonstrate that repairs were made in a safe manner in non-covered segments?* (AR.RCNONHCA.GENERAL.R) 192.714(b) (192.714(h))

3. Prioritized Scheduling *Do the repair procedures discuss remediating conditions according to a prioritization schedule in non-covered segments?* (AR.RCNONHCA.SCHEDULE.P) 192.605 (192.714(c);192.714(h))

4. Prioritized Scheduling *Do records demonstrate that defects in non-covered segments were remediated according to a prioritization schedule?* (AR.RCNONHCA.SCHEDULE.R) 192.714(c) (192.105;192.714(h))

5. Immediate Repairs *Do the repair procedures cover all of the elements for making immediate repairs in non-covered segments?* (AR.RCNONHCA.IMMEDIATE.P) 192.605 (192.714(d)(1);192.714(h))

6. Immediate Repairs *Do records demonstrate that all conditions requiring immediate repair were repaired immediately upon discovery?* (AR.RCNONHCA.IMMEDIATE.R) 192.714(d)(1) (192.712;192.714(h))

7. Two-Year Conditions *Do the repair procedures cover all of the elements for making repairs in non covered segments for Two-year conditions?* (AR.RCNONHCA.TWOYEAR.P) 192.605 (192.714(d)(2);192.714(h))

8. Two-Year Conditions *Do records demonstrate that all conditions meeting the two-year condition requirements were repaired within two years of discovery?* (AR.RCNONHCA.TWOYEAR.R) 192.714(d)(2) (192.712;192.714(h))

9. Monitored Conditions *Do the repair procedures require the operator to record and monitor conditions that meet monitoring criteria in non covered segments?* (AR.RCNONHCA.MONITOR.P) 192.605 (192.714(d)(3);192.714(h))

10. Monitored Conditions *Do records demonstrate that all defects were properly categorized?* (AR.RCNONHCA.MONITOR.R) 192.714(d)(3) (192.712;192.714(h))

11. Temporary Pressure Reduction *Do the repair procedures require a temporary pressure reduction for making repairs in non-covered segments?* (AR.RCNONHCA.PRESSUREREDUC.P) 192.605 (192.714(e);192.714(h))

12. Temporary Pressure Reduction *Do records demonstrate that a temporary pressure reduction was taken immediately or when a repair schedule could not be met?* (AR.RCNONHCA.PRESSUREREDUC.R) 192.714(e) (192.714(h))

13. Other Conditions *Do the repair procedures require the operator to take appropriate remedial action for other conditions that could affect safe operations in non-covered segments?* (AR.RCNONHCA.OTHER.P) 192.605 (192.714(f);192.714(h))

14. Other Conditions *Do the records show that the operator took appropriate remedial action for other conditions that could affect safe operations in non-covered segments?* (AR.RCNONHCA.OTHER.R) 192.714(f) (192.714(h))

15. Crack Defects *Do the repair procedures require the operator to perform direct examinations of known locations of cracks or crack-like defects?* (AR.RCNONHCA.CRACK.P) 192.605 (192.714(g);192.714(h))

16. Crack Defects *Do the records show that the operator performed direct examinations of known locations of cracks or crack-like defects?* (AR.RCNONHCA.CRACK.R) 192.714(g) (192.714(h))

17. Field Inspection - Remedial Actions *Is anomaly remediation adequate for the non-covered segments being observed?* (AR.RCNONHCA.REMEDIATION.O) 192.714

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. Safety While Making Repair *Are repairs made in a safe manner and to prevent damage to persons and property?* (AR.RMP.SAFETY.O) 192.605(b)(9) (192.713(b))

3. Prevention of Accidental Ignition *Is there a process for preventing accidental ignition where gas presents a hazard of fire or explosion?* (AR.RMP.IGNITION.P) 192.605(b)(1) (192.751(a);192.751(b);192.751(c))

4. Prevention of Accidental Ignition *Do records indicate adequate steps were taken by the operator to prevent accidental ignition prior to performing work?* (AR.RMP.IGNITION.R) 192.751(a) (192.751(b);192.751(c))

5. 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))

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

7. Tapping Pipelines Under Pressure *From a review of selected records, were the personnel who performed pressure taps on pipelines under pressure qualified?* (AR.RMP.HOTTAP.R) 192.627 (192 Subpart N)

8. Tapping Pipelines Under Pressure *Were pressure taps on pipelines under pressure performed in accordance with processes by qualified personnel?* (AR.RMP.HOTTAP.O) 192.627 (192 Subpart N)

9. Transmission Lines General Requirements for Repair Procedures *Does the repair process capture the requirements of 192.711 for transmission lines?* (AR.RMP.REPAIRREQT.P) 192.605(b)(1) (192.711(a);192.711(b);192.711(c);192.717(b)(3))

10. Transmission Lines Permanent Field Repair of Defects *Is the process adequate for the permanent field repair of defects in transmission lines?* (AR.RMP.FIELDREPAIRDEFECT.P) 192.605(b)(1) (192.713(a);192.713(b))

11. Permissible Repair Methods *From the review of records, were all repairs performed in accordance with processes, applicable sections of Part 192?* (AR.RMP.METHOD.R) 192.709(a) (192.713(a);192.713(b);192.717(a);192.717(b))

12. Qualification of Personnel Performing Pipeline Repair *From the review of selected records, were personnel performing repairs, other than welding, and post repair tests qualified for the task they performed?* (AR.RMP.REPAIRQUAL.R) 192.807(b) (192.805(h))

13. Transmission Lines Permanent Field Repair of Welds *Is the process adequate for the permanent field repair of welds?* (AR.RMP.FIELDREPAIRWELDS.P) 192.605(b) (192.715(a);192.715(b);192.715(c))

14. Welder Qualification *From the review of selected records, were repairs requiring welding performed by qualified welders using qualified welding processes?* (AR.RMP.WELDERQUAL.R) 192.225(a) (192.225(b);192.227(a);192.227(b);192.229(a);192.229(b);192.229(c);192.229(d))

15. Repair of Weld Defects *From the review of records, were weld defects repaired in accordance with 192.245 and 192.715?* (AR.RMP.WELDQUAL.R) 192.245(a) (192.245(b);192.245(c);192.715(a);192.715(b);192.715(c))

16. Inspection of Welds *From the review of records, were welds inspected and examined in accordance with 192.241 and 192.243?* (AR.RMP.WELDINSPECT.R) 192.241(a) (192.241(b);192.241(c);192.243(a);192.243(b);192.243(c);192.243(d);192.243(e);192.243(f))

17. Inspection of Welds *Were welds inspected and examined in accordance with 192.241 and 192.243?* (AR.RMP.WELDINSPECT.O) 192.241(a) (192.241(b);192.241(c);192.243(a);192.243(b);192.243(c);192.243(d);192.243(e);192.243(f))

18. Repair Records Pipe Condition *Do repair records document all information needed to understand the conditions of the pipe and its environment and provide the information needed to support the Integrity Management Risk Model?* (AR.RMP.PIPECONDITION.R) 192.709(a) (192.709(b))

19. Replacement Components *From the review of records, were any components that were replaced constructed to the same or higher standards as the original component?* (AR.RMP.REPLACESTD.R) 192.713(a) (Part 192 Subpart D)

20. Transmission Lines Permanent Field Repair of Leaks *Is there an adequate process for the permanent field repair of leaks on transmission lines?* (AR.RMP.FIELDREPAIRLEAK.P) 192.605(b) (192.717(a);192.717(b))

21. Transmission Lines Permanent Field Repair of Leaks *From the review of records, did the operator properly repair leaks on transmission lines?* (AR.RMP.FIELDREPAIRLEAK.R) 192.717(a) (192.717(b))

22. Transmission Lines Permanent Field Repair of Leaks *Does the operator properly repair leaks on transmission lines?* (AR.RMP.FIELDREPAIRLEAK.O) 192.717(a) (192.717(b))

23. Transmission Lines Testing of Repairs *Is the process adequate for the testing of replacement pipe and repairs made by welding on transmission lines?* (AR.RMP.WELDTEST.P) 192.605(b) (192.719(a);192.719(b))

24. Transmission Lines Testing of Repairs *From the review of records, did the operator properly test replacement pipe and repairs made by welding on transmission lines?* (AR.RMP.WELDTEST.R) 192.719(a) (192.719(b))

25. Transmission Lines Testing of Repairs *Does the operator properly test replacement pipe and repairs made by welding on transmission lines?* (AR.RMP.WELDTEST.O) 192.719(a) (192.719(b))

26. Non-Destructive Testing of Pipeline for Cracking and/or SCC When Exposed for Repair *Does the process require that when a pipeline segment that meets the conditions for cracking and/or possible SCC is exposed (i.e., the coating is removed), an NDE method (e.g., MPI, UT) is employed to evaluate for cracking?* (AR.RMP.CRACKNDT.P) 192.929(b) (ASME B31.8S-2004 Appendix A3.4)

27. Non-Destructive Testing of Pipeline for Cracking and/or SCC When Exposed for Repair *From the review of records, when a pipeline segment that meets the conditions of possible cracking and/or SCC is exposed (i.e., the coating is removed), was an NDE method (e.g., MPI, UT) employed to evaluate for cracking and/or SCC?* (AR.RMP.CRACKNDT.R) 192.947(g) (192.929(b))

Assessment and Repair - Pipeline Assessments for Non-IM Onshore Pipelines

1. Initial Assessment Schedule (Outside of HCAs) *What is the process/plan (including the selection criteria, timeline, and use of prior assessments) for performing the initial assessments as required by §192.710(b)(1) and (b)(3)?* (AR.PA.ASSESSSCHED.P) 192.710(b)(1) (192.710(b)(3))

2. Initial Assessment Schedule (Outside of HCAs) *Do records demonstrate pipeline segments were initially assessed (and when) per §192.710(b)(1)?* (AR.PA.ASSESSSCHED.R) 192.710(b)(1) (192.710(b)(3))

3. Assessment Methods (Outside of HCAs) *Do the procedures include a methodology for conducting the initial assessment of pipeline segments outside of an HCA per §192.710(c)?* (AR.PA.ASSESSMETHODS.P) 192.710(c)

4. Assessment Methods (Outside of HCAs) *Do the records confirm the methodology used for conducting the initial assessment of pipeline segments outside of an HCA per §192.710(c) was selected based on the results of a risk-based prioritization?* (AR.PA.ASSESSMETHODS.R) 192.710(c)

5. Periodic Re-Assessments *Do the procedures require reassessments to be conducted at least once every 10 years, not to exceed 126 months, or a shorter interval based upon the nature and extent of anomalies discovered in the previous assessment as required by §192.710(b)(2)?* (AR.PA.REASSESSMENTS.P) 192.710(b)(2) (192.710(b)(3);192.939(a))

6. Periodic Re-Assessments *Do the records indicate adequate documentation of and rationale for the reassessment intervals?* (AR.PA.REASSESSMENTS.R) 192.710(b)(2) (192.710(b)(3);192.939(a))

7. Assessments - Other Technology *Where the operator has elected to use "Other Technology" (or other technical evaluation process) for assessing pipeline segments, does the process demonstrate an equivalent understanding of the condition of the line pipe for each of the threats to which the pipeline is susceptible?* (AR.PA.OTHERTECH.P) 192.710(c)(7) (192.18;192.506(b))

8. Assessments - Other Technology *Where the operator has elected to use "Other Technology" (or other technical evaluation process) for assessing pipeline segments, do the records demonstrate an equivalent understanding of the condition of the line pipe for each of the threats to which the pipeline is susceptible?* (AR.PA.OTHERTECH.R) 192.710(c)(7) (192.18;192.506(b))

9. Assessments - Anomaly Remediation Criteria *Did the operator's procedures for anomaly investigation and remediation criteria for non-HCA pipeline segments meet the requirements of §§192.485, 192.711, and 192.713?* (AR.PA.REMEDIATIONCRITERIA.P) 192.710(f)

10. Assessments - Anomaly Remediation Criteria *Do the remediation records indicate that conducted remediation activities were conducted in accordance with the procedures?* (AR.PA.REMEDIATIONCRITERIA.R) 192.710(f) (192.933;192.709)

11. Threat Identification *Does the process include requirements to identify and evaluate all potential threats to each covered pipeline segment?* (AR.PA.THREATID.P) 192.710

12. Threat Identification *Do records demonstrate that all potential threats to each covered pipeline segment have been identified and evaluated?* (AR.PA.THREATID.R) 192.710

13. Risk Analysis - Methodology *Does the process include requirements for a risk assessment and/or risk prioritization, that considers all of the identified threats for each assessable non-HCA pipeline segment?* (AR.PA.RAMETHOD.P) 192.710

14. Risk Analysis - Methodology *Do records demonstrate that the operator has performed a risk assessment on the non-HCA pipeline segments?* (AR.PA.RAMETHOD.R) 192.710

15. Risk Analysis - Determination of Risk *Does the process include requirements for risk factors that could affect the likelihood of a release, and for factors that could affect the consequences of potential releases, be accounted for and combined in an appropriate manner to produce a risk value for each pipeline segment?* (AR.PA.RAFACTORS.P) 192.710

16. Risk Analysis - Determination of Risk *Do records demonstrate that risk analysis data is combined in an appropriate manner to produce a risk value for each pipeline segment?* (AR.PA.RAFACTORS.R) 192.710

Assessment and Repair - Special Permits

1. Special Permits *If the pipeline operates under a special permit have the processes been modified to incorporate the requirements of the permit for required ILI assessments performed?* (AR.SP.ILISP.P) 190.341(d)

2. Special Permits *If the pipeline operates under a special permit, from a review of selected records, were required ILI assessments performed?* (AR.SP.ILISP.R) 190.341(d)

3. Special Permits *If the pipeline operates under a special permit have the processes been modified to incorporate the requirements of the permit for required repairs?* (AR.SP.REPAIRSP.P) 190.341(d)

4. Special Permits *If the pipeline operates under a special permit, from a review of selected records, were required repairs performed?* (AR.SP.REPAIRSP.R) 190.341(d)

CRM, SCADA, and Leak Detection - CRM 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 *Are procedures approved, in place, and implemented?* (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 - CRM 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 (1st Edition) 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 (1st Edition) 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 (1st Edition) 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 (1st Edition) 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 (1st Edition) administration been implemented?* (CR.SCADA.ADMINISTRATION.R) 192.631(c)(1)

7. SCADA Impracticality *If any/all applicable paragraph(s) of API RP 1165 (1st Edition) 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.BACKUPSCADAADEQUACY.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)

29. Overpressure Protection Features *Are processes adequate for inspection and test of each pressure relieving device in a compressor station, including periodic operation to determine opening at the correct set pressure?* (CR.SCADA.CMPPRESSRELIEFTEST.P) 192.731(a) (192.731(b);192.731(c);192.631(b))

30. Overpressure Protection Features *Do inspection and test records for each pressure relieving device in a compressor station indicate it was operated periodically to determine that it opens at the correct set pressure?* (CR.SCADA.CMPPRESSRELIEFTEST.R) 192.731(a)

31. Overpressure Protection Features *Are there procedures for inspection and test of each pressure relieving device at pressure limiting stations?* (CR.SCADA.PRESSRELIEFTEST.P) 192.739(a) (192.631(b))

32. Overpressure Protection Features *Do records indicate adequate inspection and testing for each pressure relieving device in a pressure limiting station?* (CR.SCADA.PRESSRELIEFTEST.R) 192.739(a) (192.631(b))

33. Valve Maintenance *If the valve is monitored by SCADA, does the process account for how valve testing is coordinated with the controller?* (CR.SCADA.VALVETEST.P) 192.745(a) (192.631(b))

34. Valve Maintenance *If SCADA is used to operate valves, do records indicate the SCADA system was adequately involved in the testing to ensure valve operation?* (CR.SCADA.VALVETEST.R) 192.709(c) (192.745(a))

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) (192.631(a))

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) (192.631(a))

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) (192.631(a);192.631(g)(1)(i))

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) (192.631(a))

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) (192.631(a))

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 and that periods of time off that accommodates 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.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) (192.631(a))

9. On Call Controllers *For controllers who are on call, do records include shift schedules, when calls were made to the on call employee, and how long the individual worked?* (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) (192.631(a))

11. 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) (192.631(a))

12. 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) (192.631(a))

13. 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)

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

15. 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) (192.631(a))

16. Shift Holdover *Does the daily HOS limit and 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) (192.631(a))

17. 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)

18. 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) (192.631(a))

19. 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);192.631(a))

20. 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);192.631(a))

21. Fatigue Mitigation Strategies *Does fatigue education address fatigue mitigation strategies (countermeasures), how off-duty activities contribute to fatigue and recognizing the effects of fatigue?* (CR.CRMFM.FATIGUESTRATEGY.P) 192.631(d)(2) (192.631(a))

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

23. 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) (192.631(a))

24. 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 (e.g., operating a valve, O&M inspections/calibrations, RTU/PLC modifications) 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 (e.g., operating a valve, O&M inspections/calibrations, RTU/PLC modifications) 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 training been conducted on the abnormal operating conditions that are likely to occur simultaneously or in sequence identified by the operator?* (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) (ADB-2014-02)

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.P) 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)

CRM, SCADA, and Leak Detection - Leak Detection

1. Leak Detection Measures *Do records demonstrate the operator has identified, considered, or implemented leak detection measures to mitigate the consequences of a pipeline failure?* (CR.LD.LDSYS.R) 192.631(g)

2. Facility Leak Detection *Does the process require continuing surveillance of facilities to determine and take appropriate action concerning failures/leakage history?* (CR.LD.FACILITY.P) 192.605(b)(1) (192.613(a);192.631(b))

3. Facility Leak Detection *Do records indicate continuing surveillance of facilities to determine and take appropriate action concerning failures/leakage history?* (CR.LD.FACILITY.R) 192.605(b)(1) (192.613(a);192.631(b))

Design and Construction - Compressor Station Construction

1. Compressor Stations - Storage of Combustible Materials *Does the process require that flammable/combustible materials are stored as required, and aboveground oil or gasoline storage tanks, are installed at compressor stations according to 192.735(b)?* (FS.CS.CMPCOMBUSTIBLE.P) 192.303 (192.735(a);192.735(b);NFPA 30 (2012))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

2. Compressor Stations - Storage of Combustible Materials *Do field observations demonstrate that flammable/combustible materials are safely stored as required, and aboveground oil or gasoline storage tanks are installed at compressor stations according to §192.735(b)?* (FS.CS.CMPCOMBUSTIBLE.O) 192.735(a) (192.735(b);NFPA 30 (2012))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

3. Compressor Stations - Gas Detection and Alarms *Does the process require compressor buildings to have a fixed gas detection and alarm system installed according to §192.736?* (FS.CS.CMPGASDETECT.P) 192.303 (192.736(a))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

4. Compressor Stations - Gas Detection and Alarms *Do field observations confirm that compressor buildings have a fixed gas detection and alarm system installed according to 192.736?* (FS.CS.CMPGASDETECT.O) 192.303 (192.736(a);192.736(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Design and Construction - Construction

1. Construction Inspection - General *Does the process require the pipeline to be inspected to ensure that it is constructed in accordance with Part 192?* (DC.CO.INSPECTGEN.P) 192.303 (192.305)

2. Construction Inspection - General *Do field observation verify the pipeline being inspected to ensure it is constructed in accordance with Part 192?* (DC.CO.INSPECTGEN.O) 192.303 (192.305)

3. Casings *Does the process require railroad or highway casings to be in accordance with the requirements of 192.323?* (DC.CO.CASING.P) 192.303 (192.323(a);192.323(b);192.323(c);192.323(d);192.467(a);192.467(b))

4. Casings *Do field observations confirm railroad or highway casings are being installed as designed and specified, and in accordance with 192.323?* (DC.CO.CASING.O) 192.323 (192.467(a);192.467(b))

5. Joining of Materials Other than by Welding *Does the process require that pipeline joints (to be made other than by welding) be designed and installed in accordance with 192.273?* (DC.CO.NONWELDJOINT.P) 192.303 (192.273(a);192.273(b);192.273(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

6. Written Construction Specifications or Standards *Does the operator have written construction specifications or standards as required of 192.303?* (DC.CO.SPECS.P) 192.303

7. Inspection of Materials *Does the process require pipe and other components to be visually inspected prior to installation?* (DC.CO.INSPECTVISUAL.P) 192.303 (192.307)

8. Inspection of Materials *Do field observations confirm each length of pipe and each component is being visually inspected for damage according to 192.307?* (DC.CO.INSPECTVISUAL.O) 192.303 (192.307)

9. Repair of Steel Pipe *Does the process require repairs to steel pipe in accordance with §192.309?* (DC.CO.REPAIR.P) 192.303 (192.309;192.493)

10. Repair of Steel Pipe *Do records demonstrate that repairs to steel pipe are being made in accordance with §192.309?* (DC.CO.REPAIR.R) 192.303 (192.309;192.493)

11. Repair of Steel Pipe *Do field observations confirm repairs to steel pipe being made in accordance with §192.309?* (DC.CO.REPAIR.O) 192.303 (192.309)

12. Bends and Elbows *Does the process require field bends to be made in accordance with 192.313?* (DC.CO.FIELDBEND.P) 192.303 (192.313(a);192.313(b);192.313(c);192.315(a))

13. Bends and Elbows *Do field observations confirm field bends are being made in accordance with 192.313(a)?* (DC.CO.FIELDBEND.O) 192.313(a) (192.313(b);192.313(c);192.315(a))

14. Wrinkle Bends *Does the process require that wrinkle bends are made in accordance with 192.315?* (DC.CO.WRINKLEBEND.P) 192.303 (192.315(a);192.315(b))

15. Wrinkle Bends *Do field observations confirm wrinkle bends are made in accordance with 192.315?* (DC.CO.WRINKLEBEND.O) 192.315(a) (192.315(b))

16. Protection from Hazards *Does the operator have written specifications requiring transmission line or main be protected from hazards in accordance with 192.317?* (DC.CO.HAZARD.P) 192.303 (192.317(a);192.317(b);192.317(c);192.103;ADB-2022-01)

17. Protection from Hazards *Do field observations demonstrate or confirm installed transmission line or main is protected from hazards?* (DC.CO.HAZARD.O) 192.317 (192.303;192.614)

18. Corrosion Control - Inspect Coating Before Lowering Pipe *Do written specifications stipulate that each external protective coating must be inspected just prior to lowering the pipe into the ditch and backfilling, and any damage detrimental to effective corrosion control must be repaired?* (DC.CCPROT.COATLOWER.P) 192.143(b) (192.461(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

19. Corrosion Control - Inspect Coating Before Lowering Pipe *Do records indicate that each pipe segment with external protective coating was inspected just prior to lowering into the ditch and backfilling, and any damage detrimental to effective corrosion control was repaired?* (DC.CCPROT.COATLOWER.R) 192.143(b) (192.461(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

20. Corrosion Control - Inspect Coating Before Lowering Pipe *Do the field observations confirm that each pipe segment with external protective coating was inspected just prior to lowering into the ditch and backfilling, and any damage detrimental to effective corrosion control was repaired?* (DC.CCPROT.COATLOWER.O) 192.143(b) (192.461(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

21. Installation of Pipe in a Ditch *Does the process require that piping be installed such that stresses are minimized and the coating is protected?* (DC.CO.INSTALL.P) 192.303 (192.319(a);192.319(b))

22. Installation of Pipe in a Ditch *Do records demonstrate that piping was installed such that stresses are minimized and the coating is protected?* (DC.CO.INSTALL.R) 192.303 (192.319(a);192.319(b);192.493)

23. Installation of Pipe in a Ditch *When pipe is placed in the ditch, do field observations confirm pipe is installed so as to fit the ditch, minimize stresses, and protect the pipe coating from damage?* (DC.CO.INSTALL.O) 192.319(a) (192.319(b))

24. Installation of Pipe in a Ditch - Offshore *Does the process require that certain offshore pipe be installed in accordance with 192.319(c)?* (DC.CO.INSTALLOFFSHORE.P) 192.303 (192.319(c))

25. Installation of Pipe in a Ditch - Offshore *Do records indicate certain offshore pipe was installed in accordance with 192.319(c)?* (DC.CO.INSTALLOFFSHORE.R) 192.319(c)

26. Installation of Pipe in a Ditch - Offshore *Do field observations confirm certain offshore pipe is installed in accordance with 192.319(c)?* (DC.CO.INSTALLOFFSHORE.O) 192.319(c)

27. Installation of Pipe in a Ditch - GOM & Inlets *Does the process require that certain pipe in the Gulf of Mexico and its inlets be installed to the burial depths required by 192.319(c)?* (DC.CO.INSTALLGOM.P) 192.303 (192.319(c))

28. Installation of Pipe in a Ditch - GOM & Inlets *Do records indicate that certain pipe in the Gulf of Mexico and its inlets was installed to the burial depths required by 192.319(c)?* (DC.CO.INSTALLGOM.R) 192.303 (192.319(c))

29. Underground Clearance *Does the process require pipe to be installed with clearances specified in 192.325 and (if plastic) installed as to prevent heat damage to the pipe?* (DC.CO.CLEARANCE.P) 192.303 (192.325(a);192.325(b);192.325(c);192.325(d))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

30. Underground Clearance *Do records indicate that transmission lines or mains are installed with clearances specified in 192.325, and (if plastic) installed as to prevent heat damage to the pipe?* (DC.CO.CLEARANCE.R) 192.325(a) (192.325(b);192.325(c);192.325(d))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

31. Underground Clearance *Do field observations indicate the transmission lines or mains (and bottles/bottle-type holders) are installed with the clearances specified in 192.325 and (if plastic) installed as to prevent heat damage to the pipe?* (DC.CO.CLEARANCE.O) 192.325(a) (192.325(b);192.325(c);192.325(d);192.175(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

32. Depth of Cover - Onshore *Does the process specify that onshore piping is to be installed with a depth of cover as specified in 192.327?* (DC.CO.COVERONSHORE.P) 192.303 (192.327(a);192.327(b);192.327(c);192.327(d);192.327(e))

33. Depth of Cover - Onshore *Is onshore piping minimum cover provided as specified in 192.327?* (DC.CO.COVERONSHORE.R) 192.327(a) (192.327(b);192.327(c);192.327(d);192.327(e))

34. Depth of Cover - Onshore *Do field observations confirm onshore piping was installed with the minimum cover specified in 192.327?* (DC.CO.COVERONSHORE.O) 192.327(a) (192.327(b);192.327(c);192.327(d);192.327(e))

35. Depth of Cover - Offshore *Does the process require that offshore piping is to be installed with a depth of cover as specified in 192.327?* (DC.CO.COVEROFFSHORE.P) 192.303 (192.327(f);192.327(g);192.612(c)(3))

36. Depth of Cover - Offshore *To the extent possible, do field observations confirm offshore piping minimum cover as specified in 192.327?* (DC.CO.COVEROFFSHORE.O) 192.327(a) (192.327(f);192.327(g);192.612(c)(3))

37. Alternative MAOP: Construction *For the AMAOP pipeline, does the process include conditions on the application of alternative MAOP?* (DC.CO.AMAOPCONST.P) 192.303 (192.328;192.620(b))

38. Alternative MAOP: Construction *For the AMAOP pipeline, do records indicate the new or existing pipeline segments meet the additional construction requirements of 192.328?* (DC.CO.AMAOPCONST.R) 192.328 (192.328(a);192.328(b);192.328(c);192.328(d);192.328(e);192.620(b))

39. Alternative MAOP: Construction *For the AMAOP pipeline, do field observations confirm the new or existing pipeline segments meet the additional construction requirements of 192.328?* (DC.CO.AMAOPCONST.O) 192.328 (192.328(a);192.328(b);192.328(c);192.328(d);192.328(e);192.620(b))

Design and Construction - Construction Weld Inspection

1. Inspection and Test of Welds *Does the operator have comprehensive written specifications or procedures for the inspection and testing of welds that meet the requirements of 192.241?* (DC.WELDINSP.WELDVISUALQUAL.P) 192.241 (192.225;192.227;192.229;192.231;192.233;192.243;192.245)

2. Inspection and Test of Welds *Does the operator have records showing that the welding was visually and/or non-destructively tested according to the requirements of 192.241 and the operator's specifications or procedures?* (DC.WELDINSP.WELDVISUALQUAL.R) 192.241 (192.225;192.227;192.229;192.231;192.233;192.243;192.245)

3. Inspection and Test of Welds *Do field observations confirm that inspection and testing of welds was being done in accordance with the requirements of 192.241 and the operator's written specifications or procedures?* (DC.WELDINSP.WELDVISUALQUAL.O) 192.241(a) (192.225;192.227;192.229;192.231;192.233;192.243;192.245)

4. Nondestructive Test and Interpretation Procedures *Is there a process for nondestructive testing and interpretation in accordance with 192.243?* (DC.WELDINSP.WELDNDT.P) 192.243

5. Nondestructive Test and Interpretation Procedures *Do records indicate that NDT and interpretation are in accordance with 192.243?* (DC.WELDINSP.WELDNDT.R) 192.243

6. Nondestructive Test and Interpretation Procedures *Do field observations indicate that welding NDT procedures are being properly followed?* (DC.WELDINSP.WELDNDT.O) 192.243

7. 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.WELDINSP.WELDREPAIR.P) 192.245 (192.303)

8. Repair or Removal of Weld Defects *Do records indicate that unacceptable welds are removed and/or repaired in accordance with 192.245?* (DC.WELDINSP.WELDREPAIR.R) 192.245 (192.303)

9. Repair or Removal of Weld Defects *Do field observations confirm that unacceptable welds removed and/or repaired in accordance with 192.245?* (DC.WELDINSP.WELDREPAIR.O) 192.245 (192.303)

Design and Construction - Construction Welding Procedures

1. Welding Procedures *Does the operator have written specifications requiring qualified welding procedures in accordance with 192.225?* (DC.WELDPROCEDURE.WELD.P) 192.225

2. Welding Procedures *Does the operator have detailed records showing proper qualification of the welding procedures in accordance with 192.225?* (DC.WELDPROCEDURE.WELD.R) 192.225

3. Welding Procedures *Do field observations indicate proper qualification of the welding procedures in accordance with 192.225?* (DC.WELDPROCEDURE.WELD.O) 192.225

4. Welding Procedures - Welder Qualification *Do the written specifications require welders to be qualified in accordance with applicable sections of API Standard 1104 (21st Edition) or ASME BPVC, Section IX (2007) and cover the limitations in §192.229?* (DC.WELDPROCEDURE.WELDERQUAL.P) 192.227 (192.225;192.229)

5. Welding Procedures - Welder Qualification *Do the records demonstrate that the welders are qualified in accordance with applicable sections of API Standard 1104 (21st Edition) or ASME BPVC, Section IX (2007), and cover the limitations in §192.229?* (DC.WELDPROCEDURE.WELDERQUAL.R) 192.227 (192.225;192.229)

6. Welding Procedures - Welder Qualification *Do field observations confirm that the welders are qualified in accordance with applicable sections of API Standard 1104 (21st Edition) or ASME BPVC, Section IX (2007), and cover the limitations in §192.229?* (DC.WELDPROCEDURE.WELDERQUAL.O) 192.227 (192.225;192.229)

7. Welding Weather *Does the operator have written specifications that require the welding operation to be protected from weather conditions that would impair the quality of the completed weld?* (DC.WELDPROCEDURE.WELDWEATHER.P) 192.231 (192.225;192.227)

8. Welding Weather *Does the operator have records that document weather conditions, suspension, protective measures, and resumption of the welding processes to prevent impairment of the quality of the completed weld?* (DC.WELDPROCEDURE.WELDWEATHER.R) 192.231 (192.225;192.227)

9. Welding Weather *Do field observations indicate that welding operations are protected from weather conditions that would impair the quality of welds?* (DC.WELDPROCEDURE.WELDWEATHER.O) 192.231 (192.225;192.227)

10. Miter Joints *Does the operator have written specifications or procedures that prohibit the use of certain miter joints as required by 192.233?* (DC.WELDPROCEDURE.MITERJOINT.P) 192.233

11. Miter Joints *In the event that improper miter joints are installed, does the operator have records to indicate that the miter joints were removed as required by 192.233?* (DC.WELDPROCEDURE.MITERJOINT.R) 192.233

12. Miter Joints *In the event that miter joints were being used, do field observations show that the miter joints were properly constructed as required by 192.233?* (DC.WELDPROCEDURE.MITERJOINT.O) 192.233

13. Preparation for Welding *Does the operator have comprehensive written specifications or procedures that require preparations for welding in accordance with 192.235?* (DC.WELDPROCEDURE.WELDPREP.P) 192.235

14. Preparation for Welding *Do welding inspection records show that welding preparation was not performed according to 192.235 and the operator's specifications or procedures, or that identified issues were not corrected?* (DC.WELDPROCEDURE.WELDPREP.R) 192.235

15. Preparation for Welding *Do field observations confirm that welding preparations are being made in accordance with 192.235 and the operator's welding specifications and procedures?* (DC.WELDPROCEDURE.WELDPREP.O) 192.235 (192.225;192.227;192.229;192.231;192.233;192.241;192.243;192.245)

Design and Construction - Design of Pipe

1. Pipe Design - General (Onshore) *Does the operator have specifications in place for pipe design so that the wall thickness is sufficient or installed with adequate protection to withstand external pressures and loads that will be imposed on the pipe after installation?* (DC.DP.PIPEDESGEN.P) 192.103 (192.105;192.107;192.109;192.111;192.112;192.115;192.121;192.123;192.125;192.303;192.305;192.307)

2. Steel Pipe Design Pressure (MAOP) *Does the operator have written procedures in place for steel pipe design so that the wall thickness is sufficient for the intended maximum operating pressure as required by 192.105?* (DC.DP.PIPEDESMAOP.P) 192.105 (192.103;192.107;192.109;192.111;192.113;192.115;192.121;192.123;192.125;192.303;192.305;192.307)

3. Steel Pipe Design Pressure (MAOP) *Do design records and drawings indicate the design pressure of steel pipe is established in accordance with 192.105(a)?* (DC.DP.PIPEDESMAOP.R) 192.105 (192.107;192.109;192.111;192.113;192.115)

4. Pipe Class Location *Does the operator have written procedures for determining the class location for the new (or converted) pipeline immediately prior to design?* (DC.DP.CLASSLOCATION.P) 192.111 (192.5;192.105;192.609)

5. Pipe Class Location *Does the operator have complete records showing the determination of class location(s) for the new (or converted) pipeline?* (DC.DP.CLASSLOCATION.R) 192.111 (192.5;192.105;192.609)

6. Pipe Class Location *Do field verifications confirm the operator's class location determinations for the new pipeline?* (DC.DP.CLASSLOCATION.O) 192.111 (192.5;192.105;192.609)

7. Steel Pipe Design Factor *Does the operator have written procedures for determining the Design Factor to be used for steel pipe as required by 192.111?* (DC.DP.PIPEDESFACTOR.P) 192.111 (192.103;192.105;192.107;192.109;192.112;192.115;192.121;192.123;192.125;192.303;192.305;192.307)

8. Steel Pipe Design Using Alternative MAOP *Does the operator have written procedures for the additional design requirements needed to be eligible for the alternative maximum allowable operating pressure (AMAOP) covered by 192.112 and calculated using 192.620?* (DC.DP.PIPEDESAMAOP.P) 192.112 (192.103;192.105;192.107;192.109;192.111;192.115;192.121;192.123;192.125;192.303;192.305;192.307)

9. Steel Pipe Design Using Alternative MAOP *Do design records indicate alternative MAOP replacement pipe and components meet the additional design requirements of 192.112?* (DC.DP.PIPEDESAMAOP.R) 192.112 (192.303)

10. HCA Identification *Does the process include the methods defined in 192.903 High Consequence Area (Method 1) and/or 192.903 High Consequence Area (Method 2) to be applied to each pipeline for the identification of high consequence areas?* (DC.DP.HCAIDENTIF.P) 192.905(a)

11. P&M Measures - Planning During Design & Construction *Do the procedures include requirements to identify additional measures to prevent a pipeline failure and to mitigate the consequences of a pipeline failure in a high consequence area (HCA)?* (DC.DP.PMPLANNING.P) 192.907 (192.935(a);192.935(f))

Design and Construction - Design of Compressor Stations

1. Compressor Stations - Location of Compressor Building *Does the operator have written specifications requiring compressor stations be designed and constructed in accordance with 192.163?* (DC.DPCCMP.CMPBLDGLOCATE.P) 192.163 (192.143;GPTC;NFPA 70 (2017))

2. Compressor Stations - Location of Compressor Building *Do the operator's records indicate that the compressor station has been designed and constructed to comply with 192.163?* (DC.DPCCMP.CMPBLDGLOCATE.R) 192.163 (192.143;GPTC;NFPA 70 (2017);192.163(e))

3. Compressor Stations - Location of Compressor Building *Do field observations confirm that design and construction of compressor station buildings meet the requirements of 192.163?* (DC.DPCCMP.CMPBLDGLOCATE.O) 192.163 (192.143;GPTC;NFPA 70 (2017))

4. Compressor Stations Liquid Removal *Does the operator have written specifications that require compressors be protected from liquids?* (DC.DPCCMP.CMPLIQPROT.P) 192.165 (192.143;192.153(e);192.505(b))

5. Compressor Stations Liquid Removal *Does the operator have records to indicate that compressors are protected from liquids in accordance with 192.165?* (DC.DPCCMP.CMPLIQPROT.R) 192.165(a) (192.615(b);192.153(e);192.143)

6. Compressor Stations Liquid Removal *Do field observations confirm that compressors are protected from liquids and, as applicable, liquid separators for compressors installed in accordance with 192.165?* (DC.DPCCMP.CMPLIQPROT.O) 192.165 (192.143)

7. Compressor Stations Emergency Shutdown *Does the operator have written specifications requiring that compressor station emergency shutdown systems meet the requirements of 192.167?* (DC.DPCCMP.CMPESD.P) 192.167 (192.143;CPF 3-2011-1009)

8. Compressor Stations Emergency Shutdown *Do the operator's records indicate that compressor station emergency shutdown systems meet the requirements of 192.167?* (DC.DPCCMP.CMPESD.R) 192.167 (192.143)

9. Compressor Stations Emergency Shutdown *Do field observations confirm that design and construction of compressor station emergency shutdown systems meet the requirements of 192.167?* (DC.DPCCMP.CMPESD.O) 192.167 (192.143)

10. Compressor Stations - Pressure Limiting Devices *Does the operator have written specifications requiring that compressor stations have pressure relief or other suitable protective devices that meet the requirements of 192.169?* (DC.DPCCMP.CMPPRESSLIMIT.P) 192.169 (192.141;192.143;192.199)

11. Compressor Stations - Pressure Limiting Devices *Does the operator have records to indicate that compressor stations have pressure relief or other suitable protective devices in accordance with 192.169?* (DC.DPCCMP.CMPPRESSLIMIT.R) 192.169 (192.141;192.143;192.199)

12. Compressor Stations - Pressure Limiting Devices *Do field observations confirm design and construction of compressor station pressure limiting devices meet the requirements of 192.169?* (DC.DPCCMP.CMPPRESSLIMIT.O) 192.169 (192.141;192.143;192.199)

13. Compressor Stations - Additional Safety Equipment *Does the operator have written specifications requiring additional compressor station safety equipment be designed and constructed in accordance with 192.171?* (DC.DPCCMP.CMPSAFETYEQUIP.P) 192.171 (192.143;192.167(a)(3))

14. Compressor Stations - Additional Safety Equipment *Do the operator's records indicate that additional compressor station safety equipment is designed and constructed in accordance with §192.171?* (DC.DPCCMP.CMPSAFETYEQUIP.R) 192.171 (192.143)

15. Compressor Stations - Additional Safety Equipment *Do field observations confirm that design and construction of additional compressor station safety equipment meet the requirements of 192.171?* (DC.DPCCMP.CMPSAFETYEQUIP.O) 192.171 (192.141;192.143)

16. Compressor Stations Ventilation *Does the operator have written specifications requiring ventilation of compressor buildings in accordance with 192.173?* (DC.DPCCMP.CMPVENTILATE.P) 192.173 (192.143)

17. Compressor Stations Ventilation *Do operator records indicate that the design and construction of compressor buildings meet the ventilation requirements of 192.173?* (DC.DPCCMP.CMPVENTILATE.R) 192.173 (192.143)

18. Compressor Stations Ventilation *Do field observations confirm that design and construction of compressor buildings meet the ventilation requirements of 192.173?* (DC.DPCCMP.CMPVENTILATE.O) 192.173 (192.143)

Design and Construction - Design of Pipe - Overpressure Protection

1. Protection against Accidental Overpressuring *Does the process require the pipeline have pressure relieving or pressure limiting devices that are required of 192.195(a), and that they meet the requirements of 192.199 and 192.201?* (DC.DPCOPP.OVERPRESSURE.P) 192.303 (192.143(b);192.195(a);192.199(a);192.199(b);192.199(c);192.199(d);192.199(e);192.199(f);192.199(g);192.199(h);192.201(a);192.201(b);192.201(c);192.143(a))

2. Protection against Accidental Overpressuring *Do records indicate that the pipeline has pressure relieving or pressure limiting devices that are required by 192.195(a), and that they meet the requirements of 192.199 and 192.201?* (DC.DPCOPP.OVERPRESSURE.R) 192.195(a) (192.199(a);192.199(b);192.199(c);192.199(d);192.199(e);192.199(f);192.199(g);192.199(h);192.201(a);192.201(b);192.201(c))

3. Protection against Accidental Overpressuring *Are required pressure relieving or pressure limiting devices being installed, and do they meet the requirements of 192.199 and 192.201?* (DC.DPCOPP.OVERPRESSURE.O) 192.195(a) (192.199(a);192.199(b);192.199(c);192.199(d);192.199(e);192.199(f);192.199(g);192.199(h);192.201(a);192.201(b);192.201(c))

4. Design of Pressure Relief and Limiting Devices *Does the process require that pressure relieving or pressure limiting devices meet the requirements of 192.199?* (DC.DPCOPP.PRESSLIMIT.P) 192.303 (192.143(b);192.199(a);192.199(b);192.199(c);192.199(d);192.199(e);192.199(f);192.199(g);192.199(h);192.143(a))

5. Design of Pressure Relief and Limiting Devices *Do records indicate that pressure relieving or pressure limiting devices meet the requirements of 192.199?* (DC.DPCOPP.PRESSLIMIT.R) 192.199(a) (192.199(b);192.199(c);192.199(d);192.199(e);192.199(f);192.199(g);192.199(h))

6. Design of Pressure Relief and Limiting Devices *Do field observations confirm pressure relieving or pressure limiting devices meet the requirements of 192.199?* (DC.DPCOPP.PRESSLIMIT.O) 192.199(a) (192.199(b);192.199(c);192.199(d);192.199(e);192.199(f);192.199(g);192.199(h))

7. Required Capacity of Pressure Relieving and Limiting Stations *Does the process require that pressure relief or pressure limiting stations being installed comply with 192.201?* (DC.DPCOPP.PRESSLIMITCAP.P) 192.201(a) (192.143(a);192.143(b);192.201(b);192.201(c))

8. Required Capacity of Pressure Relieving and Limiting Stations *Do records indicate that pressure relief or pressure limiting stations being installed comply with 192.201?* (DC.DPCOPP.PRESSLIMITCAP.R) 192.201(a) (192.201(b);192.201(c))

9. Required Capacity of Pressure Relieving and Limiting Stations *Do field observations verify pressure relief or pressure limiting stations comply with the requirements of 192.201?* (DC.DPCOPP.PRESSLIMITCAP.O) 192.201(a) (192.201(b);192.201(c))

10. Launcher and Receiver Safety *Do the procedures require all launchers and receivers to have adequate safety devices in accordance with 192.750 and to ensure the safety devices are working properly just prior to each use?* (MO.GM.TRAPSAFETY.P) 192.750 (192.605(b);192.801;192.805)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

11. Launcher and Receiver Safety *Does the operator have records to demonstrate whether all launchers and receivers have safety devices that were utilized prior to each use?* (MO.GM.TRAPSAFETY.R) 192.750 (192.605(b);192.801;192.805)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

12. Launcher and Receiver Safety *Do field observations confirm selected launchers and receivers have safety devices installed and whether the safety devices were inspected prior to each use?* (MO.GM.TRAPSAFETY.O) 192.750 (192.605(b);192.801;192.805)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Design and Construction - Design of Pipe Components

1. Qualifying Metallic Components *Do the procedures require certain metallic components to be qualified for use in accordance with 192.144?* (DC.DPC.METALCOMPONENT.P) 192.144 (192.607)

2. Qualifying Metallic Components *Do records indicate that certain metallic components are qualified for use in accordance with §192.144 and §192.205?* (DC.DPC.METALCOMPONENT.R) 192.144(a) (192.144(b);192.205;192.607)

3. Valves *Do the procedures require that valves comply with the requirements of §192.145?* (DC.DPC.VALVE.P) 192.145 (192.145(a);192.145(b);192.145(c);192.145(d);192.145(e);192.145(f);192.607)

4. Valves *Do records indicate valves comply with the requirements of §192.145 and §192.205?* (DC.DPC.VALVE.R) 192.145 (192.145(a);192.145(b);192.145(c);192.145(d);192.145(e);192.145(f);192.205;192.607)

5. Valves *Do valves comply with the requirements of 192.145?* (DC.DPC.VALVE.O) 192.141 (192.145(a);192.145(b);192.145(c);192.145(d);192.145(e);192.145(f);192.607)

6. Flanges and Flange Accessories *Do the procedures require that flanges and flange accessories meet the requirements of §192.147?* (DC.DPC.FLANGE.P) 192.147 (192.147(a);192.147(b);192.147(c);192.607)

7. Flanges and Flange Accessories *Do records indicate flanges and flange accessories meet the requirements of §192.147 and §192.205?* (DC.DPC.FLANGE.R) 192.147 (192.147(a);192.147(b);192.147(c);192.205;192.607)

8. Flanges and Flange Accessories *Do flanges and flange accessories meet the requirements of 192.147?* (DC.DPC.FLANGE.O) 192.147 (192.147(a);192.147(b);192.147(c);192.607)

9. Standard Fittings *Do procedures require that standard fittings are in compliance with §192.149?* (DC.DPC.STANDARDFITTING.P) 192.149(a) (192.149(b);192.143(a);192.143(b);192.607)

10. Standard Fittings *Do records indicate standard fittings are in compliance with §192.149 and §192.205?* (DC.DPC.STANDARDFITTING.R) 192.149(a) (192.149(b);192.143(a);192.143(b);192.205;192.607)

11. Standard Fittings *Do field observations confirm standard fittings are in compliance with §192.149?* (DC.DPC.STANDARDFITTING.O) 192.149(a) (192.149(b);192.143(a);192.143(b);192.607)

12. Passage of Internal Inspection Devices *Does the process require that certain transmission pipeline components are designed and constructed to accommodate the passage of instrumented internal inspection devices?* (DC.DPC.ILIPASS.P) 192.103 (192.150(a);192.150(c))

13. Passage of Internal Inspection Devices *Do records indicate that certain transmission pipeline components are designed and constructed to accommodate the passage of instrumented internal inspection devices?* (DC.DPC.ILIPASS.R) 192.150 (192.150(a);192.150(c);192.493)

14. Passage of Internal Inspection Devices *Are certain transmission pipeline components designed and constructed to accommodate the passage of instrumented internal inspection devices?* (DC.DPC.ILIPASS.O) 192.150 (192.150(a);192.150(c))

15. Pipeline Tapping *Does the process require pipeline hot taps (or taps) and tapping fittings to comply with the requirements of 192.151?* (DC.DPC.TAP.P) 192.143 (192.151(a);192.151(b);192.151(c))

16. Pipeline Tapping *Do records indicate that tapping fittings and taps comply with the requirements of §192.151 and §192.205?* (DC.DPC.TAP.R) 192.151 (192.151(a);192.151(b);192.151(c);192.205)

17. Pipeline Tapping *Do field observations confirm each length of pipe and each tapping component are being visually inspected for sufficient installation of taps in accordance with 192 192.151?* (DC.DPC.TAP.O) 192.141 (192.151(a);192.151(b);192.151(c))

18. Components Fabricated by Welding *Does the process require components fabricated by welding, such as branch connections, assemblies of standard pipe, or prefabricated units utilized in the construction of a pipeline, are to be in accordance with 192.153?* (DC.DPC.WELDFABRICATE.P) 192.143(a) (192.153(a);192.153(b);192.153(c);192.153(d);192.155)

19. Components Fabricated by Welding *Do records indicate that components fabricated by welding, such as branch connections, assemblies of standard pipe, or prefabricated units utilized in the construction of a pipeline, are in accordance with §192.153 and §192.205?* (DC.DPC.WELDFABRICATE.R) 192.153(a) (192.153(b);192.153(c);192.153(d);192.205)

20. Components Fabricated by Welding *Do field observations confirm that components fabricated by welding, such as branch connections, assemblies of standard pipe, or prefabricated units, are in accordance with §192.153?* (DC.DPC.WELDFABRICATE.O) 192.141 (192.153(a);192.153(b);192.153(c);192.153(d))

21. Welded Branch Connections *Do records demonstrate that each welded branch connection in the form of a single connection, or in a header or manifold as a series of connections, were designed in accordance to §192.155 and §192.205?* (DC.DPC.WELDEDBRANCH.R) 192.155 (192.205)

22. Welded Branch Connections *As applicable to the project, do field observations verify that each welded branch connection in the form of a single connection, or in a header or manifold as a series of connections, was installed as designed in accordance to §192.155?* (DC.DPC.WELDEDBRANCH.O) 192.155

23. Extruded Outlets *Does the process require each extruded outlet to be suitable for anticipated service conditions and designed in accordance to §192.157?* (DC.DPC.EXTRUDEOUTLET.P) 192.149(b) (192.157)

24. Pipeline Flexibility *Does the process require pipeline and pipe components to be designed for flexibility in accordance with §192.159?* (DC.DPC.FLEXIBLE.P) 192.143(a) (192.159)

25. Pipeline Flexibility *Do records indicate pipeline and pipe components are designed for flexibility in accordance with §192.159?* (DC.DPC.FLEXIBLE.R) 192.143(a) (192.159)

26. Pipeline Flexibility *Do field observations verify that observed pipe and pipe components meet the flexibility design for thermal expansion/contraction and unusual loading or forces?* (DC.DPC.FLEXIBLE.O) 192.143(a) (192.159)

27. Supports and Anchors *Does the process require piping and associated equipment to have sufficient anchors or supports to prevent undue strain on connected equipment, resist longitudinal forces, and prevent or dampen excessive vibration in accordance with §192.161?* (DC.DPC.SUPPORT.P) 192.161

28. Supports and Anchors *Do records indicate piping and associated equipment have sufficient anchors or supports to prevent undue strain on connected equipment, to resist longitudinal forces, and to prevent or dampen excessive vibration in accordance with §192.161?* (DC.DPC.SUPPORT.R) 192.161(a) (192.161(b);192.161(c);192.161(d);192.161(e);192.161(f);192.205)

29. Supports and Anchors *Do field observations confirm each length of pipe and each component is being visually inspected for sufficient installation of anchors or supports to prevent undue strain on connected equipment, to resist longitudinal forces, to prevent or dampen excessive vibration, and is in accordance with §192.161?* (DC.DPC.SUPPORT.O) 192.141 (192.161(a);192.161(b);192.161(c);192.161(d);192.161(e);192.161(f))

30. Transmission Line Valve Spacing *Does the process require transmission line valve spacing to be accordance with §192.179(a)?* (DC.DPC.VALVESPACE.P) 192.143 (192.179(a);192.179(a)(1);192.179(a)(2);192.179(a)(3);192.179(a)(4);192.179(b);192.179(c);192.179(d);192.179(e);192.179(f);192.179(g);192.179(h))

31. Transmission Line Valve Spacing *Do records indicate that transmission line valve spacing is in accordance with 192.179(a)?* (DC.DPC.VALVESPACE.R) 192.179(a) (192.179(a)(1);192.179(a)(2);192.179(a)(3);192.179(a)(4);192.179(b);192.179(c);192.179(d))

32. Transmission Line Valve Spacing *Are transmission line valves being installed as required by §192.179?* (DC.DPC.VALVESPACE.O) 192.141 (192.179(a);192.179(b);192.179(c);192.179(d))

33. Pipe and Bottle Type Holders *As applicable to the project, does the process require that pipe and bottle type holders are designed to meet requirements?* (DC.DPC.HOLDERS.P) 192.143(a) (192.143(b);192.175(a);192.175(b);192.177(a);192.177(b))

34. Pipe and Bottle Type Holders *As applicable to the project, do records indicate that pipe and bottle type holders are designed to meet requirements?* (DC.DPC.HOLDERS.R) 192.175(a) (192.175(b);192.177(a);192.177(b))

35. Pipe and Bottle Type Holders *As applicable to the project, are pipe-type and bottle-type holders installed as designed and in accordance with 192.175?* (DC.DPC.HOLDERS.O) 192.141 (192.175(a);192.175(b);192.177(a);192.177(b))

36. Instrument, Control, and Sampling Pipe and Components *As applicable to the project, does the process require that instrument, control, and sampling pipe and components are to be designed in accordance with 192.203?* (DC.DPC.INSTRUMENTPIPE.P) 192.143(a) (192.143(b);192.203(a);192.203(b))

37. Instrument, Control, and Sampling Pipe and Components *As applicable to the project, do field observations confirm that instrument, control, and sampling pipe and components are installed as designed and in accordance with 192.203?* (DC.DPC.INSTRUMENTPIPE.O) 192.141 (192.203(a);192.203(b))

38. Alternative MAOP - Design and test factors *Do records indicate alternative MAOP replacement facilities/components meet the design and test factor requirements listed in §192.620(a)?* (DC.DPC.AMAOP.R) 192.620(a) (192.620(b);192.205)

39. RMV Installation Requirements withing HCAs *Do the operator's specifications require RMVs or AETs located in an HCA or in Class 3 or 4 locations to be installed to meet the appropriate valve spacing requirements?* (DC.DPC.RMVINSTALLHCA.P) 192.605(b) (192.634;192.636)

40. RMV Installation Requirements withing HCAs *Do records demonstrate RMVs or AETs were located in an HCA and Class 3 or 4 areas to meet the appropriate valve spacing requirements?* (DC.DPC.RMVINSTALLHCA.R) 192.709(c) (192.634;192.636)

41. ASV Flow Modeling *Do the operator's procedures adequately describe and require flow modeling for ASVs?* (DC.DPC.ASVFLOWMODEL.P) 192.605(b) (192.636(f))

42. ASV Flow Modeling *Do the records demonstrate the flow modeling was conducted as required in accordance with §192.636(f)?* (DC.DPC.ASVFLOWMODEL.R) 192.709(c) (192.636(f);192.745)

Design and Construction - Corrosion Control and Cathodic Protection

1. Internal Corrosion Control: Design and Construction (192.476) *Does the process require that the transmission line project has features incorporated into its design and construction to reduce the risk of internal corrosion, as required of 192.476?* (DC.CCPROT.INTCORRODE.P) 192.453 (192.476(a);192.476(b);192.476(c))

2. Internal Corrosion Control: Design and Construction (192.476) *Do records demonstrate the transmission line project has features incorporated into its design and construction to reduce the risk of internal corrosion, as required of 192.476?* (DC.CCPROT.INTCORRODE.R) 192.476(d) (192.476(b);192.476(c);192.476(a))

3. Internal Corrosion Control: Design and Construction (192.476) *Does the transmission project's design and construction comply with 192.476?* (DC.CCPROT.INTCORRODE.O) 192.476(a) (192.476(b);192.476(c))

4. Corrosion Control - Protective Coating Surface Preparation *Do the procedures and/or written specifications stipulate that each protective coating applied for the purpose of external corrosion control must be applied on a properly prepared surface?* (DC.CCPROT.COATSURFPREP.P) 192.143(b) (192.461(a);192.303;192.309(a))

5. Corrosion Control - Protective Coating Surface Preparation *Do records indicate that each protective coating applied for the purpose of external corrosion control was applied on a properly prepared surface?* (DC.CCPROT.COATSURFPREP.R) 192.143(b) (192.461(a);192.309(a);192.491(c))

6. Corrosion Control - Protective Coating Surface Preparation *Do field observations confirm that each protective coating applied for the purpose of external corrosion control was applied on a properly prepared surface in accordance of the operator’s written specifications?* (DC.CCPROT.COATSURFPREP.O) 192.143(b) (192.461(a);192.309(a))

7. Corrosion Control - Protective Coating Properties *Do the operator's written specifications stipulate that each protective coating applied for the purpose of external corrosion control will have sufficient adhesion to the metal surface to effectively resist underfilm migration of moisture; sufficient ductility to resist cracking; sufficient strength to resist damage due to handling and soil stress; properties compatible with any supplemental cathodic protection; and, electrically insulating type with low moisture absorption and high electrical resistance?* (DC.CCPROT.COATPROP.P) 192.143(b) (192.461(a)(2);192.461(a)(3);192.461(a)(4);192.461(a)(5);192.461(b))

8. Corrosion Control - Protective Coating Properties *Do records indicate that that each protective coating applied for the purpose of external corrosion control has sufficient adhesion to the metal surface to effectively resist underfilm migration of moisture; sufficient ductility to resist cracking; sufficient strength to resist damage due to handling and soil stress; properties compatible with any supplemental cathodic protection; and, electrically insulating type with low moisture absorption and high electrical resistance?* (DC.CCPROT.COATPROP.R) 192.143(b) (192.461(a)(2);192.461(a)(3);192.461(a)(4);192.461(a)(5);192.461(b))

9. Corrosion Control - Protective Coating Properties *Do field observations confirm that each protective coating applied for the purpose of external corrosion control has sufficient adhesion to the metal surface to effectively resist underfilm migration of moisture; sufficient ductility to resist cracking; sufficient strength to resist damage due to handling and soil stress; properties compatible with any supplemental cathodic protection; and, electrically insulating type with low moisture absorption and high electrical resistance?* (DC.CCPROT.COATPROP.O) 192.143(b) (192.461(a)(2);192.461(a)(3);192.461(a)(4);192.461(a)(5);192.461(b))

10. Corrosion Control - Inspect Coating Before Lowering Pipe *Do written specifications stipulate that each external protective coating must be inspected just prior to lowering the pipe into the ditch and backfilling, and any damage detrimental to effective corrosion control must be repaired?* (DC.CCPROT.COATLOWER.P) 192.143(b) (192.461(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

11. Corrosion Control - Inspect Coating Before Lowering Pipe *Do records indicate that each pipe segment with external protective coating was inspected just prior to lowering into the ditch and backfilling, and any damage detrimental to effective corrosion control was repaired?* (DC.CCPROT.COATLOWER.R) 192.143(b) (192.461(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

12. Corrosion Control - Inspect Coating Before Lowering Pipe *Do the field observations confirm that each pipe segment with external protective coating was inspected just prior to lowering into the ditch and backfilling, and any damage detrimental to effective corrosion control was repaired?* (DC.CCPROT.COATLOWER.O) 192.143(b) (192.461(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

13. Corrosion Control - Protect Coating in Ditch *Do operator's written specifications stipulate that each external protective coating must be protected from damage resulting from adverse ditch conditions or damage from supporting blocks?* (DC.CCPROT.COATINGINDITCH.P) 192.143(b) (192.461(d))

14. Corrosion Control - Protect Coating in Ditch *Do operator's records indicate that each external protective coating was protected from damage resulting from adverse ditch conditions or damage from supporting blocks?* (DC.CCPROT.COATINGINDITCH.R) 192.143(b) (192.461(d))

15. Corrosion Control - Protect Coating in Ditch *Do field observations verify that each external protective coating was protected from damage resulting from adverse ditch conditions or damage from supporting blocks?* (DC.CCPROT.COATINGINDITCH.O) 192.143(b) (192.461(d))

16. Corrosion Control - Assess Coating after Backfill *For onshore steel gas transmission pipelines with a continuous backfill length greater than or equal to 1000 feet, does the specification include a requirement to assess for external coating damage promptly after the transmission line is backfilled but no later than 6 months?* (DC.CCPROT.COATINGASSESS.P) 192.143(b) (192.319(d);192.319(f))

17. Corrosion Control - Assess Coating after Backfill *For onshore steel gas transmission pipelines with a continuous backfill length greater than or equal to 1000 feet, do the records demonstrate that an assessment for external coating damage was performed promptly after the transmission line was backfilled but no later than 6 months after placing the pipeline in service?* (DC.CCPROT.COATINGASSESS.R) 192.143(b) (192.319(d))

18. Corrosion Control - Assess Coating after Backfill *For an onshore steel gas transmission pipeline project with a continuous backfill length greater than or equal to 1000 feet, do field observations confirm pipe protective coating is adequately surveyed promptly after backfilling?* (DC.CCPROT.COATINGASSESS.O) 192.461(c) (192.319(d))

19. Corrosion Control - Protect Coating During Boring *Do operator's written specifications stipulate that precautions must be taken to minimize damage to the coating during installation, if coated pipe is installed by boring, driving, or other similar method?* (DC.CCPROT.COATBORING.P) 192.143(b) (192.461(e))

20. Corrosion Control - Protect Coating During Boring *Do records indicate that precautions were taken to minimize damage to the coating during installation, if coated pipe is installed by boring, driving, or other similar method?* (DC.CCPROT.COATBORING.R) 192.143(b) (192.461(e))

21. Corrosion Control - Protect Coating During Boring *Do field observations confirm that precautions were taken to minimize damage to the coating during installation, if coated pipe was installed by boring, driving, or other similar method?* (DC.CCPROT.COATBORING.O) 192.143(b) (192.461(e))

22. Corrosion Control - Personnel Qualifications *Do the operator's written specifications stipulate that the design and installation of cathodic protection systems, must be carried out by, or under the direction of, a person qualified in pipeline corrosion control methods?* (DC.CCPROT.CORROSIONQUAL.P) 192.303 (192.143(b);192.453)

23. Corrosion Control - Personnel Qualifications *Do records verify that the design and installation of cathodic protection systems, were carried out by, or under the direction of, a person qualified in pipeline corrosion control methods?* (DC.CCPROT.CORROSIONQUAL.R) 192.491 (192.143(b);192.453)

24. Corrosion Control - Personnel Qualifications *Do field observations confirm that the design and installation of cathodic protection systems, were carried out by, or under the direction of, a person qualified in pipeline corrosion control methods?* (DC.CCPROT.CORROSIONQUAL.O) 192.143(b) (192.453)

25. External Corrosion Control - CP Design *Do operator's written specifications stipulate that the cathodic protection system must be designed and installed to comply with one or more of the applicable criteria contained in Appendix D of Part 192?* (DC.CCPROT.CATHPROTDESIGN.P) 192.463(a) (192.143(b);ADB-2003-06)

26. External Corrosion Control - CP Design *Do operator's records indicate that the cathodic protection system was designed and installed to comply with one or more of the applicable criteria contained in Appendix D of Part 192?* (DC.CCPROT.CATHPROTDESIGN.R) 192.463(a) (192.143(b))

27. External Corrosion Control - CP Design *Do field observations confirm that the cathodic protection system was designed and installed to comply with one or more of the applicable criteria contained in Appendix D of Part 192?* (DC.CCPROT.CATHPROTDESIGN.O) 192.463(a) (192.143(b))

28. Cathodic Protection Design - Protection Levels *Do the operator's written specifications stipulate that amount of cathodic protection must be designed so as not to damage the protective coating or the pipe?* (DC.CCPROT.CATHPROTLEVEL.P) 192.303 (192.143;192.463(c))

29. Cathodic Protection Design - Protection Levels *Do records verify that the amount of cathodic protection was designed and installed so as not to damage the protective coating or the pipe?* (DC.CCPROT.CATHPROTLEVEL.R) 192.491 (192.143(b);192.463(c))

30. Cathodic Protection Design - Protection Levels *Do field observations confirm that the cathodic protection system was designed and installed so that the amount of cathodic protection would not damage the protective coating or the pipe?* (DC.CCPROT.CATHPROTLEVEL.O) 192.143(b) (192.463(c))

31. External Corrosion Control - Electrical Isolation of Casings *Do operator's written specifications stipulate that each pipeline must be electrically isolated from metallic casings that are a part of the underground system?* (DC.CCPROT.ELECTRICALISOL.P) 192.467(c) (192.143(b))

32. External Corrosion Control - Electrical Isolation of Casings *Do operator's records indicate that each pipeline was electrically isolated from metallic casings that are a part of the underground system?* (DC.CCPROT.ELECTRICALISOL.R) 192.467(c) (192.143(b))

33. External Corrosion Control - Electrical Isolation of Casings *Do field observations confirm that each pipeline was electrically isolated from metallic casings that are a part of the underground system?* (DC.CCPROT.ELECTRICALISOL.O) 192.467(c) (192.143(b))

34. External Corrosion Control - Electrical Isolation from Underground Metallic Structures *Do written specifications stipulate that each buried or submerged pipeline must be electrically isolated from other underground metallic structures?* (DC.CCPROT.ELECTRISOLSTRUCT.P) 192.143(b) (192.467(a);192.467(b);192.467(d);192.467(e);192.467(f);NACE RP0169;NACE SP0200-2008)

35. External Corrosion Control - Electrical Isolation from Underground Metallic Structures *Do records indicate that each buried or submerged pipeline was electrically isolated from other underground metallic structures?* (DC.CCPROT.ELECTRISOLSTRUCT.R) 192.143(b) (192.467(a);192.467(b);192.467(d);192.467(e);192.467(f);NACE RP0169;NACE SP0200-2008)

36. External Corrosion Control - Electrical Isolation from Underground Metallic Structures *Do field observations confirm that each buried or submerged pipeline was designed and installed so that it was electrically isolated from other underground metallic structures or where electrical isolation of a portion of a pipeline is necessary to facilitate the application of corrosion control?* (DC.CCPROT.ELECTRISOLSTRUCT.O) 192.143(b) (192.467(a);192.467(b);192.467(d);192.467(e);192.467(f);NACE RP0169;NACE SP0200-2008)

37. External Corrosion Control - Cathodic Protection post July 1971 *Do the written specifications stipulate that each buried or submerged pipeline installed after July 31, 1971, must be protected against external corrosion within 1 year after completion of construction, conversion to service, or becoming jurisdictional onshore gathering?* (DC.CCPROT.EXTERNALPROT.P) 192.303 (192.143(b);192.455(a))

38. External Corrosion Control - Cathodic Protection post July 1971 *Do records document that each buried or submerged pipeline installed after July 31, 1971, has been protected against external corrosion with a cathodic protection system within one year after completion of construction, conversion to service, or becoming jurisdictional onshore gathering?* (DC.CCPROT.EXTERNALPROT.R) 192.143(b) (192.455(a))

39. Cathodic Protection of Amphoteric Metals *Do the operator's written specifications describe criteria to be used for cathodic protection of amphoteric metals (e.g., aluminum, copper, zinc, tin, lead, and beryllium) that are included in a pipeline containing a metal or different anodic potential (e.g., steel, etc.)?* (DC.CCPROT.AMPHOTERIC.P) 192.303 (192.143;192.463(b))

40. Cathodic Protection of Amphoteric Metals *Do records verify adequate cathodic protection of amphoteric metals (e.g., aluminum, etc.) that are included in a pipeline containing a metal or different anodic potential (e.g., steel, etc.)?* (DC.CCPROT.AMPHOTERIC.R) 192.491(a) (192.491(b);192.463(b))

Design and Construction - Gathering

1. Gathering Lines *Does evidence demonstrate compliance with the design and installation requirements of Part 192 for certain gathering lines?* (DC.GA.COMPLIANCE.P) 192.9(a) (192.9(b);192.9(c);192.9(d))

2. Gathering Lines *Does evidence demonstrate compliance with the design and installation requirements of Part 192 for certain gathering lines?* (DC.GA.COMPLIANCE.O) 192.9(a) (192.9(b);192.9(c);192.9(d))

Design and Construction - Maintenance and Operations

1. Internal Corrosion in Cutout Pipe *Does the process direct personnel to examine removed pipe for evidence of internal corrosion?* (DC.MO.ICEXAMINE.P) 192.605(b) (192.475(a);192.475(b);192.475(c))

2. Internal Corrosion in Cutout Pipe *Do records indicate examination of removed pipe for evidence of internal corrosion?* (DC.MO.ICEXAMINE.R) 192.491(c) (192.475(a);192.475(b);192.475(c))

3. Internal Corrosion in Cutout Pipe *Is examination of removed pipe conducted to determine any evidence of internal corrosion?* (DC.MO.ICEXAMINE.O) 192.475(a) (192.475(b);192.475(c))

4. Start-Stop Procedures *Does the process include procedures for starting up and shutting down any part of the pipeline system in a manner designed to assure operation within the MAOP limits prescribed by Part 192, plus the build-up allowed for operation of pressure-limiting and control devices?* (DC.MO.MAOPLIMIT.P) 192.605(b)(5)

5. Start-Stop Procedures *Do records indicate that the pressure limitations on the pipeline are not exceeded?* (DC.MO.MAOPLIMIT.R) 192.605(b)(5)

6. 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)

7. Prevention of Accidental Ignition *As applicable to the project, is a process in place for preventing accidental ignition where gas presents a hazard of fire or explosion?* (DC.MO.IGNITION.P) 192.605(b) (192.751(a);192.751(b);192.751(c))

8. Prevention of Accidental Ignition *If applicable to the project, were processes followed where there exists the potential for accidental ignition?* (DC.MO.IGNITION.O) 192.751(a) (192.751(b);192.751(c))

9. Tapping Pipelines Under Pressure *Are there processes for tapping pipelines under pressure?* (DC.MO.HOTTAP.P) 192.605(b) (192.627)

10. Tapping Pipelines Under Pressure *Do records indicate that hot taps are performed in accordance with hot tap procedures?* (DC.MO.HOTTAP.R) 192.627

11. Tapping Pipelines Under Pressure *Are hot taps are performed in accordance with hot tap procedures?* (DC.MO.HOTTAP.O) 192.627

12. Safety - Maintenance Construction and Testing *Does the process ensure that pipeline maintenance construction and testing activities are made to provide safety, as required of 192.605(b)?* (DC.MO.SAFETY.P) 192.605(b) (192.605(b)(9))

13. Safety - Maintenance Construction and Testing *Do records indicate that pipeline maintenance construction and testing activities are performed in a safe manner?* (DC.MO.SAFETY.R) 192.605(b) (192.605(b)(9))

14. Safety - Maintenance Construction and Testing *Are pipeline maintenance construction and testing activities made in a safe manner?* (DC.MO.SAFETY.O) 192.605(b) (192.605(b)(9))

15. Procedure Manual for Operations, Maintenance, and Emergencies *Does the process require that procedures for operations, abnormal operations, maintenance, and emergencies be completed and implemented prior to the pipeline going into service?* (DC.MO.OMPROCEDURES.P) 192.605(a)

16. Plastic Pipe - Storage and Handling of Pipe and Components *Does the operator have a written procedure for the storage and handling of plastic pipe and associated components?* (DC.PLASTIC.PLASTICHANDLING.P) 192.69 (192.59;192.63(e);192.321(g))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

17. Plastic Pipe - Storage and Handling of Pipe and Components *Do records indicate that the storage and handling of plastic pipe and associated plastic components were in accordance with noted procedures and applicable standards?* (DC.PLASTIC.PLASTICHANDLING.R) 192.69 (192.59;192.63(e);192.321(g))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

18. Plastic Pipe - Storage and Handling of Pipe and Components *Do field observations confirm plastic materials are stored and handled to ensure compliance with operator procedures?* (DC.PLASTIC.PLASTICHANDLING.O) 192.69 (192.59;192.63(e);192.65;192.67)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Design and Construction - Materials

1. Pipe and Components Materials General Qualification *Does the operator have written specifications or procedures that require that materials for pipe and components meet the requirements of 192.53?* (DC.MA.GEN.P) 192.53 (192.55;192.59;192.63)

2. Pipe and Components Materials General Qualification *Do records demonstrate that materials for pipe and components have met the requirements of §192.53 and §192.205?* (DC.MA.GEN.R) 192.53 (192.55;192.59;192.63;192.205)

3. Steel Pipe Qualification *Does the operator have written procedures or specifications that require steel pipe be qualified for use under Part 192 according to 192.55? (see considerations for requirements of 192.55)* (DC.MA.STEELPIPE.P) 192.55 (192.53)

4. Steel Pipe Qualification *Does the operator have records showing that the steel pipe is qualified for use under Part 192 according to 192.55? (see considerations for requirements of 192.55)* (DC.MA.STEELPIPE.R) 192.55(a) (192.55(b);192.55(c);192.55(d);192.55(e))

5. Steel Pipe Qualification *Do field observations confirm the steel pipe is qualified in accordance with 192.55?* (DC.MA.STEELPIPE.O) 192.55(a) (192.55(b);192.55(c);192.55(d);192.55(e))

6. Marking of Materials *Does the operator have specifications requiring pipe, valves, and fittings to be marked according to the requirements of §192.63?* (DC.MA.MARKING.P) 192.63
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

7. Marking of Materials *Do field observations confirm the pipe, valves, and fittings are marked according to the requirements of 192.63?* (DC.MA.MARKING.O) 192.63

8. Railroad Transportation of Certain Pipe *Does the operator have specifications requiring that railroad transportation for certain pipe (see considerations) is in accordance with 192.65(a) and API RP 5L1(7th Edition)?* (DC.MA.RAILTRANSPORT.P) 192.65(a) (192.53(a))

9. Railroad Transportation of Certain Pipe *Does the operator have records showing that railroad transportation for certain pipe (see considerations) was in accordance with 192.65(a) and API RP 5L1(7th Edition)?* (DC.MA.RAILTRANSPORT.R) 192.65(a)

10. Railroad Transportation of Certain Pipe *Do field observations confirm that railroad transportation for certain pipe (see considerations) was in accordance with 192.65(a) and API RP 5L1(7th Edition)?* (DC.MA.RAILTRANSPORT.O) 192.65(a)

11. Barge Transportation of Certain Pipe *Does the operator have specifications requiring that ship or barge transportation for certain pipe (see considerations) is in accordance with 192.65(b) and API RP 5LW(3rd Edition)?* (DC.MA.BARGETRANSPORT.P) 192.65(b)

12. Barge Transportation of Certain Pipe *Does the operator have records showing that ship or barge transportation for certain pipe (see considerations) is in accordance with 192.65(b) and API RP 5LW (3rd Edition)?* (DC.MA.BARGETRANSPORT.R) 192.65(b)

13. Barge Transportation of Certain Pipe *Do field observations confirm that the operator has used ship or barge transportation for certain pipe (see considerations) in accordance with 192.65(b) and API RP 5LW(3rd Edition)?* (DC.MA.BARGETRANSPORT.O) 192.65(b)

14. Truck Transportation of Certain Pipe *Does the operator have specifications requiring that truck transportation for certain pipe (see considerations) is in accordance with 192.65(c) and API RP 5LT(1st Edition)?* (DC.MA.TRUCKTRANSPORT.P) 192.65(c)

15. Truck Transportation of Certain Pipe *Does the operator have records showing that truck transportation for certain pipe (see considerations) is in accordance with 192.65(c) and API RP 5LT(1st Edition)?* (DC.MA.TRUCKTRANSPORT.R) 192.65(c)

16. Truck Transportation of Certain Pipe *Do field observations confirm that the operator has performed truck transportation for certain pipe (see considerations) in accordance with 192.65(c) and API RP 5LT(1st Edition)?* (DC.MA.TRUCKTRANSPORT.O) 192.65(c)

Design and Construction - Pressure Testing

1. Hydrostatic Testing - General Requirements *Does the process require pressure testing to be conducted for new segments of pipeline, or return to service segments of pipeline that are being relocated or replaced?* (DC.PT.PRESSTEST.P) 192.605(b) (192.303;192.503(a);192.503(b);192.503(c);192.503(d);192.503(e))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

2. Hydrostatic Testing - General Requirements *Do records indicate that pressure testing is conducted in accordance with 192.503?* (DC.PT.PRESSTEST.R) 192.503(a) (192.503(b);192.503(c);192.503(d);192.503(e))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

3. Hydrostatic Testing - General Requirements *Is pressure testing conducted in accordance with 192.503?* (DC.PT.PRESSTEST.O) 192.503(a) (192.503(b);192.503(c);192.503(d);192.503(e))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

4. Hydrostatic Testing - Strength Test (High) - 30% or more SMYS *Does the process require that, as applicable to the project, sections of a pipeline operating at a hoop stress equal to or greater than 30% of SMYS be strength tested in accordance with the requirements of 192.505?* (DC.PT.PRESSTESTHIGHSTRESS.P) 192.505(a) (192.143(a);192.505(b);192.505(c);192.505(d);192.143(b);192.143(c))

5. Hydrostatic Testing - Strength Test (High) - 30% or more SMYS *Do records indicate that the sections of a pipeline operating at a hoop stress equal to or greater than 30% of SMYS were strength tested in accordance with the requirements of 192.505?* (DC.PT.PRESSTESTHIGHSTRESS.R) 192.505(a) (192.143(a);192.517(a);192.505(b);192.505(c);192.505(d);192.143(b);192.143(c))

6. Hydrostatic Testing - Strength Test (High) - 30% or more SMYS *Do field observations confirm that sections of a pipeline operating at a hoop stress equal to or greater than 30% of SMYS are strength tested in accordance with the requirements of 192.505?* (DC.PT.PRESSTESTHIGHSTRESS.O) 192.505(a) (192.143(a);192.505(b);192.505(c);192.505(d);192.143(b);192.143(c))

7. Hydrostatic Testing - Environmental Protection *Does the process require that, as applicable to the project, while conducting tests under Subpart J – Test Requirements, the test medium will be disposed of in a manner that will minimize damage to the environment?* (DC.PT.PRESSTESTENVIRON.P) 192.515(b) (192.629(a);192.629(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

8. Hydrostatic Testing - Environmental Protection *Do records indicate while conducting tests under Subpart J – Test Requirements, the test medium disposal was conducted in a manner that minimized damage to the environment?* (DC.PT.PRESSTESTENVIRON.R) 192.515(b) (192.629(a);192.629(b);192.603(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

9. Hydrostatic Testing - Environmental Protection *Do field observations confirm while conducting tests under Subpart J – Test Requirements, the test medium was disposed of in an environmentally sound manner?* (DC.PT.PRESSTESTENVIRON.O) 192.515(b) (192.629(a);192.629(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

10. Hydrostatic Testing - Safety During Testing *Does the process require that, as applicable to the project, while conducting tests under Subpart J – Test Requirements, every reasonable precaution is taken to protect its employees and the general public throughout the testing?* (DC.PT.PRESSTESTSAFETY.P) 192.515(a) (192.629(a);192.629(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

11. Hydrostatic Testing - Safety During Testing *Do records indicate while conducting tests under Subpart J – Test Requirements, every reasonable precaution was taken to protect its employees and the general public throughout the testing?* (DC.PT.PRESSTESTSAFETY.R) 192.515(a) (192.629(a);192.629(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

12. Hydrostatic Testing - Safety During Testing *Do field observations confirm while conducting tests under Subpart J – Test Requirements, every reasonable precaution is taken to protect its employees and the general public throughout the testing?* (DC.PT.PRESSTESTSAFETY.O) 192.515(a) (192.629(a);192.629(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

13. Hydrostatic Testing - Records *Does the process require that, as applicable to the project, creation and retention of a record of each Subpart J test for the required duration?* (DC.PT.PRESSTESTRECORD.P) 192.517(a) (192.517(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

14. Hydrostatic Testing - Records *Do records indicate creation and retention of a record for each Subpart J test performed for the required duration?* (DC.PT.PRESSTESTRECORD.R) 192.517(a) (192.517(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Design and Construction - Spike Hydrotest

1. Spike Hydrostatic Testing *Do the operator's procedures provide adequate instruction for conducting a Spike hydrotest, if applicable, according to the regulations?* (DC.SPT.SPIKEPRESSTEST.P) 192.605(b) (192.506)

2. Spike Hydrostatic Testing *Do records indicate that spike pressure testing is/was conducted in accordance with §192.506?* (DC.SPT.SPIKEPRESSTEST.R) 192.709 (192.506;192.517)

3. Spike Hydrostatic Testing *Do field observations verify pressure testing is conducted in accordance with §192.506?* (DC.SPT.SPIKEPRESSTEST.O) 192.506 (192.503)

4. Hydrostatic Testing - Environmental Protection *Does the process require that, as applicable to the project, while conducting tests under Subpart J – Test Requirements, the test medium will be disposed of in a manner that will minimize damage to the environment?* (DC.PT.PRESSTESTENVIRON.P) 192.515(b) (192.629(a);192.629(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

5. Hydrostatic Testing - Environmental Protection *Do records indicate while conducting tests under Subpart J – Test Requirements, the test medium disposal was conducted in a manner that minimized damage to the environment?* (DC.PT.PRESSTESTENVIRON.R) 192.515(b) (192.629(a);192.629(b);192.603(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

6. Hydrostatic Testing - Environmental Protection *Do field observations confirm while conducting tests under Subpart J – Test Requirements, the test medium was disposed of in an environmentally sound manner?* (DC.PT.PRESSTESTENVIRON.O) 192.515(b) (192.629(a);192.629(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

7. Hydrostatic Testing - Safety During Testing *Does the process require that, as applicable to the project, while conducting tests under Subpart J – Test Requirements, every reasonable precaution is taken to protect its employees and the general public throughout the testing?* (DC.PT.PRESSTESTSAFETY.P) 192.515(a) (192.629(a);192.629(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

8. Hydrostatic Testing - Safety During Testing *Do records indicate while conducting tests under Subpart J – Test Requirements, every reasonable precaution was taken to protect its employees and the general public throughout the testing?* (DC.PT.PRESSTESTSAFETY.R) 192.515(a) (192.629(a);192.629(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

9. Hydrostatic Testing - Safety During Testing *Do field observations confirm while conducting tests under Subpart J – Test Requirements, every reasonable precaution is taken to protect its employees and the general public throughout the testing?* (DC.PT.PRESSTESTSAFETY.O) 192.515(a) (192.629(a);192.629(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

10. Hydrostatic Testing - Records *Does the process require that, as applicable to the project, creation and retention of a record of each Subpart J test for the required duration?* (DC.PT.PRESSTESTRECORD.P) 192.517(a) (192.517(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

11. Hydrostatic Testing - Records *Do records indicate creation and retention of a record for each Subpart J test performed for the required duration?* (DC.PT.PRESSTESTRECORD.R) 192.517(a) (192.517(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Design and Construction - Pressure Testing - Low Pressure

1. Hydrostatic Testing - General Requirements *Does the process require pressure testing to be conducted for new segments of pipeline, or return to service segments of pipeline that are being relocated or replaced?* (DC.PT.PRESSTEST.P) 192.605(b) (192.303;192.503(a);192.503(b);192.503(c);192.503(d);192.503(e))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

2. Hydrostatic Testing - General Requirements *Do records indicate that pressure testing is conducted in accordance with 192.503?* (DC.PT.PRESSTEST.R) 192.503(a) (192.503(b);192.503(c);192.503(d);192.503(e))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

3. Hydrostatic Testing - General Requirements *Is pressure testing conducted in accordance with 192.503?* (DC.PT.PRESSTEST.O) 192.503(a) (192.503(b);192.503(c);192.503(d);192.503(e))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

4. Hydrostatic Testing - Strength Test (Low) - Less than 30% SMYS & Above 100 psig *Does the process require that, as applicable to the project, sections of a pipeline operating at a hoop stress less than 30% of SMYS and at or above 100 psig be tested in accordance with the requirements of 192.507?* (DC.PTLOWPRESS.PRESSTESTLOWSTRESS.P) 192.507 (192.505;192.515;ANSI/GPTC Z380.1-2018 Appendix G-192-9)

5. Hydrostatic Testing - Strength Test (Low) - Less than 30% SMYS & Above 100 psig *Do records indicate that, as applicable to the project, sections of a pipeline operating at a hoop stress less than 30% of SMYS and at or above 100 psig were tested in accordance with the requirements of 192.507?* (DC.PTLOWPRESS.PRESSTESTLOWSTRESS.R) 192.507 (192.505;192.515;192.517;ANSI/GPTC Z380.1-2018 Appendix G-192-9)

6. Hydrostatic Testing - Strength Test (Low) - Less than 30% SMYS & Above 100 psig *Do field observations confirm that sections of a pipeline operating at a hoop stress less than 30% of SMYS and at or above 100 psig are tested in accordance with the requirements of 192.507?* (DC.PTLOWPRESS.PRESSTESTLOWSTRESS.O) 192.507 (192.505;192.515;ANSI/GPTC Z380.1-2018 Appendix G-192-9)

7. Hydrostatic Testing - Leak Test Pipeline Below 100 psig *Does the process require that, as applicable to the project, sections of a pipeline operated below 100 psig shall be leak tested in accordance with the section requirements of 192.509 (except for service lines and plastic pipelines)?* (DC.PTLOWPRESS.PRESSTEST100PSIG.P) 192.509 (192.143)

8. Hydrostatic Testing - Leak Test Pipeline Below 100 psig *Do records indicate that the sections of a pipeline operated below 100 psig were leak tested in accordance with the section requirements of 192.509 (except for service lines and plastic pipelines)?* (DC.PTLOWPRESS.PRESSTEST100PSIG.R) 192.509 (192.143;192.517)

9. Hydrostatic Testing - Leak Test Pipeline Below 100 psig *Do field observations confirm that sections of a pipeline operated below 100 psig are leak tested in accordance with the requirements of 192.509 (except for service lines and plastic pipelines)?* (DC.PTLOWPRESS.PRESSTEST100PSIG.O) 192.509 (192.143)

10. Hydrostatic Testing - Service Lines *Does the process require that, as applicable to the project, service line segments (other than plastic) shall be leak tested before being placed in service in compliance with the requirements of 192.511?* (DC.PTLOWPRESS.PRESSTESTSERVICE.P) 192.511(a) (192.143(a);192.511(b);192.511(c);192.143(b))

11. Hydrostatic Testing - Service Lines *Do records indicate that service line segments (other than plastic) were leak tested before being placed in service in compliance with the requirements of 192.511?* (DC.PTLOWPRESS.PRESSTESTSERVICE.R) 192.511(a) (192.143(a);192.517(b);192.143(b);192.511(b);192.511(c))

12. Hydrostatic Testing - Service Lines *Do field observations confirm that service line segments (other than plastic) are leak tested before being placed in service in compliance with the requirements of 192.511?* (DC.PTLOWPRESS.PRESSTESTSERVICE.O) 192.511(a) (192.143(a);192.511(b);192.143(b);192.511(c))

13. Hydrostatic Testing - Environmental Protection *Does the process require that, as applicable to the project, while conducting tests under Subpart J – Test Requirements, the test medium will be disposed of in a manner that will minimize damage to the environment?* (DC.PT.PRESSTESTENVIRON.P) 192.515(b) (192.629(a);192.629(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

14. Hydrostatic Testing - Environmental Protection *Do records indicate while conducting tests under Subpart J – Test Requirements, the test medium disposal was conducted in a manner that minimized damage to the environment?* (DC.PT.PRESSTESTENVIRON.R) 192.515(b) (192.629(a);192.629(b);192.603(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

15. Hydrostatic Testing - Environmental Protection *Do field observations confirm while conducting tests under Subpart J – Test Requirements, the test medium was disposed of in an environmentally sound manner?* (DC.PT.PRESSTESTENVIRON.O) 192.515(b) (192.629(a);192.629(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

16. Hydrostatic Testing - Safety During Testing *Does the process require that, as applicable to the project, while conducting tests under Subpart J – Test Requirements, every reasonable precaution is taken to protect its employees and the general public throughout the testing?* (DC.PT.PRESSTESTSAFETY.P) 192.515(a) (192.629(a);192.629(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

17. Hydrostatic Testing - Safety During Testing *Do records indicate while conducting tests under Subpart J – Test Requirements, every reasonable precaution was taken to protect its employees and the general public throughout the testing?* (DC.PT.PRESSTESTSAFETY.R) 192.515(a) (192.629(a);192.629(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

18. Hydrostatic Testing - Safety During Testing *Do field observations confirm while conducting tests under Subpart J – Test Requirements, every reasonable precaution is taken to protect its employees and the general public throughout the testing?* (DC.PT.PRESSTESTSAFETY.O) 192.515(a) (192.629(a);192.629(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

19. Hydrostatic Testing - Records *Does the process require that, as applicable to the project, creation and retention of a record of each Subpart J test for the required duration?* (DC.PT.PRESSTESTRECORD.P) 192.517(a) (192.517(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

20. Hydrostatic Testing - Records *Do records indicate creation and retention of a record for each Subpart J test performed for the required duration?* (DC.PT.PRESSTESTRECORD.R) 192.517(a) (192.517(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Design and Construction - Special Permits

1. Special Permit/Waiver: Replacement of Pipe in a Special Permit Area *Is the pipeline and applicable facilities being replaced in accordance with the design and construction requirements of Part 192 and the conditions of the Special Permit?* (DC.SP.SP.O) 190.341(d)(2) (Special Permit)

Design and Construction - Training and Qualification

1. Covered Tasks - Construction Maintenance *Does the process include covered tasks relating to "construction-type" maintenance?* (DC.TQ.OQCONSTMAINT.P) 192.805(a) (192.493;Operators OQ program manual)

2. Abnormal Operating Conditions *Do records show evaluation of qualified individuals for recognition and reaction to AOCs?* (DC.TQ.ABNORMAL.R) 192.807(a) (192.803)

3. Skills and Knowledge of Personnel Performing Covered Tasks - Contractor Employees *Are qualification records maintained for contractor personnel?* (DC.TQ.OQCONTRACTOR.R) 192.807(a) (Operators OQ program manual)

4. Skills and Knowledge of Personnel Performing Covered Tasks - Contractor Employees *Do selected contractor individuals performing covered tasks demonstrate adequate skills and knowledge?* (DC.TQ.OQCONTRACTOR.O) 192.805(b) (Operators OQ program manual)

5. Qualification Records - Operator Employee *Are qualification records maintained for operator personnel?* (DC.TQ.RECORDS.R) 192.807(a) (Operators OQ program manual)

6. Skills and Knowledge of Personnel Performing Covered Tasks - Operator Employee *Do selected operator individuals performing covered tasks demonstrate adequate skills and knowledge?* (DC.TQ.OQPLANEMPLOYEE.O) 192.805(b) (Operators OQ program manual)

7. Qualification of Personnel Who Oversee and Perform Excavations and Backfilling Operations *Do records demonstrate individuals who oversee marking, trenching and backfilling operations are qualified?* (DC.TQ.EXCAVATE.R) 192.807(a) (ADB-2006-01)

8. Qualification of Personnel Who Oversee and Perform Excavations and Backfilling Operations *Do selected individuals who oversee marking, trenching and backfilling operations demonstrate adequate skills and knowledge?* (DC.TQ.EXCAVATE.O) 192.805(b) (ADB-2006-01)

9. Qualification of Personnel Performing Hot Taps *Do records document the qualification of personnel performing hot taps?* (DC.TQ.HOTTAP.R) 192.807(a) (192.627)

10. Qualification of Personnel Performing Hot Taps *Do personnel performing hot taps demonstrate adequate skills and knowledge?* (DC.TQ.HOTTAP.O) 192.805(b) (192.627)

Design and Construction - Conversion to Service (192.14)

1. Notification to PHMSA *Do records indicate operator provided required notifications to PHMSA not later than 60 days before the conversion began as required by §191.22(c)?* (DC.CONV.NOTIFICATION.R) 191.22(c)(1) (192.14(c);191.17(a))

2. Required Procedure *Did the operator prepare a comprehensive written Conversion to Service procedure that includes all of the requirements of §192.14?* (DC.CONV.PROCEDURE.P) 192.14(a)(1)

3. Integrity Management *Do the records indicate the pipeline's Integrity Management history and related activities were reviewed?* (DC.CONV.INTEGRITYMGMT.R) 192.14(a)(1)

4. Physical Inspection for Defects *Does the conversion procedure include requirement to visually inspect aboveground segments of the pipeline for physical defects and operating conditions which could be expected to impair the strength of the pipeline, as required by §192.14(a)(2)?* (DC.CONV.PHYSICALDEFECTS.P) 192.14(a)(2)

5. Physical Inspection for Defects *Do the records indicate the aboveground segments of the pipeline was were visually inspected for physical defects and operating conditions which could be expected to impair the strength of the pipeline, as required by §192.14(a)(2)?* (DC.CONV.PHYSICALDEFECTS.R) 192.14(a)(2)

6. Unsafe Defects and Conditions *Does the conversion procedure include requirement to identify and correct all known unsafe defects and conditions as required by §192.14(a)(3)?* (DC.CONV.UNSAFEDEFECTS.P) 192.14(a)(3)

7. Unsafe Defects and Conditions *Do the records indicate operator corrected (or has plans to correct) all known unsafe defects and conditions as required by §192.14(a)(3) and conducted in accordance with Part 192?* (DC.CONV.UNSAFEDEFECTS.R) 192.14(a)(3)

8. HCA Identification *Does the process include an HCA analysis (per the methods defined in §192.903) to the converted pipeline for the identification of High Consequence Areas?* (DC.CONV.HCAID.P) 192.905(a) (192.903)

9. HCA Identification *Do records demonstrate that the identification of pipeline segments in HCAs was completed in accordance with process requirements?* (DC.CONV.HCAID.R) 192.947(d) (192.903;192.905(a))

10. HCA - Potential Impact Radius *Is the process for defining and applying potential impact radius (PIR) for establishment of high consequence areas consistent with the requirements of 192.903?* (DC.CONV.HCAPIR.P) 192.903 (192.905(a))

11. HCA - Potential Impact Radius *Do records demonstrate the use of potential impact radius (PIR) for establishment of high consequence areas was consistent with requirements of §192.903?* (DC.CONV.HCAPIR.R) 192.947(d) (192.903;192.905(a))

12. Risk Assessment *Does the conversion procedure require a Risk Assessment to be performed to identify threats and hazards associated with the conversion to the new service?* (DC.CONV.RISKASSESSMENT.P) 192.14(a)(1) (192.911(b);192.911(c);192.917(a);192.917(b))

13. Risk Assessment *Do records demonstrate a Risk Assessment was performed to identify threats and hazards associated with the conversion to the new service and the measures taken/planned to mitigate reduce those risks?* (DC.CONV.RISKASSESSMENT.R) 192.14(a)(1) (192.911(b);192.911(c);192.917(a);192.917(b))

14. Design Elements *Do records indicate the Conversion-to-Service DESIGN elements were reviewed and applied in accordance with §192.14(a)?* (DC.CONV.DESIGN.R) 192.14(a)(1)

15. Construction Elements *Do the records indicate the Conversion-to-Service related CONSTRUCTION elements were reviewed in accordance with §192.14(a) and applied in accordance with Part 192?* (DC.CONV.CONSTRUCTION.R) 192.14(a)(1)

16. Operations & Maintenance Elements *Do the records indicate the Conversion-to-Service related Operations & Maintenance elements were reviewed in accordance with §192.14(a) and applied in accordance with Part 192?* (DC.CONV.OPSMAINTENANCE.R) 192.14(a)(1) (192.605)

17. O&M Manual Modifications *Does the Conversion procedure require the Operations and Maintenance Manual procedures to be reviewed, and modified or expanded as necessary to accommodate the Part 192 requirements as applied to this Conversion to Service?* (DC.CONV.OPSMAINTMODIF.P) 192.605 (192.14(a))

18. O&M Manual Modifications *Do the records indicate the Conversion-to-Service related Operations & Maintenance elements were reviewed and the necessary modifications were made in accordance with §192.14(a)?* (DC.CONV.OPSMAINTMODIF.R) 192.605 (192.14(a))

19. Historical Records Review *For the operator's written procedure to review the pipeline historical records as required by §192.14(a), were adequate / appropriate records reviewed?* (DC.CONV.HISTORICALRECORDS.R) 192.605 (192.14(a))

20. Historical Records Review - Missing Records *For the operator's review of the pipeline history (historical records) as required by §192.14(a), do records indicate operator determined what necessary records were either missing or deemed not sufficient and how the operator plans to test to obtain the missing records or insufficient data?* (DC.CONV.MISSINGRECORDS.R) 192.14(a)(1)

21. Strength Testing (Subpart J) for MAOP *Does the conversion procedure include the requirement to strength test the pipeline, in accordance with Part 192, Subpart J to substantiate the MAOP permitted by Part 192, Subpart L?* (DC.CONV.STRENGTHTESTING.P) 192.14(a)(4)

22. Strength Testing (Subpart J) for MAOP *Do the records indicate the pipeline was tested in accordance with Part 192, Subpart J to substantiate the new Maximum Allowable Operating Pressure permitted by Subpart L?* (DC.CONV.STRENGTHTESTING.R) 192.14(a)(4)

23. Applying Integrity Management (Subpart O) *Does the conversion procedure require the operator to apply the Integrity Management Program requirements, including HCAs, from Part 192, Subpart O?* (DC.CONV.IMPROGRAM.P) 192.901 (192.907(a))

24. Applying Integrity Management (Subpart O) *Do the records indicate operator developed and implemented an Integrity Management Program for the converted pipeline as required by Part 192, Subpart O?* (DC.CONV.IMPROGRAM.R) 192.947 (192.901)

25. Preventative & Mitigative Measures *Does the conversion procedure require additional measures, beyond those already required by Part 192, to prevent a pipeline failure and to mitigate the consequences of a pipeline failure in a high consequence area?* (DC.CONV.PMMEASURES.P) 192.935

26. Preventative & Mitigative Measures *Where applicable, do the records indicate operator applied preventative and mitigative measures to prevent a pipeline failure and to mitigate the consequences of a pipeline failure in a high consequence area?* (DC.CONV.PMMEASURES.R) 192.947 (192.935)

27. Conversion Records *Does the operator's conversion procedure require a record of all of the investigations, tests, repairs, replacements, and alterations made under §192.14(a) to be maintained for the life of the pipeline/facility?* (DC.CONV.RECORDS.P) 192.14(b) (192.607;192.712)

28. Conversion Records *Does the operator's conversion procedure require a record of all of the investigations, tests, repairs, replacements, and alterations made under §192.14(a) to be maintained for the life of the pipeline/facility?* (DC.CONV.RECORDS.R) 192.14(b) (192.607;192.712)

29. Commissioning Converted Pipeline *Has the operator prepared a written Commissioning Plan which details the requirements, parameters, and procedures for a safe startup of the converted pipeline under Part 192?* (DC.CONV.COMMISSIONING.P) 192.603

30. Commissioning Converted Pipeline *Do records indicate operator followed its written Commissioning Plan to ensure a safe startup of the converted pipeline under Part 192?* (DC.CONV.COMMISSIONING.R) 192.603(b) (192.603(a);192.605)

Design and Construction - Plastic Pipe Construction

1. Design of Plastic Pipe (192.121) *Does the process require the design pressure for plastic pipe to be determined in accordance with §192.121?* (DC.PLASTIC.DESIGNPRESSPLASTIC.P) 192.121

2. Design of Plastic Pipe (192.121) *Do design records and drawings indicate the design pressure for plastic pipe is determined in accordance with the formulas in §192.121?* (DC.PLASTIC.DESIGNPRESSPLASTIC.R) 192.121

3. Plastic Pipe Specs *Does the operator have specifications that require plastic pipe meet the requirements of §192.53, §192.59, and other applicable requirements of this sub-part?* (DC.PLASTIC.PLASTICSPECS.P) 192.53 (192.59)

4. Plastic Pipe Specs *Do records indicate that plastic pipe installed is qualified in accordance with 192.59?* (DC.PLASTIC.PLASTICSPECS.R) 192.53 (192.59)

5. Plastic Pipe Specs *Do field observations confirm the plastic pipe meets the requirements of §192.53 and applicable requirements of this subpart?* (DC.PLASTIC.PLASTICSPECS.O) 192.53 (192.59)

6. Design Pressure of Plastic Components / Fittings *Does the process require plastic components and fittings are able to withstand operating pressures and other anticipated loads in accordance with a listed specification?* (DC.PLASTIC.PLASTICFITTING.P) 192.143(c) (192.149(c))

7. Design Pressure of Plastic Components / Fittings *Do records indicate that plastic components and fittings are able to withstand operating pressures and other anticipated loads in accordance with a listed specification?* (DC.PLASTIC.PLASTICFITTING.R) 192.143(c) (192.149(c))

8. Marking of Materials *Does the operator have specifications requiring pipe, valves, and fittings to be marked according to the requirements of §192.63?* (DC.MA.MARKING.P) 192.63
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

9. Joining of Materials Other than by Welding *Does the process require that pipeline joints (to be made other than by welding) be designed and installed in accordance with 192.273?* (DC.CO.NONWELDJOINT.P) 192.303 (192.273(a);192.273(b);192.273(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

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

11. Plastic Pipe Joints *As applicable to the project, are plastic pipe joints installed in accordance with the requirements 192.281?* (DC.PLASTIC.PLASTICJOINT.O) 192.281(a) (192.281(b);192.281(c);192.281(d);192.281(e))

12. 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.PLASTIC.PLASTICJOINTPROCEDURE.P) 192.283(a) (192.283(b);192.283(c))

13. Plastic Pipe - Qualifying Joining Procedures *Do records indicate plastic pipe joining procedures have been qualified in accordance with 192.283, prior to making plastic pipe joints?* (DC.PLASTIC.PLASTICJOINTPROCEDURE.R) 192.273(b) (192.283(a);192.283(b);192.283(c))

14. Plastic Pipe - Qualifying Personnel to Make Joints *Is a process in place to ensure that personnel making joints in plastic pipelines are qualified?* (DC.PLASTIC.PLASTICJOINTQUAL.P) 192.285(d) (192.285(a);192.285(b);192.285(c);192.285(e);192.513;192.803;192.805)

15. Plastic Pipe - Qualifying Personnel to Make Joints *Do records indicate persons making joints in plastic pipelines are qualified in accordance with §192.285?* (DC.PLASTIC.PLASTICJOINTQUAL.R) 192.285(e) (192.285(a);192.285(b);192.285(c);192.285(d);192.807(a);192.807(b);192.513;192.803)

16. Plastic Pipe - Qualifying Joining Procedures *Do observations verify persons making joints in plastic pipelines are qualified?* (DC.PLASTIC.PLASTICJOINTQUAL.O) 192.285(d)
(192.285(a);192.285(b);192.285(c);192.285(e);192.513;192.803;192.807(b))

17. 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.PLASTIC.PLASTICJOINTINSP.P) 192.287 (192.805(h))

18. Qualification of Personnel Inspecting Joints in Plastic Pipelines *Do records indicate persons inspecting the making of plastic pipe joints have been qualified?* (DC.PLASTIC.PLASTICJOINTINSP.R) 192.287
(192.285;192.283;192.807(a);192.807(b))

19. Qualification of Personnel Inspecting Joints in Plastic Pipelines *Do person(s) inspecting joints in plastic pipelines demonstrate they are qualified to evaluate the acceptability of plastic pipe joints?*
(DC.PLASTIC.PLASTICJOINTINSP.O) 192.287 (192.807(b))

20. Installation of Plastic Pipe *Does the process require that plastic pipe be installed as required by §192.321?*
(DC.PLASTIC.INSTALLPLASTIC.P) 192.303
(192.321(a);192.321(b);192.321(c);192.321(d);192.321(e);192.321(f);192.321(g);192.321(h);192.321(i))

21. Installation of Plastic Pipe *Do records indicate plastic pipe was installed as required by 192.321?*
(DC.PLASTIC.INSTALLPLASTIC.R) 192.321(a)
(192.321(b);192.321(c);192.321(d);192.321(e);192.321(f);192.321(g);192.321(h);192.321(i))

22. Installation of Plastic Pipe *Do field observations confirm the plastic pipe is installed as required by 192.321?*
(DC.PLASTIC.INSTALLPLASTIC.O) 192.321(a)
(192.321(b);192.321(c);192.321(d);192.321(e);192.321(f);192.321(g);192.321(h);192.321(i))

23. Underground Clearance *Does the process require pipe to be installed with clearances specified in 192.325 and (if plastic) installed as to prevent heat damage to the pipe?* (DC.CO.CLEARANCE.P) 192.303
(192.325(a);192.325(b);192.325(c);192.325(d))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

24. Underground Clearance *Do records indicate that transmission lines or mains are installed with clearances specified in 192.325, and (if plastic) installed as to prevent heat damage to the pipe?* (DC.CO.CLEARANCE.R) 192.325(a) (192.325(b);192.325(c);192.325(d))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

25. Underground Clearance *Do field observations indicate the transmission lines or mains (and bottles/bottle-type holders) are installed with the clearances specified in 192.325 and (if plastic) installed as to prevent heat damage to the pipe?* (DC.CO.CLEARANCE.O) 192.325(a) (192.325(b);192.325(c);192.325(d);192.175(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

26. Trenchless Installation of Plastic Transmission and Main Pipelines *For plastic pipe Transmission and Main pipelines installed by trenchless excavation, does the process include steps that need to be taken to provide sufficient clearance for installation and maintenance activities from other underground utilities and/or structures at the time of installation?* (DC.PLASTIC.PLASTICTRENCHLESS.P) 192.329(a) (192.303)

27. Trenchless Installation of Plastic Transmission and Main Pipelines *For plastic pipe Transmission and Main pipelines installed by trenchless excavation, do field observations confirm lines are being installed with sufficient clearance for installation and maintenance activities from other underground utilities and/or structures?* (DC.PLASTIC.PLASTICTRENCHLESS.O) 192.329(a) (192.303)

28. Trenchless Installation of Plastic Lines using a Weak Link *Does the process require that during installation of plastic lines, a "weak link" (as defined by §192.3) is utilized to ensure the pipeline will not be damaged by any excessive forces during the pulling process?* (DC.PLASTIC.PLASTICWEAKLINK.P) 192.329(b) (192.376(b);192.303)

29. Trenchless Installation of Plastic Lines using a Weak Link *Do field observations confirm plastic lines are being installed using a "weak link" (as defined by §192.3) to ensure the pipeline will not be damaged by any excessive forces during the pulling process?* (DC.PLASTIC.PLASTICWEAKLINK.O) 192.329(b) (192.376(b);192.303)

30. Plastic Pipe - Bend Radius *Does the operator's process ensure that the bend radius of plastic pipe does not exceed the minimum bend radius specified by the manufacture for the diameter being installed?* (DC.PLASTIC.BENDPLASTIC.P) 192.313(d) (192.605)

31. Plastic Pipe - Bend Radius *Do field observations confirm that the correct plastic pipe bend radius is being used in the field during construction?* (DC.PLASTIC.BENDPLASTIC.O) 192.313(d) (192.605;192.603)

32. Repair of Plastic Pipe *Does the process require imperfections or damage of plastic pipe to be repaired or removed?* (DC.PLASTIC.REPAIRPLASTIC.P) 192.303 (192.311)

33. Repair of Plastic Pipe *Do field observations verify imperfections or damage of plastic pipe are repaired or removed?* (DC.PLASTIC.REPAIRPLASTIC.O) 192.311

34. Hydrostatic Testing - Plastic Pipelines *Does the process require that, as applicable to the project, sections of a plastic pipeline must be tested in accordance with the requirements of 192.513?* (DC.PLASTIC.PRESSTESTPLASTIC.P) 192.513(a) (192.143(a);192.121(a);192.513(b);192.513(c);192.513(d);192.143(b);192.143(c);192.121(b);192.121(c);192.121(d);192.121(e);192.121(f))

35. Hydrostatic Testing - Plastic Pipelines *Do records indicate that the sections of a plastic pipeline were tested in accordance with the requirements of 192.513?* (DC.PLASTIC.PRESSTESTPLASTIC.R) 192.513(a) (192.143(a);192.517(b);192.513(c);192.513(d);192.143(b);192.143(c))

36. Hydrostatic Testing - Plastic Pipelines *Do field observations confirm that sections of a plastic pipeline are tested in accordance with the requirements of 192.513?* (DC.PLASTIC.PRESSTESTPLASTIC.O) 192.513(a) (192.143(a);192.513(b);192.513(c);192.513(d);192.143(b);192.143(c))

37. Plastic Pipe - Storage and Handling of Pipe and Components *Does the operator have a written procedure for the storage and handling of plastic pipe and associated components?* (DC.PLASTIC.PLASTICHANDLING.P) 192.69 (192.59;192.63(e);192.321(g))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

38. Plastic Pipe - Storage and Handling of Pipe and Components *Do records indicate that the storage and handling of plastic pipe and associated plastic components were in accordance with noted procedures and applicable standards?* (DC.PLASTIC.PLASTICHANDLING.R) 192.69 (192.59;192.63(e);192.321(g))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

39. Plastic Pipe - Storage and Handling of Pipe and Components *Do field observations confirm plastic materials are stored and handled to ensure compliance with operator procedures?* (DC.PLASTIC.PLASTICHANDLING.O) 192.69 (192.59;192.63(e);192.65;192.67)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

40. Valve Installation in Plastic Pipe *Does the operator have a procedural requirement for plastic pipe valves to be designed with adequate support to resist against excessive torsional or shearing loads when the valve or shutoff is operated, and from any other secondary stresses that might be exerted through the valve or its enclosure?* (DC.PLASTIC.PLASTICVALVE.P) 192.193

41. Valve Installation in Plastic Pipe *Do records show that proposed pipe design plans include provisions for support or resistance against excessive torsional loads, shearing loads when the valve or shutoff is operated, or from any other secondary stresses that might be exerted on the valves?* (DC.PLASTIC.PLASTICVALVE.R) 192.193

42. Valve Installation in Plastic Pipe *Does field observation show plastic pipe valves lack provisions for support or resistance against excessive torsional loads, shearing loads when the valve or shutoff is operated, or from any other secondary stresses that might be exerted on the valves?* (DC.PLASTIC.PLASTICVALVE.O) 192.193

43. Maintenance of Equipment Used in Joining Plastic Pipe *Does the process require maintaining equipment used in joining plastic pipe 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) (192.756)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

44. Maintenance of Equipment Used in Joining Plastic Pipe *Do records indicate equipment used in joining plastic pipe 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)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

45. Maintenance of Equipment Used in Joining Plastic Pipe *Is proper maintenance being performed on equipment used in joining plastic pipe 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
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

46. Qualification of Personnel Making Joints in Plastic Pipelines *Does the process require personnel making joints in plastic pipelines be qualified?* (TQ.QUOMCONST.PLASTIC.P) 192.285(a) (192.285(d);192.805(b);192.285(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

47. Qualification of Personnel Inspecting Joints in Plastic Pipelines *Does the process require that persons who inspect joints in plastic pipes be qualified?* (TQ.QUOMCONST.PLASTICINSPECT.P) 192.287 (192.805(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

48. Qualification of Personnel Making Joints in Plastic Pipelines *Do records indicate adequate qualification of personnel making/inspecting joints in plastic pipelines?* (TQ.QUOMCONST.PLASTIC.R) 192.285(a) (192.285(d);192.287;192.807(a);192.807(b);192.285(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

49. Qualification of Personnel Making Joints in Plastic Pipelines *Do personnel making/inspecting joints in plastic pipelines demonstrate adequate skills and knowledge?* (TQ.QUOMCONST.PLASTIC.O) 192.285(a) (192.287;192.803)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Design and Construction - Vaults

1. Vaults Structural Design Requirements *As applicable to the project, does the process require that vaults and valve pits are designed in accordance with 192.183?* (DC.VAULTS.VAULT.P) 192.143(a) (192.143(b);192.183(a);192.183(b);192.183(c))

2. Vaults Structural Design Requirements *As applicable to the project, do records indicate that vaults and valve pits are designed in accordance with 192.183?* (DC.VAULTS.VAULT.R) 192.183(a) (192.183(b);192.183(c))

3. Vaults Structural Design Requirements *As applicable to the project, are vaults/pits installed as designed, and per the requirements of 192.183?* (DC.VAULTS.VAULT.O) 192.141 (192.183(a);192.183(b);192.183(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

4. Vaults Accessibility *As applicable to the project, does the process require that vaults are located in an accessible location?* (DC.VAULTS.VAULTACCESS.P) 192.143(a) (192.143(b);192.185(a);192.185(b);192.185(c))

5. Vaults Accessibility *As applicable to the project, do records indicate that vaults are located in an accessible location?* (DC.VAULTS.VAULTACCESS.R) 192.185(a) (192.185(b);192.185(c))

6. Vaults Accessibility *As applicable to the project, are vaults located in an accessible location?* (DC.VAULTS.VAULTACCESS.O) 192.141 (192.185(a))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

7. Vaults Sealing, Venting, and Ventilation *As applicable to the project, does the process require that underground vaults or closed top pits are to be sealed, vented or ventilated as required by 192.187?* (DC.VAULTS.VAULTSEAL.P) 192.187(a) (192.187(b);192.187(c))

8. Vaults Sealing, Venting, and Ventilation *As applicable to the project, do records indicate that underground vaults or closed top pits are to be sealed, vented or ventilated as required by 192.187?* (DC.VAULTS.VAULTSEAL.R) 192.187(a) (192.187(b);192.187(c))

9. Vaults Sealing, Venting, and Ventilation *As applicable to the project, are vaults/pits sealed, ventilated, or vented as required of 192.187?* (DC.VAULTS.VAULTSEAL.O) 192.141 (192.187(a);192.187(b);192.187(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

10. Vaults Drainage and Waterproofing *As applicable to the project, does the process require that underground vaults or pits are protected from water intrusion as required of 192.189?* (DC.VAULTS.VAULTWATER.P) 192.143(a) (192.143(b);192.189(a);192.189(b);192.189(c))

11. Vaults Drainage and Waterproofing *As applicable to the project, do records indicate that underground vaults or pits are protected from water intrusion as required of 192.189?* (DC.VAULTS.VAULTWATER.R) 192.189(a) (192.189(b);192.189(c))

12. Vaults Drainage and Waterproofing *As applicable to the project, are vaults installed to minimize water entrance, and have proper electrical equipment?* (DC.VAULTS.VAULTWATER.O) 192.141 (192.189(a);192.189(b);192.189(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Emergency Preparedness and Response - Emergency Response

1. Emergency Plan Review *Does the process include a requirement to review the manual at intervals not exceeding 15 months, but at least once each calendar year?* (EP.ERG.REVIEW.P) 192.605(a) (192.9(e);)

2. Emergency Plan Review *Have annual reviews been conducted of the emergency plans and procedures as required, and any updates completed as appropriate?* (EP.ERG.REVIEW.R) 192.605(a) (192.9(e))

3. Distribution of Emergency Plan and Procedures *Are supervisors provided the applicable portions of the emergency plan and procedures?* (EP.ERG.LOCATION.O) 192.615(b)(1) (192.9(e))

4. Incident Investigation Data *Does the process include the steps necessary for the gathering of data needed for reporting incidents under Part 191 of this chapter in a timely and effective manner?* (EP.ERG.INCIDENTDATA.P) 192.605(b)(4) (191.5(a);192.9(e))

5. 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) (192.9(e))

6. Receiving Notices *Do records indicate receiving, identifying, classifying and communication of notices of events requiring immediate response in accordance with procedures?* (EP.ERG.NOTICES.R) 192.615(a)(1) (192.9(e))

7. 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);192.9(e))

8. 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, operational failure (including Cyber-attacks), or a natural disaster?* (EP.ERG.RESPONSE.P) 192.615(a) (192.615(a)(3);192.615(a)(11);192.615(b)(1);192.9(e))

9. 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);192.9(e))

10. Emergency Response Readiness *Are personnel, equipment, tools, and materials needed at the scene of an emergency available as required by the procedures?* (EP.ERG.READINESS.O) 192.615(a)(4) (192.9(e))

11. 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);192.9(e))

12. Emergency Response *Does the emergency plan include procedures for the emergency shutdown, valve shut-off, 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);192.9(e))

13. 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);192.9(e))

14. Public Official Notification *Does the emergency plan include procedures for notifying appropriate public safety answering point (911) 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);192.9(e))

15. 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);192.9(d);192.9(e);NTSB P-11-9)

16. 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);192.9(d);192.9(e);NTSB P-11-9)

17. 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);192.9(e))

18. 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.POSTEVNTREVIEW.P) 192.615(b)(3) (192.9(e))

19. Emergency Response Performance *Do records indicate review of employee activities to determine whether the procedures were effectively followed in each emergency?* (EP.ERG.POSTEVNTREVIEW.R) 192.605(a) (192.615(b)(1);192.615(b)(3);192.9(e))

20. Liaison with Public Officials *Does the process include steps for establishing and maintaining liaison with appropriate fire, police, other public officials, and 911 emergency call centers?* (EP.ERG.LIAISON.P) 192.615(a)(2) (192.615(c)(1);192.615(c)(2);192.615(c)(3);192.615(c)(4);192.616(c);192.9(e);ADB-2005-03)

21. Liaison with Public Officials *Do records indicate that liaison has been established and maintained with appropriate fire, police, other public officials, and 911 emergency call centers?* (EP.ERG.LIAISON.R) 192.603(b) (192.615(c)(1);192.615(c)(2);192.615(c)(3);192.615(c)(4);192.616(c);192.9(e);ADB-2005-03)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

22. Notification of Potential Rupture *Does the operator have procedures to identify and notify operator personnel of a potential rupture?* (EP.ERG.NOTIFPOTRUPTURE.P) 192.635

23. Valve Shut-off Capabilities *Does the operator have procedures requiring shut-off of RMVs or AETs following identification of a release?* (EP.ERG.VALVESHUTOFF.P) 192.605(b) (192.636(b))

24. Valve Shut-off Capabilities *Do the records demonstrate RMVs or AETs were shut-off in accordance with §192.636(b) following identification of a release?* (EP.ERG.VALVESHUTOFF.R) 192.605(b) (192.636(b))

25. Notification of Potential Rupture - Records *Do the records indicate the operator properly identified and notified operator's personnel of a potential rupture?* (EP.ERG.NOTIFPOTRUPTURE.R) 192.635

26. Rupture Identification *Does the operator have procedures to evaluate and identify if a potential rupture is an actual rupture event?* (EP.ERG.RUPTUREIDENTIF.P) 192.615(a)(12)

Emergency Preparedness and Response - Failure & Incident Investigation

1. Incident Investigation & Analysis *Does the operator's processes include steps for analyzing pipeline incidents to determine their causes?* (EP.FII.INCIDENTANALYSIS.P) 192.617(a)

2. Incident RMV Analysis *For incidents that involve an RMV, does the operator's procedures require a post-incident analysis of all the factors that may have impacted the release volume and consequences of the release and identify and implement operators and maintenance measures to minimize future incidents?* (EP.FII.INCIDENTRMVANALYSIS.P) 192.617(a) (192.617(c))

3. Incident Summary *For incidents that involve an RMV, does the operator's procedures require an incident summary?* (EP.FII.INCIDENTSUMMARY.P) 192.617(a) (192.617(d))

4. Incident Investigation & Analysis Records *Do records indicate pipeline incidents were analyzed to determine their causes?* (EP.FII.INCIDENTANALYSIS.R) 192.617(d)

5. Failure Investigation & Analysis *Do the operator's processes include steps for analyzing pipeline failures to determine their causes?* (EP.FII.FAILUREANALYSIS.P) 192.617(a)

6. Failure RMV Analysis *For failures that involve an RMV, do the operator's procedures require a post-failure analysis and the identification and implementation of operations and maintenance measures to minimize future failures?* (EP.FII.FAILURERMVANALYSIS.P) 192.617(c)

7. Failure Summary *For failures that involve an RMV, does the operator's procedures require a failure summary?* (EP.FII.FAILURESUMMARY.P) 192.617(d)

8. Failure Investigation & Analysis Records *Do records indicate pipeline failures were analyzed to determine their causes?* (EP.FII.FAILUREANALYSIS.R) 192.617(d)

Facilities and Storage - Compressor Station System Protection

1. Compressor Station Design/Construction - Fire Protection *Do compressor stations have adequate fire protection facilities?* (FS.CSSYSPROT.CMPFP.O) 192.171(a)

2. Compressor Station Gas Detection *Have adequate gas detection and alarm systems been installed in selected applicable compressor buildings?* (FS.CSSYSPROT.CMPGASDET.O) 192.736(a) (192.736(b))

3. Compressor Station Design/Construction - Gas Engine Mufflers *Are gas engines in compressor stations equipped with mufflers that prevent gas from being trapped in the muffler?* (FS.CSSYSPROT.CMPGASENGMFL.O) 192.171(e)

4. Compressor Station Design/Construction - Gas Engine Shutdown *Are compressor station gas engines that operate with pressure gas injection equipped so that stoppage of the engine will result in the fuel being automatically shut off and the engine distribution manifold being vented?* (FS.CSSYSPROT.CMPGASENGSD.O) 192.171(d)

5. Compressor Station Design/Construction - Lubrication *Do compressor units have shutdown or alarm devices that will operate in the event of inadequate heating or lubrication?* (FS.CSSYSPROT.CMPLUBPROT.O) 192.171(c)

6. Compressor Station Design/Construction - Over-Speed Protection *Do compressor stations' prime movers other than electrical induction or synchronous motors have automatic shutdown devices that will prevent over-speed of the prime mover or the unit being driven?* (FS.CSSYSPROT.CMPOVSPD.O) 192.171(b)

7. Compressor Station Design/Construction - Pressure Relief *Are pressure relief/limiting devices inside a compressor station designed, installed, and inspected properly?* (FS.CSSYSPROT.CMPRELIEF.O) 192.199 (192.731(a);192.731(b);192.731(c))

8. Compressor Station Design/Construction - Distribution Supply ESD *Does each compressor station that supplies gas directly to a distribution system (with no other adequate sources of gas available) have an emergency shutdown system that will not function at the wrong time or cause unintended outages?* (FS.CSSYSPROT.ESDDISTSD.O) 192.167(b)

9. Compressor Station Design/Construction - ESD Electrical *Does each compressor station have an emergency shutdown system that is capable of shutting down electrical facilities (except emergency and equipment protection circuits) near gas headers and within compressor buildings?* (FS.CSSYSPROT.ESDELECSD.O) 192.167(a)(3)(i) (192.167(a)(3)(ii))

10. Compressor Station Design/Construction - ESD Gas Block *Does each compressor station have an emergency shutdown system that is capable of blocking gas out of the station and blow down the station piping? NOTE: Not required for field compressor stations of 1,000 horsepower (746 kilowatts) or less.* (FS.CSSYSPROT.ESDGASBLK.O) 192.167(a)(1)

11. Compressor Station Design/Construction - ESD Gas Discharge *Does each compressor station have an emergency shutdown system that is capable of safely discharging blowdown gas from the blowdown piping at a location where the gas will not create a hazard?* (FS.CSSYSPROT.ESDGASDISCH.O) 192.167(a)(2)

12. Compressor Station Design/Construction - ESD *Does each compressor station have an emergency shutdown system that is capable of shutting down gas compressing equipment and gas fires in the vicinity of gas headers and compressor buildings?* (FS.CSSYSPROT.ESDGASSD.O) 192.167(a)(3)

13. Compressor Station Design/Construction - ESD Locations *Does each compressor station have an emergency shutdown system that is capable of being operated from at least two locations which are: 1) Outside the gas area of the station, 2) Near the exit gates, if the station is fenced, or near emergency exits, if not fenced, 3) And not more than 500 feet (153 meters) from the limits of the station?* (FS.CSSYSPROT.ESDLOCATION.O) 192.167(a)(4)

14. Compressor Station Design/Construction - Unattended Platform ESD *Does each unattended platform compressor station located offshore or in inland navigable waters have an emergency shutdown system that will actuate automatically in the event of the following occurrences? 1) When gas pressure equals the MAOP plus 15 percent and, 2) When an uncontrolled fire occurs on the platform.* (FS.CSSYSPROT.UNATTPLATCMPSD.O) 192.167(c)(1)

15. Compressor Station Design/Construction - Platform ESD *Does each platform compressor station, located offshore or in inland navigable waters, within a building have an emergency shutdown system that will actuate automatically in the event of the following occurrences? 1) When an uncontrolled fire occurs in the building and, 2) When the concentration of gas in the air within the building reaches 50 percent of the lower explosive limit that has a source of ignition.* (FS.CSSYSPROT.PLATCMPSD.O) 192.167(c)(2)

16. Compressor Station Design/Construction - MAOP *Do compressor stations have pressure relief or other suitable protective devices with sufficient capacity and sensitivity so as to protect station piping from exceed 110% of MAOP?* (FS.CSSYSPROT.CMPMAOP.O) 192.169(a)

17. Compressor Station Design/Construction - Relief Discharge *Do pressure relief valves exhaust gas to a location where the gas will not cause a hazard?* (FS.CSSYSPROT.RELIEFDISCH.O) 192.169(b)

18. Compressor Station Design/Construction - Pressure Relief *Does the process provide adequate detail for inspection and testing of compressor station pressure relief devices with the exception of rupture disks?* (FS.CSSYSPROT.CMPRELIEF.P) 192.605(b)(1) (192.731(a);192.731(b);192.731(c))

19. Compressor Station Design/Construction - Pressure Relief *Do records document with adequate detail that all inspection and testing of compressor station pressure relief devices with the exception of rupture disks have occurred at the required interval?* (FS.CSSYSPROT.CMPRELIEF.R) 192.709(b) (192.709(c);192.731(a);192.731(b);192.731(c))

20. Compressor Station Design/Construction - Relief Capacity *Do pressure relieving/limiting stations located within the confines of a compressor station have sufficient capacity and are they set to limit the pressures to no more than allowed?* (FS.CSSYSPROT.RELIEFCAPC.O) 192.201(a) (192.201(b);192.201(c))

21. Compressor Stations Emergency Shutdown Test *Does the process provide adequate detail for inspecting and testing compressor station emergency shutdown devices at the required frequency?* (FS.CSSYSPROT.CMPESDTEST.P) 192.605(b) (192.731(c))

22. Compressor Stations Emergency Shutdown Device Test Frequency *Do records document the inspection and testing of all compressor station emergency shutdown devices at the required frequency?* (FS.CSSYSPROT.CMPESDTESTDEV.R) 192.709(c) (192.731(c))

23. Compressor Station Design/Construction - Permanent Gas Detection *Does the process adequately detail requirements of permanent gas detectors and alarms at compressor buildings?* (FS.CSSYSPROT.CMPGASDETREQ.P) 192.605(b) (192.736(b))

24. Compressor Station - Gas Detection and Alarm System *Does the process give detail how gas detection and alarm systems in compressor stations will be maintained to function properly and do procedures require performance tests?* (FS.CSSYSPROT.CMPGASDETOM.P) 192.605(b) (192.736(c);192.736(b))

25. Compressor Station - Gas Detection and Alarm System *Do records document that all compressor station gas detection and alarm systems are being maintained and tested as required?* (FS.CSSYSPROT.CMPGASDETOM.R) 192.709(c) (192.736(c);192.736(b))

Facilities and Storage - Compressor Stations

1. Compressor Station Design/Construction - Control of Property *Are onshore compressor buildings located on property under the control of the operator?* (FS.CS.BLDGLOC.O) 192.163(a) (192.163(b))

2. Compressor Station Design/Construction - Adjacent Property *Are onshore main compressor buildings far enough from adjacent property to minimize the possibility of fire being conveyed to the compressor buildings from adjacent property?* (FS.CS.BLDGADJ.O) 192.163(a)

3. Compressor Station Design/Construction - Exits *Does each main compressor building operating floor have at least two separated, easily accessed and unobstructed exits to a place of safety, main compressor building exits that have door latches that can be readily opened without a key, and main compressor building exit doors mounted to swing outward?* (FS.CS.BLDGEXITS.O) 192.163(c)

4. Compressor Station Design/Construction - Fire Fighting Space *Do onshore main compressor buildings have enough open space around them to allow for free movement of fire-fighting equipment.* (FS.CS.BLDGSPACE.O) 192.163(a)

5. Compressor Station Design/Construction - NFPA 70 *Does the equipment and wiring within compressor stations conform to National Electric Code, ANSI/NFPA 70, including the required posting or ready access of the permit?* (FS.CS.CMPNFPA70.O) 192.163(e)

6. Compressor Station Design/Construction - Fence Gates *Do fenced areas around compressor stations have at least two gates that provide for easy escape to place of safety, and do gates located within 200 feet of any compressor plant open outward and able to be opened from the inside without a key when the station is occupied?* (FS.CS.FENCEGATES.O) 192.163(d)

7. Compressor Station Design/Construction - Building Materials *Is each building on the compressor station site constructed of noncombustible materials if it contains either pipe that is more than 2 inches in diameter that contains gas under pressure or contains gas handling equipment other than gas utilization equipment used for station domestic purposes?* (FS.CS.BLDGCMBST.O) 192.163(b)

8. Compressor Station Design/Construction - Separator Liquid *Does each separator used to remove entrained liquids at compressor stations have: 1) manually operable means to remove liquids, and 2) have a means to handle slugs of liquid where there is a possibility that liquid slugs could be carried into compressors?* (FS.CS.SPTRLIQ.O) 192.165(b)(1) (192.165(b)(2))

9. Compressor Station Design/Construction - Separator Code *Do records indicate each separator used to remove entrained liquids at compressor stations is manufactured in accordance with applicable codes or requirements?* (FS.CS.SPTRCODE.R) 192.165(b)(3)

10. Compressor Station Design/Construction - Separator Code *Is each separator used to remove entrained liquids at compressor stations manufactured in accordance with applicable codes or requirements?* (FS.CS.SPTRCODE.O) 192.165(b)(3)

11. Compressor Station Design/Construction - Ventilation *Are compressor station buildings ventilated to ensure employees are not endangered by accumulation of gas in enclosed areas?* (FS.CS.CMPBLDGVENT.O) 192.173

12. Compressor Station Design/Construction - Holder *Are bottle and pipe type holders designed and installed properly?* (FS.CS.HOLDER.O) 192.175(a) (192.175(b))

13. Compressor Station Design/Construction - Holder Location *Are bottle type and pipe type holders located and constructed properly?* (FS.CS.HOLDERLOC.O) 192.177(a) (192.177(b))

14. Compressor Station - Emergency Response Plan *Are emergency response plans for selected compressor stations kept on site?* (FS.CS.CMPERP.O) 192.605(a) (192.615(b))

15. Compressor Station Design/Construction - Start-Up and Shut-Down *Does the process for start-up and shut-down have sufficient detail to ensure start-up and shut-down of compressor units in a manner designed to assure operation within the MAOP limits prescribed by this part, plus the build-up allowed for operation of pressure-limiting and control devices?* (FS.CS.CMPSUSD.P) 192.605(b)(5) (192.605(b)(7))

16. Compressor Station Design/Construction - Maintenance *Does the process have sufficient detail for maintaining compressor stations, including provisions for isolating units or sections of pipe and for purging before returning to service?* (FS.CS.CMPMAINT.P) 192.605(b)(6)

17. Compressor Stations - Storage of Combustible Materials *Does the process require that flammable/combustible materials are stored as required, and aboveground oil or gasoline storage tanks, are installed at compressor stations according to 192.735(b)?* (FS.CS.CMPCOMBUSTIBLE.P) 192.303 (192.735(a);192.735(b);NFPA 30 (2012))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

18. Compressor Stations - Storage of Combustible Materials *Do records demonstrate that flammable/combustible materials are stored as required, and aboveground oil or gasoline storage tanks are installed at compressor stations according to 192.735(b)?* (FS.CS.CMPCOMBUSTIBLE.R) 192.303 (192.735(a);192.735(b);NFPA 30)

19. Compressor Stations - Storage of Combustible Materials *Do field observations demonstrate that flammable/combustible materials are safely stored as required, and aboveground oil or gasoline storage tanks are installed at compressor stations according to §192.735(b)?* (FS.CS.CMPCOMBUSTIBLE.O) 192.735(a) (192.735(b);NFPA 30 (2012))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

20. Compressor Stations - Gas Detection and Alarms *Does the process require compressor buildings to have a fixed gas detection and alarm system installed according to §192.736?* (FS.CS.CMPGASDETECT.P) 192.303 (192.736(a))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

21. Compressor Stations - Gas Detection and Alarms *Do records demonstrate that compressor buildings have a fixed gas detection and alarm system installed according to §192.736?* (FS.CS.CMPGASDETECT.R) 192.303 (192.736(a))

22. Compressor Stations - Gas Detection and Alarms *Do field observations confirm that compressor buildings have a fixed gas detection and alarm system installed according to 192.736?* (FS.CS.CMPGASDETECT.O) 192.303 (192.736(a);192.736(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

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))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

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))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

3. Vault Inspection *What are process requirements for inspecting vaults having a volumetric internal content ≥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))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

4. Vault Inspection *Do records document the adequacy of inspections of all vaults having an internal volume ≥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))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

5. Vault Maintenance *Are inspections of selected vaults with internal volume ≥ 200 cubic feet housing pressure regulating/limiting equipment adequate?* (FS.FG.VAULTINSPECT.O) 192.749(a) (192.749(b);192.749(c);192.749(d))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

6. Vaults Structural Design Requirements *As applicable to the project, are vaults/pits installed as designed, and per the requirements of 192.183?* (DC.VAULTS.VAULT.O) 192.141 (192.183(a);192.183(b);192.183(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

7. Vaults Accessibility *As applicable to the project, are vaults located in an accessible location?* (DC.VAULTS.VAULTACCESS.O) 192.141 (192.185(a))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

8. Vaults Sealing, Venting, and Ventilation *As applicable to the project, are vaults/pits sealed, ventilated, or vented as required of 192.187?* (DC.VAULTS.VAULTSEAL.O) 192.141 (192.187(a);192.187(b);192.187(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

9. Vaults Drainage and Waterproofing *As applicable to the project, are vaults installed to minimize water entrance, and have proper electrical equipment?* (DC.VAULTS.VAULTWATER.O) 192.141 (192.189(a);192.189(b);192.189(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Facilities and Storage - Gas Storage Field (Aboveground)

1. Storage Field Atmospheric Corrosion Monitoring *Does the process give adequate instruction for the inspection of aboveground pipeline segments located in storage fields for atmospheric corrosion?* (FS.GS.STORAGEATM.P) 192.605(b)(2) (192.481(a);192.481(b);192.481(c))

2. Storage field Atmospheric Corrosion Monitoring *Do records document inspection of aboveground pipe located in storage fields for atmospheric corrosion?* (FS.GS.STORAGEATM.R) 192.491(c) (192.481(a);192.481(b);192.481(c))

3. Storage Field External Corrosion Control and Monitoring *Are external corrosion monitoring procedures established for the field piping and related storage field facilities?* (FS.GS.STORAGECP.P) 192.605(b)(2) (192.463(a))

4. Storage Field External Corrosion Control and Monitoring *Do records indicate that field piping and related storage field facilities are cathodically protected?* (FS.GS.STORAGECP.R) 192.491(c) (192.455(a);192.457(a);192.465(a))

5. Storage Field External Corrosion Control and Monitoring *Are the cathodic protection practices for field piping and related storage field facilities adequate?* (FS.GS.STORAGECP.O) 192.463(a)

6. Storage Field Internal Corrosion Control and Monitoring *Are internal corrosion monitoring procedures established for the field piping and related storage field facilities?* (FS.GS.STORAGEIC.P) 192.605(b)(2) (192.475(a);192.475(b);192.475(c);192.477)

7. Storage Field Internal Corrosion Control and Monitoring *Do records indicate that field piping and related storage field facilities are being protected from internal corrosion?* (FS.GS.STORAGEIC.R) 192.491(c) (192.475(a))

8. Storage Field Controlling Gas Velocity - Internal Corrosion and Erosion *Have target flow rates been determined for the field piping system?* (FS.GS.GASVELOCITY.R) 192.491(c) (192.475(a))

9. Storage Field Corrosion Inhibitor Use *Has a corrosion inhibitor program been established for the field piping and related storage field facilities?* (FS.GS.INHIBITOR.R) 192.491(c) (192.477)

10. Storage Field Maintenance Pigging *Is maintenance pigging used to sweep the lines of sediments and/or scale?* (FS.GS.MAINTENANCEPIG.R) 192.491(c) (192.477)

11. Storage Field Gas and Liquid Handling Facility Upsets *Number of upsets - past 3 years?* (FS.GS.FACILITYUPSET.R) 192.709(c)

12. Storage Field Failure and Rupture History *Have any failures or ruptures occurred over the past 5 years?* (FS.GS.FAILURERUPTURE.R) 192.709(c)

13. Storage Field O&M History *Have any storage field pipelines been repaired over the past 5 years?* (FS.GS.OMHISTORY.R) 192.709(a)

14. Storage Field Line Replacement *Have any storage field pipelines been replaced over the past 5 years?* (FS.GS.LINEREPLACE.R) 192.709(a)

15. Storage Field Leak Survey *Are leak surveys in the storage field required to be conducted?* (FS.GS.LEAKSURVEY.P) 192.605(e) (192.706)

16. Storage Field Leak Survey *Do records document storage field leak surveys?* (FS.GS.LEAKSURVEY.R) 192.709(c) (192.706)

17. Storage Field Safety Devices and Systems *Have a system safety analysis and safety analysis function evaluation chart been performed for the field piping and related storage facilities?* (FS.GS.OVERPRESSURE.R) 192.709(c) (192.739(a);192.739(b))

18. Storage Field Valve Replacement *Have any valves been replaced over the past 5 years?* (FS.GS.VALVEREPLACE.R) 192.709(b) (192.745(b))

Facilities and Storage - Valves

1. Valve Maintenance *Does the process have requirements for transmission line valves that might be used in an emergency?* (FS.VA.CMPVLVTEST.P) 192.605(b) (192.745(a);192.745(b))

2. Valve Maintenance *Do records adequately document that compressor transmission line valves have been inspected and partially operated at the correct interval?* (FS.VA.CMPVLVTEST.R) 192.709(c) (192.745(a);192.745(b))

3. Valve Maintenance *Are transmission line valves maintained as required?* (FS.VA.CMPVLVMAINT.O) 192.745(a) (192.745(b))

Integrity Management - High Consequence Areas

1. IM High Consequence Areas - HCA Identification *Does the process include the methods defined in 192.903 High Consequence Area (Method 1) and/or 192.903 High Consequence Area (Method 2) to be applied to each pipeline for the identification of high consequence areas?* (IM.HC.HCAID.P) 192.905(a)

2. IM High Consequence Areas - HCA Identification *Do records demonstrate that the identification of pipeline segments in high consequence areas was completed in accordance with process requirements?* (IM.HC.HCAID.R) 192.947(d) (192.905(a);192.907(a);192.911(a))

3. IM High Consequence Areas - Identification Method 1 (Class Locations) *Is the integrity management process adequate for identification of 192.903 High Consequence Areas using Method (1) for identification of HCAs?* (IM.HC.HCAMETHOD1.P) 192.903(1)(i) (192.903(1)(ii);192.903(1)(iii);192.903(1)(iv))

4. IM High Consequence Areas - Identification Method 2 (Potential Impact Radius) *Is the integrity management process adequate for identification of 192.903 High Consequence Areas using Method (2)?* (IM.HC.HCAMETHOD2.P) 192.903(2)(i) (192.903(2)(ii))

5. IM High Consequence Areas - Newly Identified HCAs *Does the process include a requirement for evaluation of new information that impacts, or creates a new, high consequence area?* (IM.HC.HCANEW.P) 192.905(c)

6. IM High Consequence Areas - Newly Identified HCAs *Do records demonstrate new information that impacts, or creates a new, high consequence area has been integrated with the integrity management program?* (IM.HC.HCANEW.R) 192.947(d) (192.905(c))

7. IM High Consequence Areas - Potential Impact Radius *Is the process for defining and applying potential impact radius (PIR) for establishment of high consequence areas consistent with the requirements of 192.903?* (IM.HC.HCAPIR.P) 192.903 (192.905(a))

8. IM High Consequence Areas - Potential Impact Radius *Do records demonstrate the use of potential impact radius (PIR) for establishment of high consequence areas consistent with requirements of 192.903?* (IM.HC.HCAPIR.R) 192.947(d) (192.903;192.905(a))

9. IM High Consequence Areas - Identified Sites *Does the process for identification of identified sites include the sources listed in 192.905(b) for those buildings or outside areas meeting the criteria specified by 192.903 and require the source(s) of information selected to be documented?* (IM.HC.HCASITES.P) 192.903 (192.905(b))

10. IM High Consequence Areas - Identified Sites *Do records indicate identification of identified sites being performed as required?* (IM.HC.HCASITES.R) 192.947(d) (192.903;192.905(b))

11. IM High Consequence Areas - Identification Method 1 (Class Locations) *Do records demonstrate that identification of 192.903 High Consequence Areas using Method (1) was adequate?* (IM.HC.HCAMETHOD1.R) 192.947(d) (192.903(1)(i);192.903(1)(ii);192.903(1)(iii);192.903(1)(iv))

12. IM High Consequence Areas - Identification Method 2 (Potential Impact Radius) *Do records demonstrate that the identification of 192.903 High Consequence Areas using Method (2) was adequate?* (IM.HC.HCAMETHOD2.R) 192.947(d) (192.905(a);192.903(2)(ii))

13. IM High Consequence Areas *Are HCAs correctly identified per up-to-date information?* (IM.HC.HCADATA.O) 192.905(c)

Integrity Management - Risk Analysis

1. Data Gathering *Does the process include requirements to gather and integrate existing data and information on the entire pipeline that could be relevant to covered segments?* (IM.RA.RADATA.P) 192.907 (192.917(b)(1);192.917(b)(2);192.917(b)(3);192.917(b)(4);192.917(e)(1);192.911(k))

2. Risk Analysis - Methodology *Does the process include requirements for a risk assessment that considers all of the identified threats for each covered segment, including the requirements of ASME B31.8S-2018(Section 5) and the need to address potential risk of a compromised operations control system (e.g., cyber-attack)?* (IM.RA.RAMETHOD.P) 192.907 (192.917(d);192.917(c))

3. Threat Identification *Do records demonstrate that all potential threats to each covered pipeline segment have been identified and evaluated?* (IM.RA.THREATID.R) 192.947(b) (192.917(a);192.917(e);192.913(b)(1);192.632)

4. Data Gathering *Do records demonstrate that existing data and information on the entire pipeline that could be relevant to covered segments being adequately gathered and integrated?* (IM.RA.RADATA.R) 192.947(b) (192.917(b);192.917(b)(2);192.917(b)(3);192.917(b)(4);192.917(e)(1);192.911(k);192.607)

5. Threat Identification *Does the process include requirements to identify and evaluate all potential threats to each covered pipeline segment?* (IM.RA.THREATID.P) 192.917(a) (192.917(e);192.913(b)(1))

6. Risk Analysis - Methodology *Do records demonstrate that the risk assessment follows 192.917(c), 192.917(d), and ASME B31.8S-2018, Section 5, and considers the identified threats for each covered segment?* (IM.RA.RAMETHOD.R) 192.947(b) (192.917(c);192.917(d))

7. Risk Analysis - Determination of Risk *Does the process include requirements for factors that could affect the likelihood of a release, and for factors that could affect the consequences of potential releases, be accounted for and combined in an appropriate manner to produce a risk value for each pipeline segment?* (IM.RA.RAFACTORS.P) 192.907 (192.917(c))

8. Risk Analysis - Determination of Risk *Do records demonstrate that risk analysis data is combined in an appropriate manner to produce a risk value for each pipeline segment?* (IM.RA.RAFACTORS.R) 192.947(b) (192.917(c))

9. Risk Analysis - Validation and Updates *Does the process provide for revisions to the risk assessment if new information is obtained or conditions change on the pipeline segments?* (IM.RA.RAMOC.P) 192.917(c)

10. Risk Analysis - Validation and Updates *Was the risk assessment revised as necessary as new information is obtained or conditions change on the pipeline segments?* (IM.RA.RAMOC.R) 192.947(b) (192.917(c))

11. Risk Analysis - Validation and Updates *Are conditions on the pipeline segments accurately reflected in the appropriate risk assessment data and information?* (IM.RA.RAMOC.O) 192.917(c)

Integrity Management - Baseline Assessments

1. IM Assessments - Environmental & Safety Risks *Does the process include requirements for conducting integrity assessments in a manner that minimizes environmental and safety risks?* (IM.BA.BAENVIRON.P) 192.911(o) (192.919(e);192.750)

2. IM Assessments - Environmental & Safety Risks *Do records demonstrate that integrity assessments have been conducted in a manner that minimizes environmental and safety risks?* (IM.BA.BAENVIRON.R) 192.947(d) (192.911(o);192.919(e);192.750)

3. IM Assessments - Methods *Does the process include requirements for specifying an assessment method(s) that is best suited for identifying anomalies associated with specific threats identified for the covered segment?* (IM.BA.BAMETHODS.P) 192.919(b) (192.921(a);192.921(c);192.921(h);192.937(c);Part 192 - Appendix F)

4. IM Assessments - Methods *Do records demonstrate that the assessment method(s) specified is best suited for identifying anomalies associated with specific threats identified for the covered segment?* (IM.BA.BAMETHODS.R) 192.947(c) (192.919(b);192.921(a);192.921(c);192.921(h);192.947(d);192.937(c);Part 192 - Appendix F)

5. IM Baseline Assessments - New HCAs/Newly Installed Pipe *Does the process include requirements for updating the assessment plan for newly identified areas and newly installed pipe?* (IM.BA.BANEW.P) 192.911(p) (192.905(c);192.921(f);192.921(g))

6. IM Baseline Assessments - New HCAs/Newly Installed Pipe *Do records demonstrate that the assessment plan has been adequately updated for new HCAs and newly installed pipe?* (IM.BA.BANEW.R) 192.947(d) (192.905(c);192.911(p);192.921(f);192.921(g);192.620)

7. IM Baseline Assessments - Prioritized Schedule *Did the BAP process require a schedule for completing the assessment activities for all covered segments and consideration of applicable risk factors in the prioritization of the schedule?* (IM.BA.BASCHEDULE.P) 192.917(c) (192.919(c);192.921(b))

8. IM Baseline Assessments - Prioritized Schedule *Do records demonstrate that all BAP required assessments were completed as scheduled?* (IM.BA.BASCHEDULE.R) 192.947(c) (192.921(d);192.947(d))

9. IM Assessments - Environmental & Safety Risks *From field observations, are integrity assessments conducted in a manner that minimizes environmental and safety risks?* (IM.BA.BAENVIRON.O) 192.911(o) (192.919(e);192.750)

Integrity Management - Continual Evaluation and Assessment

1. Low Stress Reassessments *Does the process include requirements for the "low stress reassessment" method to address threats of external and/or internal corrosion for pipelines operating below 30% SMYS?* (IM.CA.LOWSTRESSREASSESS.P) 192.941(a) (192.941(b);192.941(c))

2. Reassessment Intervals *Is the process for establishing the reassessment intervals consistent with §192.939 and ASME B31.8S-2018?* (IM.CA.REASSESSINTERVAL.P) 192.937(a) (192.939(a);192.939(b);192.913(c))

3. Low Stress Reassessments *Do records demonstrate that the implementation of "low stress reassessment" method to address threats of external and/or internal corrosion is adequate and being performed as required?* (IM.CA.LOWSTRESSREASSESS.R) 192.947 (192.941(a);192.941(b);192.941(c))

4. Periodic Evaluations *Does the process include requirements for a periodic evaluation of pipeline integrity based on data integration and risk assessment to identify the threats specific to each covered segment and the risk represented by these threats?* (IM.CA.PERIODICEVAL.P) 192.937(b) (192.917(a);192.917(b);192.917(c);192.917(d);192.917(e))

5. Periodic Evaluations *Do records demonstrate that periodic evaluations of pipeline integrity have been performed based on data integration and risk assessment to identify the threats specific to each covered segment and the risk represented by these threats?* (IM.CA.PERIODICEVAL.R) 192.947(d) (192.917(a);192.917(b);192.917(c);192.917(d);192.917(e);192.937(b))

6. Reassessment Intervals *Do records demonstrate that reassessment intervals were established consistent with the requirements of the operator's processes?* (IM.CA.REASSESSINTERVAL.R) 192.947(d) (192.937(a);192.939(a);192.939(b);192.913(c))

7. IM Continual Assessments - Methods *Is the approach for establishing reassessment method(s) consistent with the requirements in 192.937(c)?* (IM.CA.REASSESSMETHOD.P) 192.937(c) (192.931;192.937(d);192.493;192.506)

8. IM Continual Assessments - Methods *Do records document the assessment methods to be used and the rationale for selecting the appropriate assessment method?* (IM.CA.REASSESSMETHOD.R) 192.947(d) (192.937(c);192.937(d);192.506;192.493)

9. Waiver from Reassessment Interval in Limited Situations *Does the process include requirements for reassessment interval waivers (special permit per 190.341)?* (IM.CA.REASSESSWAIVER.P) 192.943(a) (192.943(b))

10. Waiver from Reassessment Interval in Limited Situations *Do records demonstrate that reassessment interval waivers (special permit per §190.341) have been adequately implemented, if applicable?* (IM.CA.REASSESSWAIVER.R) 192.947(d) (192.943(a);192.943(b))

11. Deviation from Reassessment Requirements based on Exceptional Performance *Does the process include requirements for deviations from reassessment requirements based on exceptional performance?* (IM.CA.REASSESSEXCPERF.P) 192.913(a) (192.913(b);192.913(c))

12. Deviation from Reassessment Requirements based on Exceptional Performance *Do records demonstrate that deviations from reassessment requirements are based on exceptional performance and have been adequately handled, if applicable?* (IM.CA.REASSESSEXCPERF.R) 192.947 (192.913(a);192.913(b);192.913(c))

Integrity Management - Preventive and Mitigative Measures

1. P&M Measures - General Requirements *Do the procedures include requirements to identify additional measures to prevent a pipeline failure and to mitigate the consequences of a pipeline failure in a high consequence area?* (IM.PM.PMMGENERAL.P) 192.907 (192.935(a);192.935(f))

2. P&M Measures - General Requirements *Do records demonstrate that additional measures have been identified and implemented (or scheduled) beyond those already required by Part 192 to prevent a pipeline failure and to mitigate the consequences of a pipeline failure in an HCA?* (IM.PM.PMMGENERAL.R) 192.947 (192.935(a);192.935(f))

3. P&M Measures - Third Party Damage *Does the preventive and mitigative measure process include requirements that threats due to third party damage be addressed?* (IM.PM.PMMTPD.P) 192.917(e)(1) (192.935(b)(1);192.935(e))

4. P&M Measures - Third Party Damage *Do records demonstrate that preventive & mitigative measures have been implemented regarding threats due to third party damage as required by the process?* (IM.PM.PMMTPD.R) 192.947 (192.917(e)(1);192.935(b)(1);192.935(e))

5. P&M Measures - Qualifications of Supervisory Personnel *Does the process require that persons who implement preventive and mitigative measures or directly supervise excavation work be qualified?* (IM.PM.PMMREVQUAL.P) 192.915(c)

6. P&M Measures - Qualifications of Supervisory Personnel *Do records demonstrate that personnel who implement preventive and mitigative measures or directly supervise excavation work are qualified?* (IM.PM.PMMREVQUAL.R) 192.947(e) (192.915(c))

7. P&M Measures - Third Party Damage (Special Cases) *Do the procedures include requirements for preventive and mitigative measures for pipelines operating below 30% SMYS?* (IM.PM.PMMTPDSMYS.P) 192.907 (192.935(b)(1)(i);192.935(b)(1)(iii);192.935(d);192 Appendix E Table E.II.1)

8. P&M Measures - Third Party Damage (Special Cases) *Do records demonstrate that preventive and mitigative measures for pipelines operating below 30% SMYS are being performed?* (IM.PM.PMMTPDSMYS.R) 192.947(d) (192.935(d))

9. P&M Measures - Plastic Transmission Pipelines *Do the procedures include requirements for preventive and mitigative measures for plastic transmission pipelines?* (IM.PM.PMMPLASTIC.P) 192.907 (192.935(e))

10. P&M Measures - Plastic Transmission Pipelines *Do records demonstrate that preventive and mitigative measures for plastic transmission pipelines were performed?* (IM.PM.PMMPLASTIC.R) 192.947(d) (192.935(e))

11. P&M Measures - Outside Force Damage *Does the process adequately address significant threats due to outside force (e.g., earth movement, floods, unstable suspension bridge)?* (IM.PM.PMMOF.P) 192.935(b)(2)

12. P&M Measures - Outside Force Damage *Do records demonstrate that significant threats due to outside force (e.g., earth movement, floods, unstable suspension bridge) are being adequately addressed?* (IM.PM.PMMOF.R) 192.947(d) (192.935(b)(2))

13. P&M Measures - Rupture Mitigation Valve (RMV) or Alternative Equivalent Technology (AET) *Does the process include requirements to decide if RMVs or AETs represent an efficient means of adding protection to potentially affected HCAs?* (IM.PM.PMMRMV.P) 192.935(c)

14. P&M Measures - Rupture Mitigation Valve (RMV) or Alternative Equivalent Technology (AET) *Do records demonstrate that the operator has determined, based on risk, whether RMVs or AETs should be added to protect high consequence areas?* (IM.PM.PMMRMV.R) 192.947(d) (192.935(c))

15. P&M Measures - Implementation *Have identified additional preventive and mitigative measures to reduce the likelihood or consequence of a pipeline failure in an HCA been implemented?* (IM.PM.PMMIMPLEMENT.O) 192.935(a)

16. P&M Measures - Corrosion *Does the process adequately account for taking required actions to address significant corrosion threats?* (IM.PM.PMCORR.P) 192.933 (192.917(e)(5))

17. P&M Measures - Corrosion *Do records demonstrate that required actions are being taken to address significant corrosion threats as required?* (IM.PM.PMCORR.R) 192.933 (192.917(e)(5))

Integrity Management - Quality Assurance

1. Quality Assurance *Are quality assurance processes in place for risk management applications that meet the requirements of ASME B31.8S-2018, Section 12?* (IM.QA.QARM.P) 192.911(l)

2. Invoking Non-Mandatory Statements in Standards *Does the process include requirements that non-mandatory requirements (e.g., "should" statements) from industry standards or other documents invoked by Subpart O (e.g., ASME B31.8S-2004 and NACE SP0502-2010) be addressed by an appropriate approach?* (IM.QA.IMNONMANDT.P) 192.7(a)

3. Personnel Qualification and Training Requirements *Does the process include requirements to assure personnel involved in the integrity management program are qualified for their assigned responsibilities in accordance with the quality control plan and Part 192?* (IM.QA.IMPERSONNEL.P) 192.915(a) (192.915(b);192.915(c);192.935(b)(1)(i);192.907(b);192.493;192.710(d);192 Appendix F, Sect. XIII, XIV)

4. Personnel Qualification and Training Requirements *Do records demonstrate that personnel involved in the integrity management program are qualified for their assigned responsibilities?* (IM.QA.IMPERSONNEL.R) 192.947(e) (192.915(a);192.915(b);192.915(c);192.493;192.710(d);192 Appendix F, Sect. XIII, XIV)

5. Quality Assurance *Do records demonstrate that the quality assurance process for risk management applications is being completed as required by ASME B31.8S-2018, Section 12?* (IM.QA.QARM.R) 192.947(d) (192.911(l))

6. Record Keeping *Is the process adequate to assure that required records are maintained for the useful life of the pipeline?* (IM.QA.RECORDS.P) 192.947(a) (192.947(b);192.947(c);192.947(d);192.947(e);192.947(f);192.947(g);192.947(h);192.947(i);192.517(a))

7. Management of Change *Is the process for management of changes that may impact pipeline integrity adequate?* (IM.QA.IMMOC.P) 192.911(k) (192.13(d);192.909(a);192.909(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

8. Management of Change *Do records demonstrate that changes that may impact pipeline integrity are being managed as required?* (IM.QA.IMMOC.R) 192.947(d) (192.13(d);192.909(a);192.909(b);192.911(k))

9. Measuring Program Effectiveness *Does the process for measuring IM program effectiveness include the elements necessary to conduct a meaningful evaluation?* (IM.QA.IMPERFEFECTIVE.P) 192.945(a) (192.913(b);192.951)

10. Measuring Program Effectiveness *Do records demonstrate that the methods to measure Integrity Management Program effectiveness provide effective evaluation of program performance and result in program improvements where necessary?* (IM.QA.IMPERFEFECTIVE.R) 192.947(d) (192.913(b);192.945(a);192.951)

11. Performance Metrics *Does the process to evaluate IM program effectiveness include an adequate set of performance metrics to provide meaningful insight into IM program performance?* (IM.QA.IMPERFMETRIC.P) 192.945(a) (192.913(b);192.951)

12. Performance Metrics *Do records demonstrate that performance metrics are providing meaningful insight into integrity management program performance?* (IM.QA.IMPERFMETRIC.R) 192.947(d) (192.913(b);192.945(a);192.951)

13. Record Keeping *Are required records being maintained for the life of the pipeline?* (IM.QA.RECORDS.R) 192.947(a) (192.947(b);192.947(c);192.947(d);192.947(e);192.947(f);192.947(g);192.947(h);192.947(i);192.517(a))

Maintenance and Operations - Conversion to Service

1. Conversion to Service *If any pipelines were converted into Part 192 service, was a process developed addressing all the applicable requirements?* (MO.GC.CONVERSION.P) 192.14(a) (192.14(b);192.14(c))

2. Conversion to Service *Do records indicate the process was followed for converting any pipelines into Part 192 service?* (MO.GC.CONVERSION.R) 192.14(a) (192.14(b);192.14(c))

Maintenance and Operations - Gas Pipeline Abnormal Operations

1. Abnormal Operations *Does the process fully address the responsibilities during and after an abnormal operation?* (MO.GOABNORMAL.ABNORMAL.P) 192.605(a) (192.605(c)(1))

2. Abnormal Operations *Did personnel respond to indications of abnormal operations as required by the process?* (MO.GOABNORMAL.ABNORMAL.R) 192.605(a) (192.605(c)(1))

3. Abnormal Operations *Does the process include requirements for checking variations from normal operation after abnormal operation has ended at sufficient critical locations in the system to determine continued integrity and safe operation?* (MO.GOABNORMAL.ABNORMALCHECK.P) 192.605(a) (192.605(c)(2))

4. Abnormal Operations (Notify) *Does the process include requirements for notifying responsible operator personnel when notice of an abnormal operation is received?* (MO.GOABNORMAL.ABNORMALNOTIFY.P) 192.605(a) (192.605(c)(3))

5. Abnormal Operations Review *Does the process include requirements for periodically reviewing the response of operator personnel to determine the effectiveness of the processes controlling abnormal operation and taking corrective action where deficiencies are found?* (MO.GOABNORMAL.ABNORMALREVIEW.P) 192.605(a) (192.605(c)(4))

6. 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 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, or indicates that the hoop stress corresponding to the established maximum allowable operating pressure for a segment of existing pipeline is not commensurate with the present class location?* (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))

2. 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))

3. 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) (192.609;192.611(a);192.611(b);192.611(c);192.611(d))

4. Change in Class Location Confirmation or Revision of MAOP *Was the MAOP in a pipeline segment confirmed or revised within 24 months as required?* (MO.GOCLASS.CLASSLOCATEREV.R) 192.605(b)(1) (192.609;192.611(a);192.611(b);192.611(c);192.611(d))

5. Change in Class Location Confirmation or Revision of MAOP *Do field observations verify that current population density and operator-determined class locations are consistent?* (MO.GOCLASS.CLASSLOCATEREV.O) 192.611(a) (192.609)

6. 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))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

7. Continuing Surveillance *Do records indicate performance of continuing surveillance of facilities as required, and also the reconditioning, phasing out, or MAOP reduction in any pipeline segment that was determined to be in unsatisfactory condition but on which no immediate hazard existed?* (MO.GO.CONTSURVEILLANCE.R) 192.709(c) (192.613(a);192.613(b);192.703(b);192.703(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

8. Continuing Surveillance *Are unsatisfactory conditions being captured and addressed by continuing surveillance of facilities and the pipeline as required by 192.613?* (MO.GO.CONTSURVEILLANCE.O) 192.613(a) (192.613(b);192.703(a);192.703(b);192.703(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

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);192.619(c);192.619(f);192.8(b);192.8(c)(4);192.9(d);192.9(e)(2);192.9(f)(1))

2. Normal Operations within MAOP Limits *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);192.8(b);192.8(c)(4);192.9(d);192.9(e)(2);192.9(f)(1))

3. Maximum Allowable Operating Pressure Determination *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) 192.709(c) (192.619(a);192.619(b);192.619(c);192.619(f);192.517;192.8(b);192.8(c)(4);192.9(d);192.9(e)(2);192.9(f)(1))

4. Normal Operations within MAOP Limits *Do records indicate operation within MAOP limits, plus the build-up allowed for operation of pressure-limiting and control devices, was assured while starting up and shutting down any part of the pipeline?* (MO.GOMAOP.MAOPLIMIT.R) 192.603(b) (192.605(b)(5);192.619(a);192.8(b);192.8(c)(4);192.9(d);192.9(e)(2);192.9(f)(1))

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))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

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))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

3. Dynamic Riser Inspection, Maintenance, and Monitoring Records on Offshore Floating Facilities *Do records for Dynamic Riser Inspection, Maintenance, and Monitoring on Offshore Floating Facilities document the safe and reliable operation of these systems?* (MO.GM.DYNAMICRISER.R) 192.709(c) (192 Subpart L;192 Subpart M)

4. Transmission Lines Record Keeping *Does the process include a requirement that the operator maintain a record 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.P) 192.605(b)(1) (192.709(a);192.709(b);192.709(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

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))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

6. 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))

7. 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))

8. Prevention of Accidental Ignition *Are the operator's precautionary measures adequate on a gas transmission line where there exists the potential for accidental ignition?* (MO.GM.IGNITION.O) 192.751(a) (192.751(b);192.751(c))

9. Valve Maintenance Transmission Lines *Are there processes for inspecting and partially operating each transmission line 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.VALVEINSPECT.P) 192.605(b)(1) (192.745(a);192.745(b))

10. Valve Maintenance Transmission Lines *Do records indicate proper inspection and partial operation of transmission line valves that may be required during an emergency as required and prompt remedial actions taken if necessary?* (MO.GM.VALVEINSPECT.R) 192.709(c) (192.745(a);192.745(b))

11. Valve Maintenance Transmission Lines *Are field inspection and partial operation of transmission line valves adequate?* (MO.GM.VALVEINSPECT.O) 192.745(a) (192.745(b))

12. Launcher and Receiver Safety *Do the procedures require all launchers and receivers to have adequate safety devices in accordance with 192.750 and to ensure the safety devices are working properly just prior to each use?* (MO.GM.TRAPSAFETY.P) 192.750 (192.605(b);192.801;192.805)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

13. Launcher and Receiver Safety *Does the operator have records to demonstrate whether all launchers and receivers have safety devices that were utilized prior to each use?* (MO.GM.TRAPSAFETY.R) 192.750 (192.605(b);192.801;192.805)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

14. Launcher and Receiver Safety *Do field observations confirm selected launchers and receivers have safety devices installed and whether the safety devices were inspected prior to each use?* (MO.GM.TRAPSAFETY.O) 192.750 (192.605(b);192.801;192.805)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

15. Vault Inspection *What are process requirements for inspecting vaults having a volumetric internal content ≥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))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

16. Vault Inspection *Do records document the adequacy of inspections of all vaults having an internal volume ≥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))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

17. Vault Maintenance *Are inspections of selected vaults with internal volume ≥ 200 cubic feet housing pressure regulating/limiting equipment adequate?* (FS.FG.VAULTINSPECT.O) 192.749(a) (192.749(b);192.749(c);192.749(d))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

18. 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))

19. Holders *Do records indicate systematic and routine testing and inspection of pipe-type or bottle-type holders?* (MO.GM.HOLDER.R) 192.603(b) (192.605(b)(10))

20. Maintenance of Equipment Used in Joining Plastic Pipe *Does the process require maintaining equipment used in joining plastic pipe 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) (192.756)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

21. Maintenance of Equipment Used in Joining Plastic Pipe *Do records indicate equipment used in joining plastic pipe 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)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

22. Maintenance of Equipment Used in Joining Plastic Pipe *Is proper maintenance being performed on equipment used in joining plastic pipe 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
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

23. Alternative Equivalent Technology (AET) Requirements *Do the procedures specify the requirements necessary to be achieved when operator installs an AET?* (MO.GM.AETREQUIREMENT.P) 192.605(b) (192.745(d))

24. Alternative Equivalent Technology (AET) Requirements *Do the records demonstrate that the operator complied with the requirements for AET response drills?* (MO.GM.AETREQUIREMENT.R) 192.709(c) (192.709(b);192.745(d))

25. RMV Remedial Actions *Do the procedures adequately describe the remedial measures required for RMVs or AETs found inoperable or unable to maintain shut-off?* (MO.GM.RMVREMEDIAL.P) 192.605(b) (192.179;192.745(e))

26. RMV Remedial Actions *Do the records demonstrate the remedial measure requirements for RMVs or AETs were met?* (MO.GM.RMVREMEDIAL.R) 192.709(b) (192.179;192.745(e))

27. ASV Shut-in Pressure Confirmation *Do the procedures adequately describe the process for confirming ASV shut-in pressures?* (MO.GM.ASVSHUTINPRESS.P) 192.605(b) (192.636(f);192.745(f))

28. ASV Shut-in Pressure Confirmation *Do the records demonstrate the process for confirming ASV shut-in pressures?* (MO.GM.ASVSHUTINPRESS.R) 192.709(b) (192.636(f);192.745(f))

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(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))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

2. Continuing Surveillance *Do records indicate performance of continuing surveillance of facilities as required, and also the reconditioning, phasing out, or MAOP reduction in any pipeline segment that was determined to be in unsatisfactory condition but on which no immediate hazard existed?* (MO.GO.CONTSURVEILLANCE.R) 192.709(c) (192.613(a);192.613(b);192.703(b);192.703(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

3. Continuing Surveillance *Are unsatisfactory conditions being captured and addressed by continuing surveillance of facilities and the pipeline as required by 192.613?* (MO.GO.CONTSURVEILLANCE.O) 192.613(a) (192.613(b);192.703(a);192.703(b);192.703(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

4. Continuing Surveillance Extreme Weather *Do operator's procedures detail performing initial inspections of pipeline facilities after an extreme weather event or natural disaster?* (MO.GO.CONTSURVINSPECTION.P) 192.605 (192.613(c)(1))

5. Continuing Surveillance Extreme Weather *Do the records show that operator assessed the nature of an event after an extreme weather event or natural disaster, including initial inspections?* (MO.GO.CONTSURVINSPECTION.R) 192.603(b) (192.613(c)(1))

6. Continuing Surveillance Extreme Weather *Are operator's procedures for performing inspections of pipeline facilities after an extreme weather event or natural disaster, including appropriate response times and PHMSA notification complete?* (MO.GO.CONTSURVTIMING.P) 192.605 (192.613(c)(2))

7. Continuing Surveillance Extreme Weather *Do records show that operator performed an inspection of pipeline facilities after an extreme weather event or natural disaster, or notification of delayed response to appropriate PHMSA Regional Director within 72 hours ?* (MO.GO.CONTSURVTIMING.R) 192.605 (192.613(c)(2))

8. Continuing Surveillance Extreme Weather *Do the operator's procedures detail performing prompt and appropriate remedial actions of pipeline facilities after an extreme weather event or natural disaster?* (MO.GO.CONTSURVASSESS.P) 192.605 (192.613(c)(3))

9. Continuing Surveillance Extreme Weather *Do records show that operator performed prompt and appropriate remedial response after an extreme weather event or natural disaster?* (MO.GO.CONTSURVASSESS.R) 192.603(b) (192.613(c)(3))

10. Continuing Surveillance Extreme Weather *Are the pipeline facilities that were affected by an extreme weather or natural disaster event back to a safe operating condition?* (MO.GO.CONTSURV.O) 192.613(c)

11. 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))

12. 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)

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

14. 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))

15. 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))

16. 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))

17. 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))

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

19. Normal Maintenance and Operations - Manual Location *Are appropriate parts of the manual kept at locations where operations and maintenance activities are conducted?* (MO.GO.OMLOCATION.O) 192.605(a)

20. 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))

21. 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))

22. 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))

23. Uprating *Is the pressure uprating process consistent with the requirements of 192.553?* (MO.GO.UPRATE.P) 192.13(c) (192.553(a);192.553(b);192.553(c);192.553(d))

24. Uprating *Do records indicate the pressure uprating process was implemented per the requirements of 192.553?* (MO.GO.UPRATE.R) 192.553(b) (192.553(a);192.553(c);192.553(d))

25. Outer Continental Shelf *Do records indicate specific point(s) at which operating responsibility transfers to a producing operator, as applicable?* (MO.GO.OCS.R) 192.10

26. Outer Continental Shelf *Are specific point(s) at which operating responsibility transfers to a producing operator identified, as applicable?* (MO.GO.OCS.O) 192.10

27. Class Change Valve Spacing Requirements *Does the process include the installation of RMVs or AETs whenever pipe replacements occur due to a class location change?* (MO.GO.CLASSCHNGVALVSPACE.P) 192.605(b) (192.610)

28. Class Change Valve Spacing Requirements *Do records indicate the installation of RMVs or AETs occurred whenever pipe replacements occurred due to a class location change?* (MO.GO.CLASSCHNGVALVSPACE.R) 192.709(c) (192.610)

29. Class Change Valve Spacing Requirements *Do field observations verify RMVs or AETs were installed whenever pipe replacements occurred due to a class location change?* (MO.GO.CLASSCHNGVALVSPACE.O) 192.709(c) (192.610)

30. Management of Change *Is the procedure for management of changes that may impact pipeline safety adequate?* (MO.GO.MOC.P) 192.13(d) (192.909(a);192.909(b))

31. Management of Change *Do records demonstrate that changes that may impact pipeline integrity are being managed as required?* (MO.GO.MOC.R) 192.13

32. Management of Change *Is the process for management of changes that may impact pipeline integrity adequate?* (IM.QA.IMMOC.P) 192.911(k) (192.13(d);192.909(a);192.909(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Maintenance and Operations - Gas Pipeline Overpressure Protection

1. Transmission Lines Record Keeping *Does the process include a requirement that the operator maintain a record 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.P) 192.605(b)(1) (192.709(a);192.709(b);192.709(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

2. 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))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

3. 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))

4. 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))

5. 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))

6. 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))

7. 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);192.743)

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

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

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

3. Placement of ROW Markers *Are line markers placed and maintained as required?* (MO.RW.ROWMARKER.O) 192.707(a) (192.707(b);192.707(c);192.707(d);192.9(d);192.9(e))

4. ROW Conditions *Are the ROW conditions acceptable for the type of patrolling used?* (MO.RW.ROWCONDITION.O) 192.705(a) (192.705(c))

5. 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(c);192.707(d))

6. Leakage Surveys *Does the process require leakage surveys to be conducted?* (MO.RW.LEAKAGE.P) 192.706 (192.706(a);192.706(b);192.935(d))

7. Leakage Surveys *Do records indicate leakage surveys conducted as required?* (MO.RW.LEAKAGE.R) 192.709(c) (192.706;192.706(a);192.706(b);192.935(d);192.703(c))

8. Leakage Surveys *Are leakage surveys being implemented as required?* (MO.RW.LEAKAGE.O) 192.706 (192.706(a);192.706(b);192.703(c))

9. Leak Survey (<30% SMYS Gas Transmission) *For pipelines operating below 30% SMYS in a Class 3 or 4 locations, but not in an HCA, is there a process for performing leak surveys?* (MO.RW.LEAKAGE30SMYS.P) 192.935(d) (192.935(b)(1)(i);192.935(b)(1)(iii))

10. Leak Survey (<30% SMYS Gas Transmission) *For pipelines operating below 30% SMYS in a Class 3 or 4 locations, but not in an HCA, do records indicate performance of leak surveys?* (MO.RW.LEAKAGE30SMYS.R) 192.935(d) (192.935(b)(1)(i);192.935(b)(1)(iii))

11. Requirement to Identify GOM Pipeline Hazards *Does the process require identification of pipelines in the Gulf of Mexico at risk of being exposed underwater or hazards to navigation?* (MO.RW.GOMHAZARD.P) 192.612(a) (192.612(c)(2);192.612(c)(3))

12. Requirement to Identify GOM Pipeline Hazards *Do records indicate steps taken to identify and inspect pipelines in the Gulf of Mexico at risk of being exposed underwater pipelines or hazards to navigation?* (MO.RW.GOMHAZARD.R) 192.709(c) (192.612(a);192.612(b))

13. Requirement to Identify GOM Pipeline Hazards *Are pipelines in the Gulf of Mexico at risk of being exposed underwater pipelines or hazards to navigation marked as required?* (MO.RW.GOMHAZARD.O) 192.612(c)(2)

Maintenance and Operations - Moderate Consequence Areas (MCA)

1. MCA Definition *Is the operator's MCA definition consistent with the §192.3 Definition?* (MO.MCA.MCADEF.P) 192.624(a)(2) (192.710(a)(2);192.3)

2. MCA Identification *What is the methodology being used for identifying MCAs?* (MO.MCA.MCAIDENTIF.P) 192.624(a)(2) (192.710(a)(2))

3. MCA Identification *Do the records demonstrate MCAs are properly identified and documented with the physical characteristics/attributes, operating conditions, and surrounding environmental conditions of the pipeline?* (MO.MCA.MCAIDENTIF.R) 192.624(a)(2) (192.710(a)(2))

4. MCA Identification *Do field observations of select locations indicate MCAs in the field are consistent with operator's most recent documented MCAs?* (MO.MCA.MCAIDENTIF.O) 192.624(a)(2) (192.710(a)(2))

5. MCA Identification - Roadways *Do records demonstrate the operator properly identified and applied "covered" roadways that could be affected by the PIR, and therefore considered a "pipeline with an MCA"?* (MO.MCA.MCAIDENTIFROAD.R) 192.3 (192.624;192.712)

6. MCA Potential Impact Radius *Is the process for calculating and applying potential impact radius (PIR) for establishment of Moderate Consequence Areas (MCAs) consistent with the requirements of 192.3 and 192.903?* (MO.MCA.MCAPIR.P) 192.903 (192.3;192.624(a)(2);192.710)

7. MCA Potential Impact Radius *Do records demonstrate the application of potential impact radius (PIR) for establishment of Moderate Consequence Areas (MCAs) is consistent with the requirements of 192.3 and 192.903?* (MO.MCA.MCAPIR.R) 192.903 (192.3;192.624(a)(2);192.710)

8. MCA - Identifying New MCAs *Does the process include a requirement for periodic evaluation of new information that creates a new Moderate Consequence Area?* (MO.MCA.MCANEW.P) 192.613(a) (192.624(a)(2);192.903;192.5(d);192.3)

9. MCA - Identifying New MCAs *Do records demonstrate new information that creates a new Moderate Consequence Area was periodically collected and evaluated?* (MO.MCA.MCANEW.R) 192.613(a) (192.624(a)(2);192.903;192.5(d);192.3)

10. MCA - Identifying MCAs Needing MAOP Reconfirmation *What is the written procedure for identifying legacy (grandfathered) pipeline segments affecting MCAs which must have their MAOP reconfirmed?* (MO.MCA.MAOPRECONFIRM.P) 192.624(a)(2) (192.632(a))

11. MCA - Identifying MCAs Needing MAOP Reconfirmation *Do the records adequately identify legacy (grandfathered) pipeline segments affecting MCAs which must have their MAOP reconfirmed?* (MO.MCA.MAOPRECONFIRM.R) 192.624(d) (192.603(b);192.605(b)(1);192.624(a)(2);192.632(a))

Maintenance and Operations - Verification of Materials Properties

1. Material Verification - Line Pipe Program *What is the process (or program) for determining and collecting material verification records for line pipe to meet the requirements of §§ 192.619(a)(4), 192.624, 192.607, and 192.712?* (MO.RECONFMATV.PROGRAM.P) 192.607 (192.613;192.619;192.624;192.632;192.712)

2. Material Verification - Line Pipe Program Recordkeeping *Does the line pipe material verification documentation (records) of material properties and attributes demonstrate compliance with §192.607(b)?* (MO.RECONFMATV.PROGRAM.R) 192.607(b)

3. Material Verification - Program for Non-Line Pipe Components *Does the process (or program) include determining which mainline pipeline components other than line pipe are subject to the verification of material properties and attributes requirements of 192.607(f)?* (MO.RECONFMATV.COMPONENTS.P) 192.607(f) (192.607;192.624;192.712)

4. Material Verification - Program for Non-Line Pipe Components Recordkeeping *Does the verification documentation (records) of material properties and attributes for mainline pipeline components other than line pipe demonstrate compliance with §192.607(f)?* (MO.RECONFMATV.COMPONENTS.R) 192.607(f)

5. Material Verification - Opportunistic Digs *Do the procedures define when an open excavation requires material verification and when it does not? (i.e., what meets the criteria of an opportunistic dig?)* (MO.RECONFMATV.OPPORTUNISTIC.P) 192.607(c) (192.607;192.624;192.632;192.712)

6. Material Verification - Opportunistic Digs *Do field observations indicate that the opportunistic digs and testing conducted in the field meet the requirements of the procedures?* (MO.RECONFMATV.OPPORTUNISTIC.O) 192.607(c) (192.607;192.624;192.632;192.712)

7. Material Verification - Testing Methods *What type(s) of NDT or destructive testing methods (i.e., ILI, in situ testing, etc.) is/are included in the procedures?* (MO.RECONFMATV.TESTMETHODS.P) 192.607(c) (192.607(d);192.624;192.712)

8. Material Verification - Testing Methods *Do the records indicate the type(s) of NDT or destructive testing methods used to comply with the procedures?* (MO.RECONFMATV.TESTMETHODS.R) 192.607(b)

9. Material Verification - Population Groups *If the operator plans to establish population groups, does the method employed meet the requirements of 192.607(e)?* (MO.RECONFMATV.POPULGROUPS.P) 192.607(e) (192.624;192.607;192.712)

10. Material Verification - Population Groups *Where the operator has established population groups, do the records support operator's approved methods and comply with 192.607(e)?* (MO.RECONFMATV.POPULGROUPS.R) 192.607(e)

Maintenance and Operations - MAOP Reconfirmation

1. Original MAOP Establishment Method *Do records demonstrate what method(s) from §192.619 were used to determine the pipeline original MAOP on a segment-by-segment basis?* (MO.RECONF.MAOPMETHODORIG.R) 192.619 (192.624(a))

2. MAOP Reconfirmation - Applicability *Do procedures indicate the pipeline segments for which MAOP reconfirmation is applicable and must be conducted as required by §192.624(a)?* (MO.RECONF.RECONFIRMAPPLIC.P) 192.624(a) (192.619(f))

3. MAOP Reconfirmation - Completion Dates *Have the procedures been developed and implemented for pipeline segments determined to require MAOP reconfirmation, including timeline and complete dates, as required by §192.624(b)?* (MO.RECONF.RECONFIRMTIMING.P) 192.624(b) (192.18)

4. MAOP Reconfirmation - Completion Dates *Do the records indicate that the operator is making adequate progress towards their implementation timeline / schedule as required by §192.624(b)?* (MO.RECONF.RECONFIRMTIMING.R) 192.624(b) (192.614(a))

5. MAOP Reconfirmation - Methods *Are the procedures for conducting MAOP reconfirmation adequate for the methods used (or intended to be used) as required by §192.624(c)?* (MO.RECONF.RECONFIRMMETHODS.P) 192.624(c) (192.18;192 Subpart J;192.619(a)(2);192.632)

6. MAOP Reconfirmation - Non-Line Pipe Components *Do the MAOP reconfirmation methods for the applicable portions of the facilities (i.e., Compressor Stations, Meter & Regulating Stations) ensure that material properties are available to support the MAOP?* (MO.RECONF.COMPONENTS.P) 192.624 (192.607(e);192.607(f);192.619)

7. MAOP Reconfirmation - Non-Line Pipe Components *Do the records identify all non-line pipe components requiring MAOP reconfirmation (e.g., compressor and meter stations)?* (MO.RECONF.COMPONENTS.R) 192.624 (192.607(e);192.607(f);192.619)

8. MAOP Reconfirmation - Recordkeeping *Do the MAOP reconfirmation procedures require recordkeeping in accordance with §192.624(d) for the life of the pipeline?* (MO.RECONF.RECONFIRMRECORDS.P) 192.624(b) (192.624(d);192.619(f))

9. MAOP Reconfirmation - Recordkeeping *Do the MAOP reconfirmation records meet the requirements of §192.624(d) and are they retained for the life of the pipeline?* (MO.RECONF.RECONFIRMRECORDS.R) 192.624(d) (192.517;192.624(b);192.619(f))

10. MAOP Reconfirmation - Observations *Do field observations of selected MAOP reconfirmation method(s) or related activities verify that the method employed conforms with the operator-established procedures?* (MO.RECONF.RECONFIRMATION.O) 192.624(c) (192.505;192.506;192.607)

Maintenance and Operations - MAOP Reconfirmation - Method 1

1. MAOP Reconfirmation - Method 1 (Pressure Test) *Where the operator has elected Method 1 for the MAOP reconfirmation, do the procedures for conducting a pressure test for MAOP reconfirmation meet the requirements of §192.624(c)(1)?* (MO.RECONFM1.METHOD1.P) 192.624(c)(1) (192.18;192 Subpart J;192.619(c))

2. MAOP Reconfirmation - Method 1 (Pressure Test) *Where the operator has elected Method 1 for the MAOP reconfirmation, are the records adequate for a pressure test for MAOP reconfirmation as required by §192.624(c)(1)?* (MO.RECONFM1.METHOD1.R) 192.624(d) (192.624(c)(1);192 Subpart J;192.619(c))

Maintenance and Operations - MAOP Reconfirmation - Method 2

1. MAOP Reconfirmation - Method 2 (Pressure Reduction) *Where the operator has elected Method 2 for the MAOP reconfirmation, do the procedures for conducting a pressure reduction for MAOP reconfirmation meet the requirements of §192.624(c)(2)?* (MO.RECONFM2.METHOD2.P) 192.624(c)(2) (192.18;192 Subpart J;192.619(c))

2. MAOP Reconfirmation - Method 2 (Pressure Reduction) *Where the operator has elected Method 2 for the MAOP reconfirmation, do the records confirm the pressure reduction for MAOP reconfirmation meet the requirements of §192.624(c)(2)?* (MO.RECONFM2.METHOD2.R) 192.624(d) (192.624(c)(2);192 Subpart J;192.18;192.619(c))

Maintenance and Operations - MAOP Reconfirmation - Method 3 (ECA)

1. ECA Assessment for MAOP Reconfirmation *When the operator elects to use ECA for MAOP reconfirmation (per §192.624(c)(3)), do the procedures provide sufficient detail to ensure the ECA Assessment is conducted in accordance with §192.632?* (MO.RECONFM3.ECAASSESSMENT.P) 192.632

2. ECA Analysis #1 *When the operator elects to use ECA for MAOP reconfirmation (per §192.624(c)(3)), do the procedures provide sufficient detail to ensure the ECA Analysis is conducted in accordance with §192.632(a) for methods and data collection?* (MO.RECONFM3.ECAANALYSIS1.P) 192.632(a) (192.624(c);192.712)

3. ECA Analysis #2 *When the operator elects to use ECA for MAOP reconfirmation (per §192.624(c)(3)), do the procedures provide sufficient detail to ensure the ECA Analysis is conducted in accordance with §192.632(a) for crack analysis and predicted failure pressure (including Charpy V-notch)?* (MO.RECONFM3.ECAANALYSIS2.P) 192.632(a) (192.624(c);192.712)

4. ECA to Determine Remaining Defects *When the operator elects to use ECA for MAOP reconfirmation (per §192.624(c)(3)), do the procedures provide sufficient detail to ensure the ECA Assessment is conducted in accordance with §192.632(b) for determining remaining defects?* (MO.RECONFM3.ECAREMAINDEFECTS.P) 192.632(b) (192.624(c);192.712)

5. ECA to Determine Remaining Defects Using ILI *When the operator elects to use ECA for MAOP reconfirmation (per §192.624(c)(3)), do the procedures provide sufficient detail to ensure the ECA Analysis is conducted in accordance with §192.632(c) for selecting appropriate ILI tools?* (MO.RECONFM3.ECAREMAINDEFECTSILI.P) 192.632(c) (192.624(c);192.712)

6. ECA Defects - Pipeline Remaining Life *When the operator elects to use ECA for MAOP reconfirmation (per §192.624(c)(3)), do the procedures provide sufficient detail to ensure the ECA Analysis is performed in accordance with §192.632(d) for estimating remaining life of the pipeline?* (MO.RECONFM3.ECAREMAINPIPELINELIFE.P) 192.632(d) (192.624(c);192.712)

7. ECA Assessment for MAOP Reconfirmation *When the operator elects to use ECA for MAOP reconfirmation (per §192.624(c)(3)), do the records indicate the ECA Analysis was conducted in accordance with their procedures and §192.632?* (MO.RECONFM3.ECAASSESSMENT.R) 192.632

8. ECA Analysis #1 *When the operator elects to use ECA for MAOP reconfirmation (per §192.624(c)(3)), do the records indicate the ECA Analysis was conducted in accordance with §192.632(a) for methods and data collection?* (MO.RECONFM3.ECAANALYSIS1.R) 192.632(a) (192.624(c);192.712)

9. ECA Analysis #2 *When the operator elects to use ECA for MAOP reconfirmation (per §192.624(c)(3)), do the records indicate the ECA Analysis was conducted in accordance with §192.632(a) for crack analysis and predicted failure pressure (including Charpy V-notch)?* (MO.RECONFM3.ECAANALYSIS2.R) 192.632(a) (192.624(c);192.712)

10. ECA to Determine Remaining Defects *When the operator elects to use ECA for MAOP reconfirmation (per §192.624(c)(3)), do the records indicate the ECA Assessment was conducted in accordance with §192.632(b) for determining remaining defects?* (MO.RECONFM3.ECAREMAINDEFECTS.R) 192.632(b) (192.624(c);192.712)

11. ECA to Determine Remaining Defects Using ILI *When the operator elects to use ECA for MAOP reconfirmation (per §192.624(c)(3)), do the records indicate the ECA Analysis was conducted in accordance with §192.632(c) for selecting appropriate ILI tools?* (MO.RECONFM3.ECAREMAINDEFECTSILI.R) 192.632(c) (192.624(c);192.712)

12. ECA Defects - Pipeline Remaining Life *When the operator elects to use ECA for MAOP reconfirmation (per §192.624(c)(3)), do the records indicate the ECA Analysis was performed in accordance with §192.632(d) for estimating remaining life of the pipeline?* (MO.RECONFM3.ECAREMAINPIPELINELIFE.R) 192.632(d) (192.624(c);192.712)

Maintenance and Operations - MAOP Reconfirmation - Method 5

1. MAOP Reconfirmation - Method 5 (Press Reduction Small PIR)) *Where the operator has elected Method 5 for the MAOP reconfirmation, do the procedures for conducting a pressure reduction for pipeline segments with small PIR meet the requirements of §192.624(c)(5)?* (MO.RECONFM5.METHOD5.P) 192.624(c)(5) (192.18;192 Subpart J;192.619(c))

2. MAOP Reconfirmation - Method 5 (Press Reduction Small PIR)) *Where the operator has elected Method 5 for the MAOP reconfirmation, are the records for pressure reduction on pipeline segments with a small PIR for MAOP reconfirmation adequate as required by §192.624(c)(5)?* (MO.RECONFM5.METHOD5.R) 192.624(d) (192.624(c)(5);192.18;192 Subpart J;192.619(c))

Maintenance and Operations - MAOP Reconfirmation - Method 6

1. MAOP Reconfirmation - Method 6 (Alt. Technology) *Where the operator has elected Method 6 for the MAOP reconfirmation, do the procedures for the alternative technical evaluation process meet the requirements of §192.624(c)(6)?* (MO.RECONFM6.METHOD6.P) 192.624(c)(6) (192.18;192 Subpart J;192.619(c))

2. MAOP Reconfirmation - Method 6 (Alt. Technology) *Where the operator has elected Method 6 for the MAOP reconfirmation, do the records for the alternative technical evaluation process meet the requirements of §192.624(c)(6)?* (MO.RECONFM6.METHOD6.R) 192.624(d) (192.624(c)(6);192.18;192.619(c))

Maintenance and Operations - Alternative MAOP

1. Alternate MAOP Additional O&M *Does the AMAOP process include additional O&M requirements?* (MO.AMAOP.ADDITIONALOM.P) 192.605(a) (192.620(d))

2. Alternate MAOP Additional O&M *Do records indicate the additional AMAOP O&M requirements were met?* (MO.AMAOP.ADDITIONALOM.R) 192.605(a) (192.620(d))

3. Alternate MAOP Calculation *Does the AMAOP process include appropriate factors and considerations for calculating the alternative MAOP?* (MO.AMAOP.CALC.P) 192.605(a) (192.620(a))

4. Alternate MAOP Calculation *Do records indicate appropriate calculation of the alternative MAOP?* (MO.AMAOP.CALC.R) 192.605(a) (192.620(a))

5. Alternate MAOP Conditions *Does the AMAOP process include conditions on the application of alternative MAOP?* (MO.AMAOP.CONDITIONS.P) 192.605(a) (192.620(b))

6. Alternate MAOP Conditions *Do records indicate the AMAOP process satisfied the conditions on application of an alternative MAOP?* (MO.AMAOP.CONDITIONS.R) 192.605(a) (192.620(b))

7. Alternate MAOP Requirements *Does the AMAOP process include AMAOP requirements?* (MO.AMAOP.REQUIREMENTS.P) 192.605(a) (192.620(c))

8. Alternate MAOP Conditions *Do records indicate the AMAOP requirements were met?* (MO.AMAOP.REQUIREMENTS.R) 192.605(a) (192.620(c))

9. Alternate MAOP Overpressure Protection *Does the AMAOP process include overpressure protection requirements?* (MO.AMAOP.OVERPRESS.P) 192.605(a) (192.620(e))

10. Alternate MAOP Overpressure Protection *Do records indicate that overpressure protection requirements were met?* (MO.AMAOP.OVERPRESS.R) 192.605(a) (192.620(e))

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 CGA Best Practices or use 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) (Appendix F to Part 112)

8. DP Information Gathering Requirements *Does the process require critical damage prevention information be gathered and recorded during pipeline patrols, leak surveys, and integrity assessments?* (PD.DP.DPINFOGATHER.P) 192.917(b) (192.935(b)(1)(ii))

9. DP Information Gathering Requirements *Do records demonstrate that critical damage prevention information is being gathered and recorded during pipeline patrols, leakage surveys, and integrity assessments?* (PD.DP.DPINFOGATHER.R) 192.947(b) (192.917(b);192.935(b)(1)(ii))

Public Awareness and Damage Prevention - Public Awareness

1. 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)

2. 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 (1st Edition) Section 2.2;API RP 1162 (1st Edition) Section 3)

3. 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 (1st Edition) Section 2.5;API RP 1162 (1st Edition) Section 7.1)

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

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 (1st Edition)Section 2.2;API RP 1162 (1st Edition)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 (1st Edition) Section 3;API RP 1162 (1st Edition) Section 4;API RP 1162 (1st Edition) 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 (1st Edition)?* (PD.PA.SUPPLEMENTAL.P) 192.616(c) (API RP 1162 (1st Edition) Section 6.2)

8. Educational Provisions *Do records indicate delivered messages specifically included provisions to educate the public, emergency officials, local public officials, and excavators on the categories defined in §192.616(d)?* (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(1st Edition), Table 2-1 through Table 2.3?* (PD.PA.MESSAGEFREQUENCY.R) 192.616(c) (API RP 1162 (1st Edition) Table 2-1;API RP 1162 (1st Edition) Table 2-2;API RP 1162 (1st Edition) Table 2-3)

11. Liaison with Public Officials *Do records indicate that liaison has been established and maintained with appropriate fire, police, other public officials, and 911 emergency call centers?* (EP.ERG.LIAISON.R) 192.603(b) (192.615(c)(1);192.615(c)(2);192.615(c)(3);192.615(c)(4);192.616(c);192.9(e);ADB-2005-03)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

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 (1st Edition) 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 (1st Edition) 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(1st Edition) Section 8;API RP 1162(1st Edition) 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(1st Edition) 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(1st Edition) 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(1st Edition) 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(1st Edition) 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(1st Edition) 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(1st Edition) 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(1st Edition) 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(1st Edition) Section 2.7 (Step 12);API RP 1162(1st Edition) Section 8.5)

Public Awareness and Damage Prevention - ROW Markers, Patrols, Monitoring

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))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

2. Continuing Surveillance *Do records indicate performance of continuing surveillance of facilities as required, and also the reconditioning, phasing out, or MAOP reduction in any pipeline segment that was determined to be in unsatisfactory condition but on which no immediate hazard existed?* (MO.GO.CONTSURVEILLANCE.R) 192.709(c) (192.613(a);192.613(b);192.703(b);192.703(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

3. Continuing Surveillance *Are unsatisfactory conditions being captured and addressed by continuing surveillance of facilities and the pipeline as required by 192.613?* (MO.GO.CONTSURVEILLANCE.O) 192.613(a) (192.613(b);192.703(a);192.703(b);192.703(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Public Awareness and Damage Prevention - Special Permits

1. AMAOP Pipelines and Special Permit Pipelines *If the operator operates a pipeline under a special permit have the processes been modified to incorporate the requirements of the permit for required repairs?* (PD.SP.REPAIR.P) 190.341(d)(2)

2. Special Permits *If the operator operates a pipeline under a special permit, do the processes specify implementation of applicable CGA Best Practices?* (PD.SP.BESTPRACTICE.P) 190.341(d)(2)

3. 80% Pipelines and Special Permit Pipelines *If the operator operates a pipeline under a special permit, do records indicate that required repairs were performed?* (PD.SP.REPAIR.R) 190.341(d)(2)

4. 80% Pipelines and Special Permit Pipelines *If the operator operates a pipeline under a special permit verify that the requirements have been implemented.* (PD.SP.REQUIREMENT.O) 190.341(d)(2)

5. Special Permits - AMAOP *If the operator operates a pipeline under an AMAOP special permit have the processes been modified to incorporate the requirements of the permit?* (PD.SP.AMAOP.P) 190.341(d)(2)

6. Special Permits - AMAOP *If the operator operates a pipeline under an AMAOP special permit, do records indicate that required repairs were performed?* (PD.SP.AMAOP.R) 190.341(d)(2) (192.605(b))

Reporting - Notices and Reporting

1. OQ Program Modifications *Does the OQ Program require the Administrator or state agency to be notified if the operator significantly modifies its program?* (RPT.NR.NOTIFYOQ.P) 192.805(i) (192.18)

2. OQ Program Modifications *Do records indicate the Administrator or state agency was notified when the OQ Program was significantly modified?* (RPT.NR.NOTIFYOQ.R) 192.805(i) (192.18)

3. Alternative MAOP - Elevated Temperature *Do records indicate coating information was provided to PHMSA and state authorities at least 60 days prior to operating above 120 deg. F?* (RPT.NR.AMAOPTEMP.R) 192.112(h)(2)

4. Alternative MAOP - Coating Monitoring *Do records indicate coating monitoring program provided to PHMSA and state authorities?* (RPT.NR.AMAOPCOAT.R) 192.112(h)(3)

5. Alternative MAOP - Test failure *Do records indicate the results of root cause analyses of pipe test failures reported to PHMSA and state authorities, at least 60 days prior to operating at the alternative MAOP?* (RPT.NR.AMAOPTESTFAIL.R) 192.328(d)(1)

6. Alternative MAOP - Operating Failure *Prior to using the alternative maximum allowable pressure option on a pipeline that have been previously operated at lower pressures, do processes require reporting the results of root cause analyses of operational failures to PHMSA and state authorities, at least 60 days prior to operation at the alternative MAOP?* (RPT.NR.AMAOPOPFAIL.P) 192.605(b)(1) (192.620(b)(6))

7. Alternative MAOP - Operating Failure *Do records indicate results of root cause analyses of operational failures reported to PHMSA and state authorities for those pipelines using the alternative maximum allowable pressure option on a pipeline that have been previously operated at lower pressures, at least 60 days prior to operation at the alternative MAOP?* (RPT.NR.AMAOPOPFAIL.R) 192.603(b) (192.620(b)(6))

8. Alternative MAOP - Election *Does the process require notification to PHMSA and the state pipeline safety authorities of the election to use the alternative MAOP?* (RPT.NR.AMAOPNOTIFY.P) 192.620(c)(1)

9. Alternative MAOP - Election *Do records indicate notification to PHMSA and the state pipeline safety authorities of the election to use the alternative MAOP?* (RPT.NR.AMAOPNOTIFY.R) 192.603(b) (192.620(c)(1))

10. Alternative MAOP - Certification (192.620) *Does the process require certified copies required by 192.620(c)(2) be sent to applicable PHMSA region offices and state pipeline safety authorities?* (RPT.NR.AMAOPCERT.P) 192.620(c)(3)

11. Alternative MAOP - Certification *Do records indicate certified copies required by 192.620(c)(2) were sent to applicable PHMSA region offices and state pipeline safety authorities?* (RPT.NR.AMAOPCERT.R) 192.603(b) (192.620(c)(3))

12. Alternative MAOP - Cathodic Protection (Amdt) *Does the process require notification to PHMSA and the state pipeline safety authorities of certain annual test station readings that do not meet cathodic protection criteria if remedial action cannot be completed within 6 months?* (RPT.NR.AMAOPCP.P) 192.620(d)(8)

13. Alternative MAOP - Cathodic Protection *Do records indicate notification to PHMSA and the state pipeline safety authorities of certain annual test station readings that do not meet cathodic protection criteria if remedial action could not be completed within 6 months?* (RPT.NR.AMAOPCP.R) 192.603(b) (192.620(d)(8))

14. IM Management of Change *Is the process for notifying PHMSA and/or state/local authorities of significant changes to the Integrity Management Program adequate?* (RPT.NR.NOTIFYIMCHANGE.P) 192.909(b) (192.921(a)(7);192.937(c)(7);192.18)

15. IM Management of Change *Do records demonstrate that PHMSA and/or state/local authorities were notified of substantial or significant changes to the Integrity Management Program?* (RPT.NR.NOTIFYIMCHANGE.R) 192.947(i) (192.909(b);192.921(a)(7);192.937(c)(7))

16. IM Pressure Reductions *Do processes require notifying PHMSA and/or state/local authorities: 1) if the schedule for evaluation and remediation required under paragraph 192.933(c) cannot be met and safety cannot be provided through temporary reduction in operating pressure or other action, and 2) when a pressure reduction exceeds 365 days?* (RPT.NR.NOTIFYIMPRESS.P) 192.933(a)(1)

17. IM Pressure Reductions *Do records demonstrate that PHMSA and/or state/local authorities were notified with the required information when one of the following occurred: 1) schedule for evaluation and remediation could not be met and safety could not be provided through a temporary reduction in operating pressure, or 2) when a pressure reduction exceeded 365 days?* (RPT.NR.NOTIFYIMPRESS.R) 192.947(i) (192.933(a)(1))

18. IM Performance Measures (Deviate) *Is there a process for reporting integrity management program performance measures if deviating from certain IMP requirements (exceptional performance)?* (RPT.NR.IMDEVIATERPT.P) 192.913(b)(1)(vii)

19. IM Performance Measures (Deviate) *Do records demonstrate adequate reporting of integrity management program performance measures if deviating from certain IMP requirements (exceptional performance)?* (RPT.NR.IMDEVIATERPT.R) 192.947(i) (192.913(b)(1)(vii))

20. IM Performance Reporting *Is there a process for annual reporting of integrity management performance data?* (RPT.NR.IMPERFRPT.P) 192.947(i) (192.945(a);191.17;ASME B31.8S-2004 Appendix A Section 9.8)

21. IM Performance Reporting *Do annual reports demonstrate that integrity management performance data were reported?* (RPT.NR.IMPERFRPT.R) 192.947(i) (192.945(a);191.17;ASME B31.8S-2004 Appendix A Section 9.8)

22. 192.18 Required Notifications to PHMSA *Do the procedures include provisions for each of the required types of notifications to PHMSA per §192.18?* (RPT.NR.19218NOTIF.P) 192.18(c) (192.506(b);192.607(e)(4);192.607(e)(5);192.624(c)(2)(iii);192.624(c)(6);192.632(b)(3);192.710(c)(7);192.712(d)(3)(iv);192.712(e)(2)(i)(E);192.921(a)(7);192.937(c)(7);191.1(a);192.8(b)(2);192.9(g);192.9(h))

23. 192.18 Required Notifications to PHMSA *Do the records indicate proper and timely notifications to PHMSA for each notification type as required by §192.18(c)?* (RPT.NR.19218NOTIF.R) 192.18(c) (192.506(b);192.607(e)(4);192.607(e)(5);192.624(c)(2)(iii);192.624(c)(6);192.632(b)(3);192.710(c)(7);192.712(d)(3)(iv);192.712(e)(2)(i)(E);192.921(a)(7);192.937(c)(7);191.1(a);192.8(b)(2);192.9(g);192.9(h);192.909(b);192.805(i))

Reporting - Regulatory Reporting (Traditional)

1. Annual Report Records *Have complete and accurate Annual Reports utilizing the most recent form F 7 100.2-1 been submitted?* (RPT.RR.ANNUALREPORT.R) 191.17(a) (191.1(a);192.8(c)(3);192.8(c)(4);192.8)

2. Annual Report Records - Gas Gathering *Do records document the methodology that the operator used to identify and classify Type A, B, C, and R gathering pipelines correctly and within required timeframes?* (RPT.RR.GGSEGMENTID.R) 192.8(b) (191.1(a);191.17(a);192.8(c)(3);192.8(c)(4);192.8)

3. 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;191.1(a);192.8(c)(3))

4. 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);191.1(a);192.8(c)(3))

5. Telephonic Reporting: Exposed Pipe GOM and inlets *Does the process include telephonic notification to the National Response Center of exposed or navigation hazard pipe in the Gulf of Mexico and its inlets?* (RPT.RR.TELREPORTGOM.P) 192.605(b)(1) (192.612(c)(1))

6. Telephonic Reporting: Exposed Pipe GOM and inlets *Do records indicate telephonic notification of exposed pipes in the Gulf of Mexico and its inlets was made?* (RPT.RR.TELREPORTGOM.R) 192.612(c)(1)

7. 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) 191.15(a) (192.624(a)(1);192.624(a)(2);191.1(a);192.8(c)(3))

8. Supplemental Incident Reports *Does the process require preparation and filing of supplemental incident reports?* (RPT.RR.INCIDENTREPORTSUPP.P) 191.15(d) (192.624(a);191.1(a);192.8(c)(3))

9. Incident Reports *Do records indicate reportable incidents were identified and reports were submitted to DOT on the most recent Form within the required timeframe?* (RPT.RR.INCIDENTREPORT.R) 191.15(a) (192.624(a)(1);192.624(a)(2);191.1(a);192.8(c)(3))

10. Supplemental Incident Reports *Do records indicate accurate supplemental incident reports were filed as soon as practicable with a clear reference by date to the original report?* (RPT.RR.INCIDENTREPORTSUPP.R) 191.15(d) (191.1(a);192.8(c)(3))

11. Safety Related Condition Reports *Do processes require reporting of safety-related conditions?* (RPT.RR.SRCR.P) 192.605(a) (191.23(a);191.23(b);191.25(a);191.25(b);191.25(c);191.1(a);192.8(c)(3))

12. Safety Related Conditions - Recognizing SRCs *Does the process include instructions enabling personnel who perform operation and maintenance activities to recognize conditions that may potentially be safety-related conditions, including MAOP Exceedances?* (RPT.RR.SRC.P) 192.605(a) (192.605(d);191.23(a))

13. 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(b);191.25(c);191.1(a);192.8(c)(3))

14. Offshore Hazard to Navigation: Permit Delay *Do the process require PHMSA notification when federal or state permits cannot be obtained in time?* (RPT.RR.NOTIFYPERMITGOM.P) 192.605(b)(1) (192.612(c)(3)(ii))

15. Offshore Hazard to Navigation: Permit Delay *Do records indicate required notification was provided when permitting delayed reburial of pipe in Gulf of Mexico waters found to be a hazard to navigation?* (RPT.RR.NOTIFYPERMITGOM.R) 192.612(c)(3)(ii)

16. Abandoned Underwater Facility Reports *Does the process require reports to be filed for each abandoned offshore pipeline facility or each abandoned onshore pipeline facility that crosses over, under or through a commercially navigable waterway?* (RPT.RR.ABANDONWATERFACILITY.P) 192.605(b)(1) (192.727(g))

17. Abandoned Underwater Facility Reports *Do records indicate reports were filed for abandoned offshore pipeline facilities or abandoned onshore pipeline facilities that crosses over, under or through a commercially navigable waterway?* (RPT.RR.ABANDONWATERFACILITY.R) 192.727(g)

18. NPMS: Annual Updates *Do records indicate NPMS submissions were completed each year, on or before March 15, representing all in service, idle and retired assets as of December 31 of the previous year (excludes distribution lines and gathering lines) occurred, and that if no modifications occurred, an email was submitted stating that fact?* (RPT.RR.NPMSANNUAL.R) 191.29(a) (191.29(b))

19. 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);191.1(a);192.8(c)(3))

20. National Registry of Pipeline and LNG Operators (OPID) *Do records indicate appropriate obtaining, and control of, Operator Identification Numbers (OPIDs), including changes in entity, acquisition/divestiture, and construction/update/uprate?* (RPT.RR.OPID.R) 191.22(a) (191.22(c);191.22(d);191.1(a);192.8(c)(3))

Reporting - Special Permits

1. Special Permits or Waiver *Has the operator complied with all reporting requirements contained within its special permit or waiver?* (RPT.SP.SPWAIVER.R) 190.341(d)(2) (Special Permit)

Screening - General Screening Questions

1. Procedure Organization and Structure *How are the procedures organized?* (SRN.GENERAL.PROCEDORG.S)

2. Records Location *How are records organized and stored, and are there limitations to reviewing them?* (SRN.GENERAL.RECORDLOCATE.S)

3. Asset Acquisition and Divestiture *Describe the significant asset acquisitions, mergers, and divestitures in the last five years.* (SRN.GENERAL.ASSETCHANGE.S)

4. Existing Facilities *What types of facilities (compressor stations, regulator/meter stations, valve sites, laterals, etc.) are components of the pipeline system?* (SRN.GENERAL.FACILITIES.S)

5. Pipeline System Changes *Have there been any significant changes in the pipeline system configuration in the last 5 years?* (SRN.GENERAL.SYSTEMCHGS.S)

6. Idle & Inactive Pipelines - Current and Returned to Service *For any pipelines or pipeline segments currently identified as "idle," "inactive," or "returned to service," how are those segments managed in relevant Programs and/or Procedures? (Provide details)* (SRN.GENERAL.IDLEPIPE.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

7. Discussion of Enforcement *Discussion of enforcement.* (SRN.GENERAL.ENFORCEMENT.S)

8. Discussion of Incident Reports *Discussion of Incident Reports.* (SRN.GENERAL.INCIDENREPORT.S)

9. Safety Related Condition Reports (SRCRs) *Have there been any Safety Related Conditions (SRCs) or Maximum Allowable Operating Pressure Exceedances for this pipeline in the last 5 years? (Provide details)* (SRN.GENERAL.SRCR.S)

10. Implementing Advisory Bulletins (ADBs) *Has the guidance of ADBs (Advisory Bulletins) been implemented in relevant program areas?* (SRN.GENERAL.ADB.S)

11. Grandfathered Facilities *Are there any facilities or components grandfathered under various code requirements? (Provide details)* (SRN.GENERAL.GRANDFATHER.S)

12. Exclusion Groups *Confirmation of asset "Exclusions" (See Considerations).* (SRN.GENERAL.EXCLUSIONS.S)

13. Tribal Lands *Does the pipeline cross tribal lands?* (SRN.GENERAL.TRIBALLANDS.S)

Screening - AR - Repair Criteria (O&M)

1. Repair Criteria (O&M) *Are repair criteria in non-covered segments different than in covered segments? (provide details)* (SRN.AR-RCOM.REPAIROM.S)

Screening - AR - Confirmatory Direct Assessment

1. Confirmatory Direct Assessment *Has the operator utilized CDA on this pipeline system? (If Yes, provide details.)* (SRN.AR-CDA.CDA.S)

Screening - AR - External Corrosion Direct Assessment (ECDA)

1. External Corrosion Direct Assessment (ECDA) *Has the operator utilized ECDA on this pipeline system?* (SRN.AR-EC.ECDA.S)

Screening - AR - Internal Corrosion Direct Assessment (ICDA)

1. Internal Corrosion Direct Assessment (ICDA) *Has the operator utilized ICDA on this pipeline system?* (SRN.AR-IC.ICDA.S)

Screening - AR - In-Line Inspection (Smart Pigs)

1. Integrity Assessments *Describe integrity issues or new threats discovered by the most recent integrity assessments.* (SRN.AR-IL.INTEGASSMNTS.S)

2. Integrity Assessment Method - ILI *What process was used to select the ILI assessment tool(s)?* (SRN.AR-IL.ILIUSE.S)

Screening - AR - Low Stress Reassessment

1. Low Stress Reassessment *If Low Stress Reassessment is used, was a baseline assessment conducted, and, if so, what were the results?* (SRN.AR-LSR.LSR.S)

Screening - AR - Other Technology

1. Other Technology *What, if any, Other Technology(ies) have been used to assess the integrity of the pipeline in the last 7 years? (provide details)* (SRN.AR-OT.OT.S)

Screening - AR - Pipeline Assessments for Non-IM Onshore Pipelines

1. Pipeline Assessments for Non-IM Onshore Pipelines *What is the status of your program to assess transmission lines outside of an HCA?* (SRN.AR-PA.ASSESSNONHCA.S)

Screening - AR - Integrity Assessment Via Pressure Test

1. Integrity Assessment Via Pressure Test *Where pressure testing was utilized to assess the integrity of the pipeline, what was the extent and nature of any pipeline failures? (provide details)* (SRN.AR-PTI.PRESSTEST.S)

Screening - AR - Repair Criteria (HCA)

1. Repair Criteria (HCA) *Has the nature and/or severity of required repairs found during the most recent assessment changed significantly as compared to the previous assessments? (Provide details)* (SRN.AR-RC.REPCRIT.S)

2. Pipe Movement or Replacement Projects *Have any pipeline movement or replacement projects been performed in the last 5 years? If so, identify the projects and locations.* (SRN.DC-CO.MOVEREPLACE.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Screening - AR - Repair Methods and Practices

1. Repair Methods and Practices *Have repairs to the pipeline been made in the past 5 years due to Integrity Management assessments?* (SRN.AR-RMP.METHODS.S)

Screening - AR - Stress Corrosion Cracking

1. Indications of Stress Corrosion Cracking *What indications or instances of Stress Corrosion Cracking (SCC) have been identified and remediated in the last 5 years, and what is the resulting SCC program? (provide details)* (SRN.AR-SCC.SCC.S)

2. Stress Corrosion Cracking Direct Assessment (SCCDA) *Has the operator utilized SCCDA on this pipeline system?* (SRN.AR-SCC.SCCDA.S)

Screening - CR - CRM General

1. Control Center Location *What is the assignment of the pipeline and its facilities to one or more control rooms (including their locations)?* (SRN.CR-CRMGEN.CONTROLCNTR.S)

Screening - CR - CRM Roles and Responsibilities

1. Controllers *Have there been any revisions or changes to the CRM roles and responsibilities or staffing levels as a result of any AOCs or emergencies? (Provide details)* (SRN.CR-CRMRR.CONTROLLERS.S)

Screening - CR - Supervisory Control and Data Acquisition

1. SCADA System *How many SCADA Systems and/or other remote/field automation units are utilized for the pipeline? (Provide details)* (SRN.CR-SCADA.SCADASYSTEMS.S)

Screening - CR - Fatigue Management

1. Fatigue Management *What type of shift schedule does the operator utilize and has it changed in the past five years?* (SRN.CR-CRMFM.FATIGMGMT.S)

Screening - CR - Alarm Management

1. Control Room Alarms and Logging Process *What changes have been made to the alarm management process of receiving and logging/recording system events, alarms, and commands in the last 5 years? (Provide details)* (SRN.CR-CRMAM.ALARMS.S)

Screening - CR - Change Management

1. Change Management *How are changes to pipeline equipment or configuration coordinated between the control room and associated field personnel?* (SRN.CR-CRMCMGT.CHANGE.S)

Screening - CR - Operating Experience

1. Operating Experience *What changes, if any, have been made to the CRM procedures in the last 5 years?* (SRN.CR-CRMEXP.OPEREXP.S)

Screening - CR - CRM Training

1. Controller Training *What controller training program updates or improvements were made in the last 5 years?* (SRN.CR-CRMTRAIN.CNTRLRTRAIN.S)

Screening - CR - Compliance Validation and Deviations

1. Compliance Validation and Deviations *What deviations from the control room procedures have occurred in the last 5 years? (provide details)* (SRN.CR-CRMCOMP.COMPLVALID.S)

Screening - CR - Leak Detection

1. Leak Detection System - Method *If a computational pipeline monitoring (CPM) leak detection system (LDS) is not used, then how are leaks detected? (Describe the LDS system in place)* (SRN.CR-LD.LEAKDETMETHOD.S)

Screening - DC - Compressor Station Construction

1. Compressor Station Construction *What compressor station construction activities are scheduled to occur within the next 6 months? (provide details)* (SRN.DC-COCMP.CMPSTA.S)

Screening - DC - Design of Compressor Stations

1. Design of Compressor Stations *What is the process for ensuring that compressor station protective & safety devices and emergency shutdowns are designed in accordance with the code and applicable industry standards, and installed where needed?* (SRN.DC-DPCCMP.CMPSTA.S)

Screening - DC - Design of Pipe - Overpressure Protection

1. Design of Pipe - Overpressure Protection *What is the process for establishing and documenting each pressure limiting device and overpressure safety device on the pipeline system?* (SRN.DC-DPCOPP.PRESSPROT.S)

Screening - DC - Pressure Testing - Low Pressure

1. Pressure Testing - Low Pressure Pipelines *What pressure tests related to Low Pressure pipelines (below 30% SMYS) construction projects are planned to occur within the next 6 months and have there been any failures in last 5 years on the pipeline or pipeline components? (provide details)* (SRN.DC-PTLOWPRESS.PRESSTEST.S)

Screening - DC - Construction Weld Inspection

1. Construction Weld Inspection *For recent construction projects, what was the approximate weld rejection rate? (Provide details)* (SRN.DC-WELDINSP.WELDINSP.S)

Screening - DC - Construction Welding Procedures

1. Construction Welding Procedures *For any recent or upcoming construction activities, what was/is the process for approving welding procedures?* (SRN.DC-WELDPROCEDURE.WELDPROCEDURE.S)

Screening - DC - Construction

1. Construction Projects - Pipe and Facilities *Have any new pipeline and/or facilities construction has taken place within the last 5 years, is presently underway, or is planned to occur within the next six months? Next two years? (provide details)* (SRN.DC-CO.CONSTRUCTION.S)

2. Pipe Movement or Replacement Projects *Have any pipeline movement or replacement projects been performed in the last 5 years? If so, identify the projects and locations.* (SRN.DC-CO.MOVEREPLACE.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Screening - DC - Design of Pipe

1. Design of Pipe *Have there been any pipeline design process changes in the last 5 years to ensure that all appropriate design requirements from Part 192 and Industry Standards for line pipe are followed? (provide details)* (SRN.DC-DP.PIPEDESIGN.S)

Screening - DC - Design of Pipe Components

1. Design of Pipe Components *What is the process for ensuring that pipe components and devices (i.e., fittings, flanges, valves, instrumentation, ancillary fittings/piping, etc.) are designed in accordance with the code and applicable industry standards, and are installed where needed?* (SRN.DC-DPC.COMPDESIGN.S)

Screening - DC - Gathering (D&C)

1. Gathering Design and Construction *What processes have been established for the Design & Construction of gathering pipelines?* (SRN.DC-GA.GATHERING.S)

Screening - DC - Materials

1. Materials - Qualification, Marking, and Transport *For pipeline projects in the last 5 years, what were the steel pipe (and plastic pipe) qualification, marking, and transportation requirements?* (SRN.DC-MA.MATERIALSCONSTR.S)

Screening - DC - Maintenance and Operations

1. Maintenance & Operations Construction Related *What parts of the O&M procedures are utilized when conducting the following activities: internal corrosion examination, project related shutdown/start-up, accidental ignition controls, hot tapping, and conducting activities in a safe manner?* (SRN.DC-MO.MAINTOM.S)

Screening - DC - Pressure Testing

1. Pressure Testing - O&M Construction Projects *What post-project pressure tests for O&M construction projects are planned to occur within the next 6 months on the pipeline or pipeline components? (provide details)* (SRN.DC-PT.PRESSURETEST.S)

2. Pressure Testing - Failures *Have there been any O&M construction (pre-commissioning, including replacement projects) hydrostatic pressure test or other pressure test failures within the last 5 years? (provide details)* (SRN.DC-PT.CONSTHYDROFAIL.S)

Screening - DC - Training and Qualification

1. OQ Covered Task List *What are the identified OQ program covered tasks for O&M construction projects?* (SRN.DC-TQ.CONSTOQTASK.S)

Screening - DC - Conversion to Service

1. Conversion to Service Screening *What is the pipeline system (or segment) for which operator is planning to do a Conversion-to-Service?* (SRN.DC-CONV.CONVERSION.S)

Screening - DC - Plastic Pipe Construction

1. Plastic Pipe - Handling and Storage of Plastic Pipe and Components *How are the handling and storage of plastic pipe and components conducted?* (SRN.DC-PLASTIC.PLASTICHANDLING.S)

2. Plastic Pipe - Construction Projects *Have any new PLASTIC pipe construction or replacement projects taken place within the last 5 years, is presently underway, or is planned to occur within the next six months? (Provide details.)* (SRN.DC-PLASTIC.CONSTRUCTION.S)

Screening - EP - Emergency Response

1. Post-Incident Manual Revisions *What revisions to the Emergency Response procedures have been made in the last 5 years?* (SRN.EP-ERG.MANUALMOC.S)

2. Release Volumes - Natural Gas *Have any releases occurred in the last five years where the release volume and/or release rate exceeded the operator's maximum calculated release volume or rate used for emergency preparedness?* (SRN.EP-ERG.RELEASEVOL.S)

3. Emergency Response Activation *What emergency events (or drills if not actual events) have occurred in the past 5 years that required activation of an emergency response in accordance with procedures? (please explain)* (SRN.EP-ERG.EPACTIVATE.S)

Screening - EP - Failure & Incident Investigation

1. Failure & Incident Investigation *Discuss with the operator their program to track and investigate failures.* (SRN.EP-FII.FAILUREINVEST.S)

Screening - FS - Compressor Stations

1. Compressor Stations - Site Layout *Have there been any changes to the compressor station site(s) that could impact the following: site layout, personnel movement/egress, NFPA70 requirements, separators, ventilation, bottle/pipe type holders, and flammable materials storage? (Provide details)* (SRN.FS-CS.CMPSTA.S)

2. Compressor Stations - Operations *Have there been any changes to the compressor station sites that could impact normal/emergency operations procedures and equipment configuration? (Provide details)* (SRN.FS-CS.CMPEQUIPOPS.S)

3. Compressor Stations - Supply Gas *Do any compressor stations serve as the sole gas supply for a gas distribution system, and if so, have any of these compressor stations been modified or undergone other construction within the last 5 years? (Provide details)* (SRN.FS-CS.CMPSTATIONDIST.S)

Screening - FS - Compressor Station System Protection

1. Compressor Station System Protection *What processes are in place for ensuring that compressor station protective and safety devices and emergency shutdowns (ESD) are installed where needed and inspected?* (SRN.FS-CSSYSPROT.CMPSTA.S)

2. Compressor Stations in HCAs *Are any compressor stations located in a High Consequence Area (HCA)? (provide details)* (SRN.FS-CSSYSPROT.HCAFACILITY.S)

Screening - FS - Facilities General

1. Facilities Operations Changes *What changes, including abandonment and deactivation, have been made to the non-compressor station facilities operations and equipment configuration in the last 5 years? (Provide details)* (SRN.FS-FG.FACILCHGS.S)

Screening - FS - Gas Storage

1. Gas Storage Fields *What, if any, gas storage fields are operated associated with the pipeline? (Provide details)* (SRN.FS-GS.STORAGEFIELD.S)

Screening - FS - Valves (Facilities & Storage)

1. Facility Valves *What is the process for ensuring that facility valves are installed where needed and maintained for the safe operation of the pipeline different from mainline valves?* (SRN.FS-VA.VALVES.S)

Screening - IM - Baseline Assessments

1. IM Baseline Assessments - Prioritized Schedule *Has there been any newly identified HCAs or newly installed pipe in HCAs identified in the last 5 years?* (SRN.IM-BA.BAPSCHEDULE.S)

Screening - IM - Continual Evaluation and Assessment

1. IM Periodic Evaluation Actions *Describe the actions implemented in the last 5 years to address the threats identified and the risk represented by these threats as a result of a periodic evaluation for a specific covered segment.* (SRN.IM-CA.PERIODICEVALMOC.S)

2. IM Integrity Assessments Delayed *Has the performance of any integrity assessments been delayed such that a schedule or required timeframe was exceeded? (Provide details)* (SRN.IM-CA.ASSESSDELAY.S)

Screening - IM - High Consequence Areas

1. IMP - Process and Procedure Changes *Describe the most significant changes to the Integrity Management processes and procedures since the last IMP-focused PHMSA inspection.* (SRN.IM-HC.IMPLANMOD.S)

2. IM HCAs - Newly Identified HCAs *Describe the method or process that identifies any new segments that are in an HCA and incorporates them into the Integrity Management Program.* (SRN.IM-HC.HCANEW.S)

3. Facilities in HCA *Are any non-compressor station facilities located in a High Consequence Area (HCA)? (Provide details)* (SRN.IM-HC.FACILHCA.S)

4. Idle & Inactive Pipelines - Current and Returned to Service *For any pipelines or pipeline segments currently identified as "idle," "inactive," or "returned to service," how are those segments managed in relevant Programs and/or Procedures? (Provide details)* (SRN.GENERAL.IDLEPIPE.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Screening - IM - Preventive & Mitigative (P&M) Measures

1. IM Preventive & Mitigative Measures - General Requirements *Describe the preventive measures & mitigative measures that have been implemented in the last 5 years or are planned to be implemented in the future to protect HCAs.* (SRN.IM-PM.PMIMPGENERAL.S)

Screening - IM - Quality Assurance

1. IM Performance Measures *What are the methods employed to measure the Integrity Management Program's effectiveness?* (SRN.IM-QA.PERFMEASURE.S)

2. IM Management of Change (MOC) *Describe the most significant changes that have been implemented outside of the IMP processes as a result of IMP decisions and moved through the Management of Change (MOC) process in the last 5 years.* (SRN.IM-QA.MOC.S)

Screening - IM - Risk Analysis

1. Risk Analysis - Comprehensiveness of Approach *Describe the most significant modifications that have been made to the IM processes in the last 5 years to identify and evaluate all potential threats to each covered pipeline segment.* (SRN.IM-RA.RAMOD.S)

2. Risk Analysis - ROW Information Management *How is the information gathered (related to potential excavation damage) during pipeline patrols, monitoring, and leakage surveys analyzed and used by the integrity management information / risk analysis?* (SRN.IM-RA.INFOMGMT.S)

Screening - MO - Alternative MAOP

1. Alternative MAOP *Are any segments of the pipeline operated under the Alternate MAOP limitations (ref. 192.620)?* (SRN.MO-AMAOP.AMAOP.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Screening - MO - Conversion to Service

1. Conversion to Part 192 Service *What pipelines or pipeline segments have undergone a conversion to Part 192 service in the last 5 years? (provide details)* (SRN.MO-GC.192CONV.S)

Screening - MO - Gas Pipeline Abnormal Operations

1. Abnormal Operations Events *What abnormal operations events has the pipeline experienced in the last 5 years and how were lessons learned incorporated? (Provide details)* (SRN.MO-GOABNORMAL.ABPROCESS.S)

Screening - MO - Gas Pipeline Class Location

1. Class Location Changes *Has there been a class location change occur in the past 3 years that required a study and the subsequent confirmation or revision of the pipeline segment's MAOP?* (SRN.MO-GOCLASS.CLASSLOCATEMAOPREV.S)

Screening - MO - Gas Pipeline MAOP

1. MAOP Changes *If there have been any changes in the pipeline MAOP or in startup/shutdown procedures to ensure that operations are within MAOP, in the last 5 years, what was the nature of the changes?* (SRN.MO-GOMAOP.MAOPCHGS.S)

2. MAOP Validation *Are records available that fully validate the current pipeline MAOP, and if not, what is the process for addressing this issue?* (SRN.MO-GOMAOP.MAOPVALID.S)

3. MAOP Determination *Does the operator have any pipelines where the MAOP was determined by §192.619(a)(2) or §192.619(c)?* (SRN.MO-GOMAOP.MAOPDETERMINATION.S)

Screening - MO - MAOP Reconfirmation

1. MAOP Reconfirmation Methods *Which MAOP Reconfirmation Methods do you plan to use or have used?* (SRN.MO-RECONF.MAOPMETHODS.S)

Screening - MO - Moderate Consequence Areas (MCA)

1. MCA Identification Program *Has the operator completed their review and identification of Moderate Consequence Areas (MCAs)?* (SRN.MO-MCA.MCAIDENTIFY.S)

Screening - MO - Gas Pipeline Maintenance

1. Pipe Movement or Replacement Projects *Have any pipeline movement or replacement projects been performed in the last 5 years? If so, identify the projects and locations.* (SRN.DC-CO.MOVEREPLACE.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

2. Gas Pipeline Maintenance *What significant changes have been made to the pipeline maintenance program in the last 5 years?* (SRN.MO-GM.GASMTCE.S)

Screening - MO - Gas Pipeline Odorization

1. Odorization *Are any portions of the pipeline system(s) non-odorized? (Provide details)* (SRN.MO-GOODOR.ODORIZE.S)

Screening - MO - Gas Pipeline Operations

1. Tracking of "Near Misses" *Are "near misses" tracked, and if so, how are they reviewed and potentially incorporated into revised procedures or revised programs?* (SRN.MO-GO.NEARMISS.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

2. O&M Procedure Manual Modifications *What, if any, changes or improvements have been made to the O&M manuals, processes, or procedures in the last 5 years?* (SRN.MO-GO.OMPLANMOD.S)

3. Gas Pipeline Operational Restrictions *Are there any operational restrictions (for example, reduced operational pressure) that have been put on the pipeline system or any system components? (Provide details)* (SRN.MO-GO.OPERATERESTRICT.S)

4. Idle & Inactive Pipelines - Current and Returned to Service *For any pipelines or pipeline segments currently identified as "idle," "inactive," or "returned to service," how are those segments managed in relevant Programs and/or Procedures? (Provide details)* (SRN.GENERAL.IDLEPIPE.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

5. Continuing Surveillance Extreme Weather *Have there been any extreme weather events or natural disasters that had a likelihood to damage pipeline facilities in the last five years?* (SRN.MO-GO.CONTSURVEILLANCE.S)

Screening - MO - Gas Pipeline Overpressure Protection

1. Gas Pipeline Overpressure Protection *Have any pressure limiting device or overpressure safety device settings been changed for the pipeline system in the last 5 years? (Provide details)* (SRN.MO-GMOPP.PRESSPROTECT.S)

2. Segment-Specific MAOP Protection *Are there any segment-specific MAOP protection controls in place? (provide details)* (SRN.MO-GMOPP.MAOPSEGPROTECT.S)

3. MAOP Exceedances *Have there been any MAOP exceedances in the last 5 years? (please describe)* (SRN.MO-GMOPP.MAOPEXCEED.S)

Screening - MO - ROW Markers, Patrols, Leakage Survey and Monitoring

1. ROW Markers, Patrols, Leakage Surveys, and Monitoring *What, if any, issues have occurred in the last 5 years regarding pipeline ROW monitoring, marking, leakage surveys, and patrolling?* (SRN.MO-RW.ROWISSUES.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Screening - PD - Damage Prevention

1. Damage Prevention Program *How is the effectiveness of the Damage Prevention Program measured, and what issues have been discovered in the last 5 years?* (SRN.PD-DP.DPPROGRAM.S)

2. Tracking of "Near Misses" *Are "near misses" tracked, and if so, how are they reviewed and potentially incorporated into revised procedures or revised programs?* (SRN.MO-GO.NEARMISS.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

3. Damage Prevention - One-Call Process *How is the effectiveness of the One-Call system response measured, and what issues have been identified in the last 5 years?* (SRN.PD-DP.ONECALL.S)

4. Idle & Inactive Pipelines - Current and Returned to Service *For any pipelines or pipeline segments currently identified as "idle," "inactive," or "returned to service," how are those segments managed in relevant Programs and/or Procedures? (Provide details)* (SRN.GENERAL.IDLEPIPE.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Screening - PD - Public Awareness

1. Public Awareness Manual Modifications *What, if any, changes or improvements have been made to the Public Awareness manuals, processes, or procedures in the last 5 years?* (SRN.PD-PA.PAPROGRAM.S)

2. Public Awareness Program Effectiveness *How is the effectiveness of the Public Awareness Program measured, and what issues have been identified in the last 5 years?* (SRN.PD-PA.PAPROGRAMEFF.S)

3. ROW Markers, Patrols, Leakage Surveys, and Monitoring *What, if any, issues have occurred in the last 5 years regarding pipeline ROW monitoring, marking, leakage surveys, and patrolling?* (SRN.MO-RW.ROWISSUES.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

4. Idle & Inactive Pipelines - Current and Returned to Service *For any pipelines or pipeline segments currently identified as "idle," "inactive," or "returned to service," how are those segments managed in relevant Programs and/or Procedures? (Provide details)* (SRN.GENERAL.IDLEPIPE.S)

Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Screening - TD - External Corrosion - Exposed Pipe

1. External Corrosion - Exposed Pipe *Have any exposed portions of buried pipe been discovered in the last 5 years? (Provide details)* (SRN.TD-CPEXPOSED.EXPOSEDPIPE.S)

Screening - TD - External Corrosion - CP Monitoring

1. Cathodic Protection Monitoring *What issues have been discovered during cathodic protection monitoring in the last 5 years? (provide details)* (SRN.TD-CPMONITOR.CATHODICPROT.S)

2. Cathodic Protection Monitoring Impractical *Are there any separately protected short sections of mains or transmission line, not in excess of 100 feet for which monitoring CP once each calendar year is impractical?* (SRN.TD-CPMONITOR.CPSEPARATE.S)

Screening - TD - Internal Corrosion - Corrosive Gas

1. Internal Corrosion - Corrosive Gas *Where corrosive gas is transported, what changes have been made to minimize internal corrosion in the last 5 years?* (SRN.TD-ICCG.CORRGAS.S)

Screening - TD - Alternative MAOP

1. Alternative MAOP *Are any segments of the pipeline operated under the Alternate MAOP limitations (ref. 192.620)?* (SRN.MO-AMAOP.AMAOP.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Screening - TD - Atmospheric Corrosion

1. External Corrosion - Atmospheric Corrosion *What, if any, specific corrosion control projects in response to discovering atmospheric external corrosion have been conducted in the last 5 years? (Provide details)* (SRN.TD-ATM.ATMCORRODE.S)

Screening - TD - External Corrosion - Coatings

1. External Corrosion - Coatings *What, if any, coating issues have been discovered in the last 5 years? (Provide details)* (SRN.TD-COAT.COATINGS.S)

Screening - TD - External Corrosion - Cathodic Protection

1. External Corrosion - CP Ineffective *What, if any, portion of the pipeline is not effectively protected from external corrosion by a cathodic protection system? (describe details)* (SRN.TD-CP.CP.S)

2. External Corrosion - Cathodic Protection *What, if any, specific projects in response to discovering external corrosion related to cathodic protection have been conducted in the last 5 years? (Provide details)* (SRN.TD-CP.EXTCORROSION.S)

Screening - TD - Internal Corrosion - Preventive Measures

1. Internal Corrosion - Preventive Measures *What, if any, internal corrosion issues have been discovered in the last 5 years? (provide details)* (SRN.TD-ICP.INTCORROSION.S)

Screening - TD - Stress Corrosion Cracking

1. Stress Corrosion Cracking *What indications or instances of Stress Corrosion Cracking (SCC) has the pipeline experienced in the last 5 years, and what is the resulting SCC program? (Provide details)* (SRN.TD-SCC.SCC.S)

Screening - TQ - Qualification of Personnel - Specific Requirements (IM)

1. Qualification of Personnel - Specific Requirements (IM) *Have there been any changes in the last 5 years to the process to ensure that individuals (operator and contractor) are qualified to perform integrity management program activities and integrity management quality control?* (SRN.TQ-QUIM.IMREQMNTS.S)

Screening - TQ - Qualification of Personnel - Specific Requirements (O and M Construction)

1. Qualification of Personnel - Specific Requirements (O & M Construction) *What significant changes have been made in the last 5 years to the processes regarding the qualifications of individuals involved in welding and joining pipe?* (SRN.TQ-QUOMCONST.OMCONSTREQMNTS.S)

Screening - TQ - Operator Qualification

1. OQ Plan Modifications *What, if any, changes or improvements have been made to the OQ Plan in the last 5 years?* (SRN.TQ-OQ.OQPLANMOD.S)

2. OQ Personnel Count *Have there been changes in the number of personnel (both company and contractor) covered by the OQ Plan in the last 5 years?* (SRN.TQ-OQ.OQPERSONNEL.S)

3. OQ Removal from Covered Task *Have any OQ-qualified individuals (operator and contractor) been removed from performing a covered task, and what were the circumstances for the removal(s)?* (SRN.TQ-OQ.OQREMOVAL.S)

Screening - TQ - Qualification of Personnel - Specific Requirements

1. Qualification of Personnel - Specific Requirements *Have there been any changes in the last 5 years to the process to ensure that individuals (operator and contractor) are qualified to perform the following activities? - corrosion control processes, - hot tapping, and - individuals who oversee and perform marking, trenching, and backfilling operations.* (SRN.TQ-QU.REQMNTS.S)

Screening - TQ - Training of Personnel

1. Training of Personnel *Have there been any changes in the last 5 years to the process to ensure that emergency response personnel (operator and contractor) are qualified to perform their activities?* (SRN.TQ-TR.TRAINING.S)

Time-Dependent Threats - Alternative MAOP

1. Alternative MAOP - Internal Corrosion *Is there a process for controlling internal corrosion on pipelines that may operate under the Alternative Maximum Operating Pressure rule?* (TD.AMAOP.AMAOP.P) 192.605(b)(2) (192.620(d)(5))

2. Alternative MAOP - Internal Corrosion *Do records document that the operator is following a process for controlling internal corrosion on pipelines they may operate under the Alternative Maximum Operating Pressure rule?* (TD.AMAOP.AMAOP.R) 192.709(c) (192.620(d)(5))

3. Alternative MAOP - Internal Corrosion *Is the process being followed for controlling internal corrosion on pipelines operated under the Alternative Maximum Operating Pressure rule?* (TD.AMAOP.AMAOP.O) 192.620(d)(5)

4. Alternative MAOP - Interference Currents *Does the process include (prior to operating an existing pipeline segment at an alternate maximum allowable operating pressure, or within six months after placing a new pipeline segment in service at an alternate maximum allowable operating pressure) required instructions for addressing any interference currents on the pipeline segment?* (TD.AMAOP.AMAOPINTFRCURRENT.P) 192.605(b)(2) (192.620(d)(6))

5. Alternative MAOP - Interference Currents *Do records document that actions taken (prior to operating an existing pipeline segment at an alternate maximum allowable operating pressure, or within six months after placing a new pipeline segment in service at an alternate maximum allowable operating pressure) have been adequate in addressing any interference currents on the pipeline segment?* (TD.AMAOP.AMAOPINTFRCURRENT.R) 192.709(c) (192.620(d)(6))

6. Alternative MAOP - Indirect Method *Does the process require that within six months after placing the cathodic protection of a new pipeline segment in operation, or within six months after an existing pipeline segment under Part 192 has been certified under the Alternative Maximum Operating Pressure rule, that adequacy be assessed of the indirect method such as close-interval survey, and the integrity of the coating using direct current voltage gradient (DCVG) or alternating current voltage gradient (ACVG)?* (TD.AMAOP.AMAOPINDIRECT.P) 192.605(b)(2) (192.620(d)(7))

7. Alternative MAOP - Indirect Method *Do records document that within six months after placing the cathodic protection of a new pipeline segment in operation, or within six months after an existing pipeline segment under Part 192 has been certified under the Alternative Maximum Operating Pressure rule, that adequacy was assessed of the indirect method such as close-interval survey, and the integrity of the coating using direct current voltage gradient (DCVG) or alternating current voltage gradient (ACVG)?* (TD.AMAOP.AMAOPINDIRECT.R) 192.709(c) (192.620(d)(7))

8. Alternative MAOP - Test Reading *Does the process for a pipeline segment operating at an Alternate Maximum Allowable Operating Pressure require: (a) Completion of remedial action within six months of a failed reading at a test station during annual monitoring, or notification of each responsible pipeline safety party demonstrating that the integrity of the pipeline is not compromised; and (b) After completion of the remedial action to address a failed reading, confirmed restoration of adequate corrosion control by a close interval survey on either side of the affected test station to the next test station?* (TD.AMAOP.AMAOPTESTREAD.P) 192.605(b)(2) (192.620(d)(8))

9. Alternative MAOP - Test Reading *Do records document that for a pipeline segment operating at an alternate maximum allowable operating pressure the following: (a) Completion of remedial action within six months of a failed reading at a test station during annual monitoring, or notification of each responsible pipeline safety party demonstrating that the integrity of the pipeline is not compromised, and (b) After completion of the remedial action to address a failed reading, confirmed restoration of adequate corrosion control by a close interval survey on either side of the affected test station to the next test station?* (TD.AMAOP.AMAOPTESTREAD.R) 192.709(c) (192.620(d)(8))

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);192.9(f)(1);192.453)

2. Atmospheric Corrosion *Do records document the protection of above ground pipe from atmospheric corrosion?* (TD.ATM.ATMCORRODE.R) 192.491(c) (192.479(a);192.479(b);192.479(c);192.9(f)(1);192.453)

3. Atmospheric Corrosion Monitoring *Does the process give adequate instruction for the inspection of aboveground pipeline segments for atmospheric corrosion?* (TD.ATM.ATMCORRODEINSP.P) 192.605(b)(2) (192.481(a);192.481(b);192.481(c);192.481(d);192.9(f)(1);192.453)

4. 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);192.481(d);192.9(f)(1);192.453)

5. Atmospheric Corrosion Monitoring *Is pipe that is exposed to atmospheric corrosion protected?* (TD.ATM.ATMCORRODEINSP.O) 192.481(b) (192.481(c);192.479(a);192.479(b);192.479(c);192.481(d);192.9(f)(1);192.453;192.491)

Time-Dependent Threats - External Corrosion - CP Monitoring

1. Cathodic Protection Criteria *Does the process require CP monitoring criteria to be used that is acceptable?* (TD.CPMONITOR.MONITORCRITERIA.P) 192.605(b)(2) (192.463(a);192.463(c);192.9(f)(1);192.452(b);192.452(c);192.453)

2. Cathodic Protection Criteria *Do records document that the CP monitoring criteria used was acceptable?* (TD.CPMONITOR.MONITORCRITERIA.R) 192.491(c) (192.463(a);192.9(f)(1);182.452;192.453;192.491)

3. Cathodic Protection 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(a);192.463(b);192.463(c);Part 192, Appendix D)

4. 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);192.9(f)(1);192.452;192.453)

5. 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);192.9(f)(1);192.452;192.453;192.491)

6. 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);192.9(f)(1);192.452;192.453)

7. Rectifiers 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);192.9(f)(1);192.452;192.453;192.491)

8. Rectifiers or other Impressed Current Sources *Are impressed current sources properly maintained and are they functioning properly?* (TD.CPMONITOR.CURRENTTEST.O) 192.465(b)

9. 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);192.9(f)(1);192.452;192.453)

10. 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);192.9(f)(1);192.452;192.453;192.491)

11. Bonds, Diodes and Reverse Current Switches *Are interference bonds, diodes, and reverse current switches properly maintained and are they functioning properly?* (TD.CPMONITOR.REVCURRENTTEST.O) 192.465(c)

12. Extent of Corrosion Control Deficiencies for Onshore Gas Transmission *For onshore gas transmission pipelines, does the process require that the operator develop a remedial action plan to determine the extent of the area affected when low cathodic protection levels are detected?* (TD.CPMONITOR.DEFICIENCYEXTENT.P) 192.605(b)(2) (192.465(d);192.465(f))

13. Extent of Corrosion Control Deficiencies for Onshore Gas Transmission *For onshore gas transmission pipelines, does the remedial action plan adequately document actions taken to determine the extent of inadequate cathodic protection, and correct any identified deficiencies in corrosion control?* (TD.CPMONITOR.DEFICIENCYEXTENT.R) 192.491(c) (192.465(d);192.465(f))

14. Extent of Corrosion Control Deficiencies for Onshore Gas Transmission *Is the extent of inadequate cathodic protection identified, and if found, corrected?* (TD.CPMONITOR.DEFICIENCYEXTENT.O) 192.465(f) (192.465(d))

15. 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);192.9(f)(1);192.452;192.453)

16. 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);192.9(f)(1);192.452;192.453;192.491)

17. Correction of Corrosion Control Deficiencies for Onshore Gas Transmission *For onshore gas transmission pipelines, does the process require prompt actions are taken to correct any identified deficiencies in corrosion control found during inspections/testing?* (TD.CPMONITOR.DEFICIENCYGT.P) 192.605(b)(2) (192.465(d))

18. Correction of Corrosion Control Deficiencies for Onshore Gas Transmission *For onshore gas transmission pipelines, do records adequately document actions taken to correct any identified deficiencies in corrosion control found during inspections/testing?* (TD.CPMONITOR.DEFICIENCYGT.R) 192.491(c) (192.465(d))

19. 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 (192.9(f)(1);192.452;192.453)

20. Test Stations *Do records identify the location of test stations and show a sufficient number of test stations?* (TD.CPMONITOR.TESTSTATION.R) 192.469 (192.9(f)(1);192.452;192.453;192.491)

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

22. 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);192.9(f)(1);192.452;192.453)

23. 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);192.9(f)(1);192.452;192.453;192.491)

24. Test Leads *Do pipelines with cathodic protection have electrical test leads installed in accordance with requirements of Subpart I?* (TD.CPMONITOR.TESTLEAD.O) 192.471(a) (192.471(b);192.471(c))

25. Interference Currents *For pipelines other than onshore gas transmission, does the operator have a program in place to minimize detrimental effects of interference currents on its pipeline system?* (TD.CPMONITOR.INTFRCURRENT.P) 192.605(b)(2) (192.473(a);192.9(d);192.9(e);192.9(f)(1);192.452;192.453)

26. Interference Currents *For pipelines other than onshore gas transmission, 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.CPMONITOR.INTFRCURRENT.R) 192.491(c) (192.473(a);192.9(f)(1);192.452;192.453;192.491)

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

28. Interference Currents Design & Installation *Does the operator have a program for designing and installing cathodic protection systems that minimizes the detrimental effects of interference currents on existing adjacent metallic structures?* (TD.CPMONITOR.INTFRCURRENTDES.P) 192.605(b)(2) (192.473(b))

29. Interference Currents Design & Installation *Do records for the design and installation of cathodic protection systems demonstrate the operator reduced the detrimental effects of interference currents on existing adjacent metallic structures?* (TD.CPMONITOR.INTFRCURRENTDES.R) 192.491(c) (192.473(b))

30. Interference Currents Survey *For onshore transmission pipelines, does the operator have a program in place to identify and analyze the detrimental effects of interference currents on its pipeline system by performing interference surveys to detect the presence and level of any electrical stray current.* (TD.CPMONITOR.INTFRCURRENTSURV.P) 192.605(b)(2) (192.473(c)(1);192.473(c)(2))

31. Interference Currents Survey *For onshore gas transmission pipelines, do records document an effective program to identify and analyze interference currents by performing interference and monitoring surveys to detect the presence and level of any electrical stray current?* (TD.CPMONITOR.INTFRCURRENTSURV.R) 192.491(c) (192.473(c)(1);192.473(c)(2))

32. Interference Currents Remediation *For transmission pipelines, does the program to minimize the detrimental effects of interference currents on its pipeline system include requirements to develop a remedial plan to correct instances that would impede the safe operation of the pipeline or adversely impact the environment or public?* (TD.CPMONITOR.INTFRCURRENTREM.P) 192.605(b)(2) (192.473(c)(3);192.473(c)(4))

33. Interference Currents Remediation *For onshore gas transmission pipelines, 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.CPMONITOR.INTFRCURRENTREM.R) 192.491(c) (192.473(c)(3);192.473(c)(4))

34. 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);192.9(f)(1);192.452;192.453)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

35. 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);192.9(f)(1);192.452;192.453)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

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);192.452(a);192.452(b);192.455(f);192.455(g);192.9(f)(1);192.452;192.453)

2. Cathodic Protection post July 1971 *Do records document that each buried or submerged pipeline installed after July 31, 1971, has been 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.R) 192.491(c) (192.455(a);192.457(a);192.452(a);192.452(b);192.455(f);192.455(g);192.9(f)(1);192.452;192.453;192.491)

3. 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 must be cathodically protected in areas where active corrosion is found?* (TD.CP.PRE1971.P) 192.605(b)(2) (192.457(b);192.9(f)(1);192.452;192.453)

4. Cathodic Protection pre August 1971 *Do records document 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 have been cathodically protected in areas where active corrosion was found?* (TD.CP.PRE1971.R) 192.491(c) (192.457(b);192.9(f)(1);192.452;192.453;192.491)

5. Cathodic Protection of Underground Piping *Are bare or coated pipes in compressor, regulator or meter stations installed before August 1, 1971 (except for cast and ductile iron lines) cathodically protected in areas where active corrosion was found in accordance with Subpart I of Part 192?* (TD.CP.PRE1971.O) 192.457(b)

6. 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);192.9(f)(1);192.452;192.453)

7. Use of Aluminum *Do records support the installation of aluminum when it was installed in a submerged or buried pipeline?* (TD.CP.ALUMINUM.R) 192.491(c) (192.455(e);192.9(f)(1);192.452;192.453;192.491)

8. 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);192.9(f)(1);192.452;192.453)

9. Cathodic Protection of Amphoteric Metals *Do records document adequate cathodic protection of amphoteric metals (aluminum) that are included in a steel pipeline?* (TD.CP.AMPHOTERIC.R) 192.491(c) (192.463(b);192.9(f)(1);192.452;192.453;192.491)

10. 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);192.9(f)(1);192.452;192.453)

11. Unprotected Buried Pipelines (typically bare pipelines) *Do records adequately document the re-evaluation of non-cathodically protected buried pipelines for areas of active corrosion?* (TD.CP.UNPROTECT.R) 192.491(c) (192.465(e);192.9(f)(1);192.452;192.453;192.491)

12. 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);192.9(f)(1);192.452;192.453)

13. 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);192.9(f)(1);192.452;192.453;192.491)

14. 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))

15. Inspection/Testing to Ensure Electrical Isolation *Does the process provide adequate guidance to inspect and electrically test to ensure that electrical isolation is adequate?* (TD.CP.ELECISOLATETEST.P) 192.605(b)(2) (192.467(d);192.9(f)(1);192.452;192.453)

16. Inspection/Testing to Ensure Electrical Isolation *Do records adequately document the inspection and electrical testing performed to ensure that electrical isolation is adequate?* (TD.CP.ELECISOLATETEST.R) 192.491(c) (192.467(d);192.9(f)(1);192.452;192.453;192.491)

17. Inspection/Testing to Ensure Electrical Isolation *Do field observations verify that inspection and electrical testing ensured that electrical isolation is adequate?* (TD.CP.ELECISOLATETEST.O) 192.467(d)

18. Protection from Fault Currents *Does the process provide sufficient guidance for determining when protection against damage from fault currents or lightning is needed and how that protection must be installed?* (TD.CP.FAULTCURRENT.P) 192.605(b)(2) (192.467(f);192.9(f)(1);192.452;192.453)

19. Protection from Fault Currents *Do records adequately document the installation and inspection of fault current and lightning protection?* (TD.CP.FAULTCURRENT.R) 192.491(c) (192.467(f);192.9(f)(1);192.452;192.453;192.491)

20. Protection from Fault Currents *Are fault current and lightning protection for the pipeline installed and inspected?* (TD.CP.FAULTCURRENT.O) 192.467(f)

21. 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);192.9(f)(1);192.452;192.453)

22. Graphitization of Cast Iron and Ductile Iron *Do records document remediation of graphitization of cast iron or ductile iron pipe?* (TD.CP.GRAPHITIZE.R) 192.491(c) (192.489(a);192.489(b);192.9(f)(1);192.452;192.453;192.491)

23. 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);192.9(f)(1);192.452;192.453)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

24. 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);192.9(f)(1);192.452;192.453)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

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)(1);192.461(a);192.461(b);192.483(a);192.9(f)(1);192.452;192.453)

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)(1);192.461(a);192.461(b);192.483(a);192.9(f)(1);192.452;192.453;192.491)

3. New Buried Pipe w/o Coating *If a buried or submerged pipeline installed after July 31, 1971 was not installed with an external protective coating do records provide adequate documentation why such a coating was not necessary to protect the pipe from external corrosion?* (TD.COAT.NEWPIPENOCOAT.R) 192.491(c) (192.455(b);192.9(f)(1);192.452;192.453;192.491)

4. New Buried Pipe Coating Application *Does the process give adequate guidance for the application and inspection of protective coatings on pipe?* (TD.COAT.NEWPIPEINSTALL.P) 192.605(b)(2) (192.461(c);192.461(d);192.461(e);192.483(a);192.9(f)(1);192.452;192.453)

5. New Buried Pipe Coating Application *Do records document that acceptable external protective coating materials have been used and the application and inspection was done in accordance with the written procedures?* (TD.COAT.NEWPIPEINSTALL.R) 192.491(c) (192.461(c);192.461(d);192.461(e);192.483(a);192.9(f)(1);192.452;192.453;192.491)

6. New Buried Pipe Coating Application *Do field observations confirm pipe protective coating is adequately and properly applied?* (TD.COAT.NEWPIPEINSTALL.O) 192.461(a) (192.461(c);192.461(d);192.461(e);192.319(b);192.483(a))

7. Coating Assessment *For onshore steel gas transmission pipelines with a continuous backfill length greater than or equal to 1000 feet, Does the procedure include requirements to assess for external coating damage promptly after the transmission line is backfilled but no later than 6 months?* (TD.COAT.ASSESS.P) 192.605(b)(2) (192.461(f);192.461(g);192.461(h))

8. Coating Assessment *For onshore steel gas transmission pipelines with a continuous backfill length greater than or equal to 1000 feet, do records document an assessment for external coating damage promptly but no later than 6 months after the transmission line was backfilled?* (TD.COAT.ASSESS.R) 192.491(c) (192.461(f);192.461(g);192.461(h);192.461(i))

9. Coating Assessment *For onshore steel gas transmission pipelines with a continuous backfill length greater than or equal to 1000 feet, do field observations confirm pipe protective coating is adequately surveyed promptly after backfilling?* (TD.COAT.ASSESS.O) 192.461(c)

10. 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 be examined for external corrosion and coating deterioration, and if external corrosion is found, further examination is required to determine the extent of the corrosion?* (TD.CPEXPOSED.EXPOSEINSPECT.P) 192.605(b)(2) (192.459;192.9(f)(1);192.452;192.453)

2. Examination of Exposed Portions of Buried Pipe *Do records adequately document that exposed buried piping was examined for corrosion and deteriorated coating?* (TD.CPEXPOSED.EXPOSEINSPECT.R) 192.491(c) (192.459;192.9(f)(1);192.452;192.453;192.491)

3. Examination of Exposed Portions of Buried Pipe *Is exposed buried piping examined for corrosion and deteriorated coating?* (TD.CPEXPOSED.EXPOSEINSPECT.O) 192.459

4. Evaluation of Externally Corroded Pipe *Does the process provide sufficient direction for personnel to evaluate the remaining strength of externally corroded pipe?* (TD.CPEXPOSED.EXTCORRODEEVAL.P) 192.605(b)(2) (192.485(a);192.485(b);192.485(c);192.9(f)(1);192.452;192.453;192.712(b))

5. Evaluation of Externally Corroded Pipe *Do records adequately document the evaluation of externally corroded pipe?* (TD.CPEXPOSED.EXTCORRODEEVAL.R) 192.491(c) (192.485(a);192.485(b);192.485(c);192.9(f)(1);192.452;192.453;192.491;192.712(b))

6. Evaluation of Externally Corroded Pipe *Do field observations confirm externally corroded pipe was properly evaluated?* (TD.CPEXPOSED.EXTCORRODEEVAL.O) 192.485(a) (192.485(b);192.485(c))

7. Repair of Externally Corroded Pipe *Does the process give sufficient guidance for personnel to repair or replace pipe that is externally corroded to an extent that there is not sufficient remaining strength in the pipe wall?* (TD.CPEXPOSED.EXTCORRODREPAIR.P) 192.605(b)(2) (192.485(a);192.485(b);192.485(c);192.9(f)(1);192.452;192.453)

8. Repair of Externally Corroded Pipe *Do records document the repair or replacement of pipe that has been externally corroded to an extent that there is not sufficient remaining pipe wall strength?* (TD.CPEXPOSED.EXTCORRODREPAIR.R) 192.491(c) (192.485(a);192.485(b);192.485(c);192.9(f)(1);192.452;192.453;192.491)

9. Repair of Externally Corroded Pipe *Do field observations confirm the repair or replacement of pipe that has been externally corroded to an extent that there is not sufficient remaining pipe wall strength?* (TD.CPEXPOSED.EXTCORRODREPAIR.O) 192.485(a) (192.485(b);192.485(c))

10. 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);192.9(f)(1);192.452;192.453)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

11. 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);192.9(f)(1);192.452;192.453)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Time-Dependent Threats - Internal Corrosion - Corrosive Gas

1. Internal Corrosion - Corrosive Gas *Does the process require that the corrosive effect of the gas in the pipeline be investigated?* (TD.ICCG.CORRGAS.P) 192.605(b)(2) (192.475(a);192.9(f)(1);192.452;192.453)

2. Internal Corrosion - Corrosive Gas *Do records document the actions taken when corrosive gas is being transported by pipeline?* (TD.ICCG.CORRGAS.R) 192.491(c) (192.475;192.9(f)(1);192.452;192.453;192.491;192.477;192.478(a);192.478(b))

3. 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.ICCG.CORRGASACTION.P) 192.605(b)(2) (192.477;192.9(f)(1);192.452;192.453;192.478)

4. Internal Corrosion Corrosive Gas Actions *Do records document the actions taken when corrosive gas is being transported by pipeline?* (TD.ICCG.CORRGASACTION.R) 192.491(c) (192.477;192.9(f)(1);192.452;192.453;192.491;192.478(a);192.478(b))

5. Internal Corrosion Corrosive Gas Actions *Are adequate actions taken when corrosive gas is being transported by pipeline?* (TD.ICCG.CORRGASACTION.O) 192.477 (192.478)

6. Internal Corrosion - Corrosive Constituent Monitoring *For onshore gas transmission, does the process require monitoring of the corrosive constituents in the transported gas, and effective mitigation as necessary?* (TD.ICCG.CORRCONSTMONIT.P) 192.605(b)(2) (192.478(a);192.478(b)(1);192.478(b)(2))

7. Internal Corrosion - Corrosive Constituent Monitoring *For onshore gas transmission, do operator records indicate monitoring the gas stream for corrosive constituents, effectively mitigating as necessary?* (TD.ICCG.CORRCONSTMONIT.R) 192.491(c) (192.478(a);192.478(b)(1);192.478(b)(2))

8. Internal Corrosion - Corrosive Constituent Monitoring *For onshore gas transmission pipelines, does the internal corrosion management process require an evaluation to ensure corrosive constituents are effectively monitored and mitigated?* (TD.ICCG.GTEVAL.P) 192.478(a) (192.478(b)(3))

9. Internal Corrosion - Corrosive Constituent Monitoring *For onshore gas transmission pipelines, do records indicate the operator performed an internal corrosion management evaluation at least once per calendar year, not to exceed 15 months?* (TD.ICCG.GTEVAL.R) 192.491(c) (192.478(b)(3))

10. Internal Corrosion - Corrosive Constituent Review *For onshore gas transmission pipelines, do procedures include a requirement to review the results from the internal corrosion monitoring and mitigation program at least once each calendar year, but at intervals not exceeding 15 months?* (TD.ICCG.CORRGASREVIEW.P) 192.605(b)(2) (192.478(c))

11. Internal Corrosion - Corrosive Constituent Review *For onshore gas transmission pipelines, has the operator conducted annual reviews of the internal corrosion monitoring and mitigation program as required?* (TD.ICCG.CORRGASREVIEW.R) 192.491(c) (192.478(c))

Time-Dependent Threats - Internal Corrosion - Preventive Measures

1. Internal Corrosion in Removed 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);192.9(f)(1);192.452;192.453)

2. Internal Corrosion in Removed 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);192.9(f)(1);192.452;192.453;192.491)

3. Internal Corrosion in Removed Pipe *Is removed pipe examined for evidence of internal corrosion?* (TD.ICP.EXAMINE.O) 192.475(a) (192.475(b))

4. 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)

5. 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) (192.9(f)(1);192.452;192.453;192.485(a);192.485(c);192.712(b))

6. Evaluation of Internally Corroded Pipe *Do records document adequate evaluation of internally corroded pipe?* (TD.ICP.EVALUATE.R) 192.491(c) (192.9(f)(1);192.452;192.453;192.485(a);192.485(c);192.491;192.712(b))

7. Repair of Internally Corroded Pipe *Does the process give sufficient guidance for personnel to repair or replace pipe that has internally corroded to an extent that there is no longer sufficient remaining strength in the pipe wall?* (TD.ICP.REPAIRINT.P) 192.491(c) (192.485(a);192.485(b);192.9(f)(1);192.452;192.453)

8. Repair of Internally 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?* (TD.ICP.REPAIRINT.R) 192.485(a) (192.485(b);192.9(f)(1);192.452;192.453;192.491)

9. Repair of Internally Corroded Pipe *Do field observations confirm repair or replacement of pipe that has been internally corroded to an extent that there is not sufficient remaining strength in the pipe wall?* (TD.ICP.REPAIRINT.O) 192.485(a) (192.485(b))

10. Bottle Type and Pipe Type Holders *Does the process preclude storing gas containing more than 0.25 grain of hydrogen sulfide per 100 standard cubic feet (5.8 milligrams/m3) at standard conditions (4 parts per million) in pipe-type or bottle-type holders?* (TD.ICP.PIPEBOTTLE.P) 192.605(b)(2) (192.475(c);192.9(f)(1);192.452;192.453)

11. Bottle Type and Pipe Type Holders *Do records indicate gas containing more than 0.25 grain of hydrogen sulfide per 100 standard cubic feet (5.8 milligrams/m3) at standard conditions (4 parts per million) is being stored in pipe-type or bottle-type holders?* (TD.ICP.PIPEBOTTLE.R) 192.475(c)

12. Bottle Type and Pipe Type Holders *Do field observations indicate gas containing more than 0.25 grain of hydrogen sulfide per 100 standard cubic feet (5.8 milligrams/m3) at standard conditions (4 parts per million) is being stored in pipe-type or bottle-type holders?* (TD.ICP.PIPEBOTTLE.O) 192.475(c)

Time-Dependent Threats - Special Permits

1. Special Permit *Has a process been developed as necessary for complying with the special permit conditions?* (TD.SP.CONDITIONS.P) 190.341(d)(2)

2. Special Permit *Do records demonstrate compliance with all special permit or waiver requirements?* (TD.SP.CONDITIONS.R) 190.341(d)(2)

3. Special Permit *Are special permit requirements being complied with?* (TD.SP.CONDITIONS.O) 190.341(d)(2)

Time-Dependent Threats - Stress Corrosion Cracking

1. SCC on HCA Sections *Does the integrity management program have a process to identify and evaluate stress corrosion cracking threats to each covered pipeline segment?* (TD.SCC.SCCIM.P) 192.911(c) (192.917(a)(1);192.917(e))

2. SCC on HCA Sections *Do integrity management program records document results of studies to identify and evaluate stress corrosion cracking threats to each covered pipeline segment?* (TD.SCC.SCCIM.R) 192.947(d) (192.917(a)(1);192.917(e))

3. Remediation of SCC *Do records document that the operator has properly remediated any occurrences of SCC?* (TD.SCC.SCCREPAIR.R) 192.709(a) (192.703(b))

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 processes or operator approved contractor processes.* (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. 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))

2. 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)

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

4. 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))

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

6. 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

7. 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)

8. Training Requirements (Initial, Retraining, and Reevaluation) *Does the operator have records for initial qualification, re-training and re-evaluation of individuals performing covered tasks?* (TQ.OQ.TRAINING.R) 192.807(a) (192.807(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. 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))

11. Contractor Qualification Documentation Meets Operator Requirements *Does the OQ plan document that the operator has assured that the processes 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)

12. 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)

13. 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

14. 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)

15. 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

16. 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))

17. 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))

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

19. Management of Changes *Does the OQ program identify how changes to processes, 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)

20. 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)

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

Training and Qualification - Qualification of Personnel - Specific Requirements

1. Corrosion Control Personnel Qualification *Does the process require corrosion control processes 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))

4. Qualification of Personnel Tapping Pipelines under Pressure *Do records indicate the qualification of personnel performing hot taps?* (TQ.QU.HOTTAPQUAL.R) 192.627 (192.807(a);192.807(b))

5. Qualification of Personnel Tapping Pipelines under Pressure *Do personnel performing hot taps demonstrate adequate skills and knowledge?* (TQ.QU.HOTTAPQUAL.O) 192.627 (192.805(h))

6. Qualification of Personnel who Oversee and Perform Excavations and Backfilling Operations *Does the process require individuals who oversee and perform marking, trenching, and backfilling operations be qualified?* (TQ.QU.EXCAVATE.P) 192.805(b) (ADB-2006-01;192.801;192.328)

7. Qualification of Personnel who Oversee and Perform Excavations and Backfilling Operations *Do records indicate qualification of individuals who oversee marking, trenching, and backfilling operations?* (TQ.QU.EXCAVATE.R) 192.807(a) (192.807(b);ADB-2006-01;192.801;192.328)

8. Qualification of Personnel who Oversee and Perform Excavations and Backfilling Operations *Do individuals who oversee marking, trenching, and backfilling operations demonstrate adequate skills and knowledge?* (TQ.QU.EXCAVATE.O) 192.805(b) (192.805(h);ADB-2006-01;192.801(a);192.328(a);192.328(c))

Training and Qualification - Qualification of Personnel - Specific Requirements (IM)

1. Qualification of Personnel for the Integrity Management Program *Does the process require that operator/vendor personnel (including supervisors and persons responsible for preventive and mitigative measures), who review and evaluate results meet acceptable qualification standards?* (TQ.QUIM.IMREVIEWQUAL.P) 192.915(a) (192.915(b);192.915(c);192.935(b);192.493)

2. Qualification of Personnel for the Integrity Management Personnel *Do records indicate adequate qualification of integrity management personnel?* (TQ.QUIM.IMREVIEWQUAL.R) 192.947(e) (192.915(a);192.915(b);192.915(c);192.935(b)(1)(i);192.947(d);192.493)

3. Integrity Management Program Quality Control Plan *Does the process require personnel who execute IM program activities to be competent and qualified in accordance with the quality control plan in accordance with ASME B31.8S-2004, Section 12.2(b)(4)?* (TQ.QUIM.IMQC.P) 192.805(b) (ASME B31.8S-2004, Section 12.2(b)(4);192.935(b)(1)(i);192.907(b);192.911(l))

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

1. Qualification of Welding Inspectors *Does the process require welding inspection personnel to be adequately trained and qualified?* (TQ.QUOMCONST.INSPECTOR.P) 192.241(a) (192.241(c);192.805(b);192.328(a);192.328(b))

2. Qualification of Welding Inspectors *Do records indicate adequate qualification documentation for personnel who conduct welding inspections?* (TQ.QUOMCONST.INSPECTOR.R) 192.241(a) (192.241(c);192.807(a);192.807(b))

3. Qualification of Welding Inspectors *Does the welding inspector demonstrate adequate skills and knowledge?* (TQ.QUOMCONST.INSPECTOR.O) 192.241(a) (192.241(c))

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))

5. Qualification of Welders *Do records indicate that welders are adequately qualified?* (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))

6. Qualification of Welders *Does the process require welders to be qualified in accordance with API 1104-21st Edition or the ASME Boiler & Pressure Vessel Code-2007?* (TQ.QUOMCONST.WELDER.P) 192.227(a) (192.225(a);192.225(b);192.328(a);192.328(b);192.805(b))

7. 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))

8. Qualification of Welders *Do welders demonstrate adequate skills and knowledge?* (TQ.QUOMCONST.WELDER.O) 192.227(a) (192.227(b);192.229(a);192.229(b);192.229(c);192.229(d);192.803;192.328(a);192.328(b))

9. Qualification of Nondestructive Testing Personnel *Does the process require nondestructive testing of welds to be performed by personnel who are trained and qualified in the established procedures and with the testing equipment employed?* (TQ.QUOMCONST.NDT.P) 192.243(b)(2) (192.803;192.805(b);192.805(h);192.328(a);192.328(b))

10. Qualification of Nondestructive Testing Personnel *Do nondestructive testing personnel demonstrate adequate skills and knowledge?* (TQ.QUOMCONST.NDT.O) 192.243(b)(2) (192.803;192.328(a);192.328(b))

11. Qualification of Personnel Making Joints in Plastic Pipelines *Does the process require personnel making joints in plastic pipelines be qualified?* (TQ.QUOMCONST.PLASTIC.P) 192.285(a) (192.285(d);192.805(b);192.285(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

12. Qualification of Personnel Inspecting Joints in Plastic Pipelines *Does the process require that persons who inspect joints in plastic pipes be qualified?* (TQ.QUOMCONST.PLASTICINSPECT.P) 192.287 (192.805(b))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

13. Qualification of Personnel Making Joints in Plastic Pipelines *Do records indicate adequate qualification of personnel making/inspecting joints in plastic pipelines?* (TQ.QUOMCONST.PLASTIC.R) 192.285(a) (192.285(d);192.287;192.807(a);192.807(b);192.285(c))
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

14. Qualification of Personnel Making Joints in Plastic Pipelines *Do personnel making/inspecting joints in plastic pipelines demonstrate adequate skills and knowledge?* (TQ.QUOMCONST.PLASTIC.O) 192.285(a) (192.287;192.803)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Training and Qualification - Training of Personnel

1. Emergency Response Training *Does the process require a continuing training program to be in place to effectively instruct emergency response personnel?* (TQ.TR.TRAINING.P) 192.615(b)(2) (192.805(b))

2. Emergency Response Training *Is training for emergency response personnel documented?* (TQ.TR.TRAINING.R) 192.615(b)(2) (192.807(a);192.807(b))

3. Emergency Response Training *Do emergency response personnel demonstrate adequate skills and knowledge?* (TQ.TR.TRAINING.O) 192.615(b)(2) (192.805(b))

4. Emergency Response Training Performance Review *Does the process require review of emergency response personnel performance?* (TQ.TR.TRAININGREVIEW.P) 192.615(b)(3)

Underground Natural Gas Storage - Rule and FAQs

1. Risk Prioritization Based on Safety Risk Analysis *Are risk assessments for each storage facility and related wells prioritized based on the results of the safety risk analyses?* (UNGS.RULE.RISKPRIORITIES.P) 192.12(d)(2) (192.12(b)(2);192.12(b)(1);192.12(a)(3);192.12(a)(2);192.12(a)(1))

2. Addressing Safety Concerns Based on Safety Risk Analysis Ranking *Does the process require that safety concerns are identified and addressed based on the ranking of the safety risk analyses?* (UNGS.RULE.RISKRANKING.P) 192.12(d)(2) (192.12(b)(2);192.12(b)(1);192.12(a)(3);192.12(a)(2);192.12(a)(1))

Underground Natural Gas Storage - Reporting

1. Definition of Incident *How does the operator define an incident?* (UNGS.RPT.INCIDENTDEFN.P) 191.15(c) (191.3)

2. Incident Reporting - Immediate *Is there a process to immediately report incidents to the National Response Center?* (UNGS.RPT.IMMEDREPORT.P) 191.5(a) (191.5(b);191.3)

3. Incident Reporting - Immediate *Do records indicate immediate notifications of incidents were made in accordance with 191.5?* (UNGS.RPT.IMMEDREPORT.R) 191.5(a) (191.5(b);191.3)

4. Incident Reporting - Procedures *What are the procedures in place for reporting a storage facility incident soon as practicable but no later than 30 days after discovery of a reportable incident?* (UNGS.RPT.INCIDENTREPORT.P) 191.15(c) (191.3)

5. Incident Reporting - Procedures *Do records indicate reportable incidents were identified and reports were submitted to DOT on Form 7100.2 within the required time frame?* (UNGS.RPT.INCIDENTREPORT.R) 191.15(c) (191.3)

6. Incident Reporting - Supplemental *What are the procedures in place for preparing and filing supplemental incident reports?* (UNGS.RPT.INCIDENTREPORTSUPP.P) 191.15(d) (191.15(c))

7. Incident Reporting - Supplemental *Do records indicate accurate supplemental incident reports were filed and within the required time frame?* (UNGS.RPT.INCIDENTREPORTSUPP.R) 191.15(d) (191.15(c))

8. Safety-Related Conditions Reporting (SRCR) *Are procedures in place to report a safety-related condition as required by 191.23?* (UNGS.RPT.SRCR.P) 191.23(a) (191.23(b);191.25(a);191.25(b);191.25(c))

9. Safety-Related Conditions Reporting (SRCR) *Have any Safety-Related Condition Reports been submitted to PHMSA/OPS?* (UNGS.RPT.SRCR.R) 191.23(a) (191.23(b);191.25(a);191.25(b);191.25(c))

10. Safety-Related Conditions Reporting (SRCR) - Bridge Plugs *Have any wells been isolated using a bridge plug?* (UNGS.RPT.SRCRBRIDGEPLUG.R) 191.23(a) (191.23(b);191.25(a))

11. Safety-Related Conditions Reporting (SRCR) - Bridge Plugs *Do field observations confirm Safety-Related Conditions Reporting (SRCR) requirements were met with regards to the use of bridge plugs?* (UNGS.RPT.SRCRBRIDGEPLUG.O) 191.23(a) (191.25(a);191.25(c))

12. Unique Wells Reporting *If applicable, are storage facility wells that are somehow "unique" (i.e., withdrawal only, shallow capture wells or recirculation wells) included in the Annual Report and also included in the Risk Management and Integrity Management programs?* (UNGS.RPT.UNIQUEWELLS.R) 191.17(c) (192.12(b);192.12(a);API RP1171, Section 8.2;API RP1171, Section 9.3;API RP1170, Section 10.3)

13. Unique Wells Reporting *If applicable, do field observations confirm that "unique" wells were properly included in the Annual Report and are also included in the Risk Management and Integrity Management programs?* (UNGS.RPT.UNIQUEWELLS.O) 191.17(c) (192.12(b);192.12(a);API RP1170, Section 10.3;API RP1171, Section 8.2;API RP1171, Section 9.3)

14. National Registry - OPID *Does the process require the obtaining, and appropriate control, of Operator Identification Numbers (OPIDs) for the storage field?* (UNGS.RPT.OPID.P) 191.22(a) (191.22(b))

15. National Registry - Notification of Changes *What is the process in place to notify PHMSA of any changes that fall under 191.22(c) (i.e., construction, conversions, change in entity, or acquisition or divestiture)?* (UNGS.RPT.REGISTRYCHGSNOTIF.P) 191.22(c)

16. National Registry - Notification of Changes *Were notifications for changes to the storage facility submitted per §191.22(c) and with accurate information?* (UNGS.RPT.REGISTRYCHGSNOTIF.R) 191.22(c)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

17. Annual Report *Does the process require submittal of an annual report (Form 7100.4-1) by March 15 for the preceding calendar year?* (UNGS.RPT.ANNUALREPORT.P) 191.17(c)

18. Annual Report *Were annual reports submitted according to procedure and with accurate information?* (UNGS.RPT.ANNUALREPORT.R) 191.17(c)

Underground Natural Gas Storage - Reservoirs - Integrity in Reservoir Design

1. Geological Characterization - Evaluation *Is there a process for preliminary evaluation, characterization, and mapping of the geologic properties of the reservoir that is intended for storing gas?* (UNGS.RESDES.GEOLOGICEVAL.P) 192.12(b)(1) (API RP1171(1st Edition), Section 5.2.2)

2. Geological Characterization - Evaluation *Do records demonstrate that the intended reservoir was evaluated, characterized and mapped for properties intended for gas storage?* (UNGS.RESDES.GEOLOGICEVAL.R) 192.12(b)(1) (API RP1171(1st Edition), Section 5.2.2)

3. Geological Characterization - Buffer Zone *Does the process use the geologic characterization to establish the initial vertical and areal buffer zone to protect the integrity of the natural gas storage operation?* (UNGS.RESDES.GEOLOGICBUFFER.P) 192.12(b)(1) (API RP1171(1st Edition), Section 5.2.2)

4. Geological Characterization - Buffer Zone *Do records demonstrate that the initial vertical and areal buffer zones were established based on the geological characterization?* (UNGS.RESDES.GEOLOGICBUFFER.R) 192.12(b)(1) (API RP1171(1st Edition), Section 5.2.2)

5. Engineering Characterization - Design for Integrity *Does the process require, at a minimum, evaluation of the casing materials, casing configuration, casing set depths, cement materials, and placement depths for mechanical integrity of all existing and abandoned wells that penetrate the formations being characterized for storage purposes?* (UNGS.RESDES.ENGRCHCTR1.P) 192.12(b)(1) (API RP1171(1st Edition), Section 5.3.2)

6. Engineering Characterization - Design for Integrity *Do records demonstrate that all existing and abandoned wells, that penetrate the characterized formation for storage, have been evaluated for casing materials, casing configuration, casing set depths, cement materials, and placement depths for functional integrity?* (UNGS.RESDES.ENGRCHCTR1.R) 192.12(b)(1) (API RP1171(1st Edition), Section 5.3.2)

7. Engineering Characterization - Corrosive Potential *Does the process account for the corrosive potential of the pore fluids if the storage reservoir was used for gas-liquid or oil production?* (UNGS.RESDES.ENGRCHCTR2.P) 192.12(b)(1) (API RP1171(1st Edition), Section 5.3.2)

8. Engineering Characterization - Corrosive Potential *Do records demonstrate that pore fluids have been evaluated for corrosive potential?* (UNGS.RESDES.ENGRCHCTR2.R) 192.12(b)(1) (API RP1171(1st Edition), Section 5.3.2)

9. Engineering Characterization - Corrosion Management *Does the process incorporate the corrosive potential of pore fluids, if present, into the design and operation strategies of the storage reservoir ?* (UNGS.RESDES.ENGRCHCTR3.P) 192.12(b)(1) (API RP1171(1st Edition), Section 5.3.2)

10. Engineering Characterization - Corrosion Management *If there is a corrosive potential from pore fluids, do records demonstrate that the design and operation accounts for the corrosive potential?* (UNGS.RESDES.ENGRCHCTR3.R) 192.12(b)(1) (API RP1171(1st Edition), Section 5.3.2)

11. Engineering Characterization - Fluids Issues *Does the process require identification and mitigation of potential mineralogical and fluid compatibility issues?* (UNGS.RESDES.ENGRCHCTR4.P) 192.12(b)(1) (API RP1171(1st Edition), Section 5.3.2)

12. Engineering Characterization - Fluids Issues *Do records demonstrate that mineralogical and fluid compatibility issues are identified and mitigated?* (UNGS.RESDES.ENGRCHCTR4.R) 192.12(b)(1) (API RP1171(1st Edition), Section 5.3.2)

13. Engineering Characterization - Reservoir Pressures *Does the characterization process require the identification of initial and current reservoir pressures based on known data ?* (UNGS.RESDES.ENGRCHCTR5.P) 192.12(b)(1) (API RP1171(1st Edition), Section 5.3.2)

14. Engineering Characterization - Reservoir Pressures *Do records demonstrate that the initial and current pressures, for the target reservoir, are identified based on known data?* (UNGS.RESDES.ENGRCHCTR5.R) 192.12(b)(1) (API RP1171(1st Edition), Section 5.3.2)

15. Engineering Characterization - All *Are field observations consistent with the engineering characterization of the reservoir?* (UNGS.RESDES.ENGRCHCTRALL.O) 192.12(b)(1) (API RP1171(1st Edition), Section 5.3.2)

16. Reservoir Containment Assurance Analysis *Does the process require that data be acquired to manage uncertainties that were identified during the geologic and engineering characterization process?* (UNGS.RESDES.CONTASSURANCE.P) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.1)

17. Reservoir Containment Assurance Analysis *Do records indicate that data was acquired to manage uncertainties identified during the characterization process?* (UNGS.RESDES.CONTASSURANCE.R) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.1)

18. Containment Capability of Reservoir *Does the process assess the containment capability of the reservoir and the wells for the designed storage operation volumes, pressures, and rates?* (UNGS.RESDES.CONTCAPABILITY.P) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.1)

19. Containment Capability of Reservoir *Do records demonstrate that the containment capability of the reservoir and wells was assessed for the designed storage operation volumes, pressures, and rates?* (UNGS.RESDES.CONTCAPABILITY.R) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.1)

20. Containment Assurance - Reservoir Connectivity *Does the process address gas migration control and containment when porous zones are connected with the target reservoir?* (UNGS.RESDES.GASMIGRATION.P) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.2)

21. Containment Assurance - Reservoir Connectivity *Do records demonstrate that gas migration control and containment were addressed in the design, if the target reservoir is connected to another porous zone?* (UNGS.RESDES.GASMIGRATION.R) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.2)

22. Maximum Reservoir Pressure *Does the process provide a design basis for the maximum pressure of the storage reservoir?* (UNGS.RESDES.MAXRESPRESS.P) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.3)

23. Maximum Reservoir Pressure *Do records demonstrate that the design basis for the maximum reservoir pressure was documented?* (UNGS.RESDES.MAXRESPRESS.R) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.3)

24. Maximum Pressures - Wells, Piping, and Other *Does the process provide a design basis for the maximum pressure of the wells, wellheads, piping, or associated storage facilities?* (UNGS.RESDES.MAXPRESSOTHER.P) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.3)

25. Maximum Pressures - Wells, Piping, and Other *Do records demonstrate that the pressure limits of the wells, wellheads, piping, and associated storage facilities are not exceeded?* (UNGS.RESDES.MAXPRESSOTHER.R) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.3)

26. Maximum Pressures - Reservoir, Wells, Piping, and Other *Do pressure reading observations reflect that actual pressures are within the established set limits?* (UNGS.RESDES.MAXPRESSALL.O) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.3)

27. Well Containment Assurance Analysis *Does the process require evaluation of all wells that penetrate the storage zone for containment assurance?* (UNGS.RESDES.WELLCONTASSURANCE.P) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.4)

28. Well Containment Assurance Analysis *Do records demonstrate that all wells that penetrate the storage zone have been evaluated for containment assurance?* (UNGS.RESDES.WELLCONTASSURANCE.R) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.4)

29. Supplemental Evaluation of Reservoirs Developed within Aquifers *For storage reservoirs developed within aquifers, does the process require supplemental reservoir geological and engineering evaluation for the delineation of the storage reservoir?* (UNGS.RESDES.AQUIFEREVAL01.P) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.5)

30. Supplemental Evaluation of Reservoirs Developed within Aquifers *Do records demonstrate that supplemental aquifer reservoir geological and engineering evaluations were performed?* (UNGS.RESDES.AQUIFEREVAL01.R) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.5)

31. Supplemental Evaluation of Reservoirs Developed within Aquifers *For storage reservoirs developed within aquifers, does the process require data gathering and characterization of the reservoir, caprock, basal rock, and lateral seals through drilling, logging and coring?* (UNGS.RESDES.AQUIFEREVAL02.P) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.5)

32. Supplemental Evaluation of Reservoirs Developed within Aquifers *Do records demonstrate that aquifer containment assurance data was acquired through drilling, logging, and coring of the aquifer?* (UNGS.RESDES.AQUIFEREVAL02.R) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.5)

33. Supplemental Evaluation of Reservoirs Developed within Aquifers *For storage reservoirs developed within aquifers, does the process require that site specific geophysical delineation be performed?* (UNGS.RESDES.AQUIFEREVAL03.P) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.5)

34. Supplemental Evaluation of Reservoirs Developed within Aquifers *Do records demonstrate that site specific geophysical delineation was conducted for the aquifer storage?* (UNGS.RESDES.AQUIFEREVAL03.R) 192.12(b)(1) (API RP1171,(1st Edition) Section 5.4.5)

35. Supplemental Evaluation of Reservoirs Developed within Aquifers *For storage reservoirs developed within aquifers, is there a process requiring that water pump testing and water level observation be performed to characterize the storage reservoir dimensions, gas capacity, flow performance, and caprock integrity?* (UNGS.RESDES.AQUIFEREVAL04.P) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.5)

36. Supplemental Evaluation of Reservoirs Developed within Aquifers *Do records demonstrate that a water pump test and water level observation were performed to characterize the storage reservoir within an aquifer?* (UNGS.RESDES.AQUIFEREVAL04.R) 192.12(b)(1) (API RP1171(1st Edition), Section 5.4.5)

37. Storage Design Recordkeeping *Does the process require design records to be maintained for the following activities: geologic records; engineering records; land and mineral ownership, rights, and control; facility integrity plan; well drilling, completion, workover and plugging records; regulatory records and permits?* (UNGS.RESDES.DESRECORDS.P) 192.12(b)(1) (API RP1171(1st Edition), Section 5.6)

38. Storage Design Recordkeeping *Do records demonstrate that the required design records have been maintained?* (UNGS.RESDES.DESRECORDS.R) 192.12(b)(1) (API RP1171(1st Edition), Section 5.6)

39. Storage Design Recordkeeping - Life of Facility *Does the process require that accurate and comprehensive records of natural gas storage design activities be maintained for the life of the facility?* (UNGS.RESDES.DESRECORDSLOF.P) 192.12(b)(1) (API RP1171(1st Edition), Section 5.6)

40. Storage Design Recordkeeping - Life of Facility *Are design records accurate and comprehensive and maintained for the lifetime of the facility?* (UNGS.RESDES.DESRECORDSLOF.R) 192.12(b)(1) (API RP1171(1st Edition), Section 5.6)

Underground Natural Gas Storage - Reservoirs - Integrity in Well Design & Construction

1. National Registry - Notification of Changes *Were notifications for changes to the storage facility submitted per §191.22(c) and with accurate information?* (UNGS.RPT.REGISTRYCHGSNOTIF.R) 191.22(c)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

2. Design of Wellhead Equipment *Does the process ensure that new and replaced wellheads allow for full diameter entry to the wellbore?* (UNGS.RESWELLDES.WELLHEADEQUIP.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.2.2;API RP1171(1st Edition), Section 11.2.1)

3. Design of Wellhead Equipment *Do records demonstrate that new and replaced wellheads allow for full diameter entry to the wellbore?* (UNGS.RESWELLDES.WELLHEADEQUIP.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.2.2)

4. Design of Wellhead Equipment - Restricted Diameter *Does the process require review of well records to determine if limited wellhead entry is sufficient for planned activities?* (UNGS.RESWELLDES.WELLHEADENTRY.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.2.2;API RP1171(1st Edition), Section 11.2.1)

5. Design of Wellhead Equipment - Restricted Diameter *Do records indicate operator reviewed the well records to determine if limited (less-than-full-diameter) wellhead entry is sufficient to allow for the planned activities?* (UNGS.RESWELLDES.WELLHEADENTRY.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.2.2)

6. Design of Wellhead Equipment - Isolation Valve *Does the process require that wells be equipped with valves that provide isolation of the well from the pipeline system and for entry into the wellbore?* (UNGS.RESWELLDES.WELLHEADISOLVLV.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.2.2;API RP1171(1st Edition), Section 11.2.1)

7. Design of Wellhead Equipment - Isolation Valve *Do records demonstrate that wells are equipped with valves that provide isolation from the pipeline and entry into the wellbore?* (UNGS.RESWELLDES.WELLHEADISOLVLV.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.2.2)

8. Design of Wellhead Equipment - Pressure Rating *Does the process ensure that wellhead equipment is pressure rated to exceed the maximum anticipated operating pressure?* (UNGS.RESWELLDES.WELLHEADRATING.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.2.3;API RP1171(1st Edition), Section 11.2.1)

9. Design of Wellhead Equipment - Pressure Rating *Do records demonstrate that wellhead equipment is pressure rated to exceed the maximum anticipated operating pressure?* (UNGS.RESWELLDES.WELLHEADRATING.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.2.3)

10. Design of Wellhead Equipment - Pressure Rating *Do pressure ratings of wellhead equipment reflect the documented ratings?* (UNGS.RESWELLDES.WELLHEADRATING.O) 192.12(b)(1) (API RP1171(1st Edition), Section 5.5.1)

11. Design of Wellhead Equipment - ESD Valve Review *Does the process require evaluation of the need of an emergency shut down (ESD) valve by reviewing the requirements of API RP 1171(1st Edition) section 6.2.5?* (UNGS.RESWELLDES.WELLHEADESD.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.2.5;API RP1171(1st Edition), Section 11.2.1)

12. Design of Wellhead Equipment - ESD Valve Review *Do records demonstrate that the need for emergency shutdown valves were reviewed based on the requirements of API RP 1171(1st Edition) Section 6.2.5?* (UNGS.RESWELLDES.WELLHEADESD.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.2.5)

13. Well Casing - Completion *Does the process require that well designs are completed with two or more strings of casing to protect ground water, control wellbore conditions, isolate the storage gas, and inject storage gas from the pipeline into and withdraw out of the storage reservoir?* (UNGS.RESWELLDES.WELLCOMPLETION.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.1;API RP1171(1st Edition), Section 11.2.1)

14. Well Casing - Completion *Do well records indicate that storage wells are completed with two or more strings of casing to protect ground water, control wellbore conditions, isolate the storage gas, and inject storage gas from the pipeline into and withdraw out of the storage reservoir?* (UNGS.RESWELLDES.WELLCOMPLETION.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.1)

15. Well Casing - Design per API 5C3 *Does the process require the use API 5C3 for casing designs?* (UNGS.RESWELLDES.WELLCASINGDES.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.1;API RP1171(1st Edition), Section 11.2.1)

16. Well Casing - Design per API 5C3 *Do well records indicate that API 5C3 was used for the design of the casings?* (UNGS.RESWELLDES.WELLCASINGDES.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.1)

17. Surface Casing Design *Does the design process require that the surface casing be of sufficient size, grade, and depth to support drilling operations and to protect groundwater?* (UNGS.RESWELLDES.SURFCASINGDES.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.3;API RP1171(1st Edition), Section 11.2.1)

18. Surface Casing Design *Do records indicate that the surface casing is of sufficient size, grade, and depth to support drilling operations and to protect groundwater?* (UNGS.RESWELLDES.SURFCASINGDES.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.3)

19. Production Casing Design *Does the design process require that the production casing be of adequate size and strength to maintain the well integrity?* (UNGS.RESWELLDES.PRODCASINGDES1.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.5;API RP1171(1st Edition), Section 11.2.1)

20. Production Casing Design *Do records indicate that the production casing is of sufficient size, strength, and depth to maintain the well integrity and be compatible with fluid chemical composition?* (UNGS.RESWELLDES.PRODCASINGDES1.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.5)

21. Production Casing Design - Fluids Compatibility *Does the design process require that the production casing be compatible with fluid chemical composition?* (UNGS.RESWELLDES.PRODCASINGDES2.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.5;API RP1171(1st Edition), Section 11.2.1)

22. Production Casing Design - Fluids Compatibility *Do records indicate that the production casing is compatible with fluid chemical composition?* (UNGS.RESWELLDES.PRODCASINGDES2.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.5)

23. Production Casing Design - Perforations *Does the process require that the production casing be free of open perforations or holes other than the planned completion interval(s)?* (UNGS.RESWELLDES.PRODCASINGDES3.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.5;API RP1171(1st Edition), Section 11.2.1)

24. Production Casing Design - Perforations *Do records indicate that the production casing is free of open perforations or holes other than the planned completion interval(s)?* (UNGS.RESWELLDES.PRODCASINGDES3.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.5)

25. Production Casing Design - Perforations Sealed *Does the process require that perforations created in production casing for investigative or remedial work be sealed to establish hydraulic isolation?* (UNGS.RESWELLDES.PRODCASINGDES4.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.5;API RP1171(1st Edition), Section 11.2.1)

26. Production Casing Design - Perforations Sealed *Do records indicate that perforations created in production casing for investigative or remedial work were sealed to establish hydraulic isolation?* (UNGS.RESWELLDES.PRODCASINGDES4.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.5)

27. Casing Handling and Transport *Does the process ensure that the casing is stored, transported, lifted, and installed according to manufacturer specifications and API 5C1?* (UNGS.RESWELLDES.CASINGHANDLING.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.6;API RP1171(1st Edition), Section 11.2.1)

28. Casing Handling and Transport *Do records demonstrate that the casing was stored, transported, lifted and installed as specified by the manufacturer and API 5C1?* (UNGS.RESWELLDES.CASINGHANDLING.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.6)

29. Casing Connections - Design *Does the process require that casing connections be designed to accommodate loads associated with placement?* (UNGS.RESWELLDES.CASINGCONN1.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.7;API RP1171(1st Edition), Section 11.2.1)

30. Casing Connections - Design *Do records demonstrate that the casing connections can withstand loads associated with placement of the casing?* (UNGS.RESWELLDES.CASINGCONN1.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.7)

31. Casing Connections - Gas Seal *Does the process ensure that the casing connections can maintain a gas seal under anticipated wellbore flow conditions and subsequent work?* (UNGS.RESWELLDES.CASINGCONN2.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.7;API RP1171(1st Edition), Section 11.2.1)

32. Casing Connections - Gas Seal *Do records indicate that casing connections have the ability to maintain a gas seal under well flow conditions and subsequent work?* (UNGS.RESWELLDES.CASINGCONN2.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.7)

33. Casing Connections - Specifications *Does the process ensure that casing connections are made up according to manufacturer specifications or in accordance with API 5CT?* (UNGS.RESWELLDES.CASINGCONN3.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.7;API RP1171(1st Edition), Section 11.2.1)

34. Casing Connections - Specifications *Do records demonstrate that the casing connections are made up according to manufacturer specifications or in accordance with API 5CT?* (UNGS.RESWELLDES.CASINGCONN3.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.7)

35. Casing Connections - Thread Compound *Does the process ensure that casing thread compound or lubricant is compatible with the expected wellbore environment?* (UNGS.RESWELLDES.CASINGCONN4.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.7;API RP1171(1st Edition), Section 11.2.1)

36. Casing Connections - Thread Compound *Do records demonstrate that the casing thread compound or lubricant is compatible with the expected wellbore environment?* (UNGS.RESWELLDES.CASINGCONN4.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.7)

37. Casing Connections - Lubricant Specs *Does the process ensure that casing thread compound or lubricant is consistent with the manufacturer's recommended lubricant or API 5A3?* (UNGS.RESWELLDES.CASINGCONN5.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.7;API RP1171(1st Edition), Section 11.2.1)

38. Casing Connections - Lubricant Specs *Do records demonstrate that the casing thread compound or lubricant is consistent with the manufacturer's recommended lubricant or API 5A3?* (UNGS.RESWELLDES.CASINGCONN5.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.3.7)

39. Casing Cement *Does the process ensure that the cement slurry or slurry combination is designed for hydrostatic weight control and strength requirements for the storage reservoir?* (UNGS.RESWELLDES.CASINGCEMENT.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.4.3;API RP1171(1st Edition), Section 11.2.1)

40. Casing Cement *Do records demonstrate that the cement slurry or slurry combination used for the storage reservoir are/were designed for hydrostatic weight control and strength requirements?* (UNGS.RESWELLDES.CASINGCEMENT.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.4.3)

41. Cement Slurry Design *Does the process ensure that the fracture gradient of the storage zone is not exceeded during cement pumping operations?* (UNGS.RESWELLDES.CEMENTSLURRY.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.4.4)

42. Cement Slurry Design *Do records demonstrate that the storage zone fracture gradient was not exceeded during cement pumping operations?* (UNGS.RESWELLDES.CEMENTSLURRY.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.4.4)

43. Cement Pumping Design *Does the process require that competent uncontaminated cement be placed around the casing shoe and around the circumference of the casing?* (UNGS.RESWELLDES.CEMENTPUMPING.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.4.5;API RP1171(1st Edition), Section 11.2.1)

44. Cement Pumping Design *Do records indicate that competent, uncontaminated cement is placed at casing shoes and around the circumference of the casing?* (UNGS.RESWELLDES.CEMENTPUMPING.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.4.5)

45. Cement Bond Evaluation *Is there a process for evaluating the cement placement and bond quality through cement bond log or other means that can demonstrate the sealing potential of the cement?* (UNGS.RESWELLDES.CEMENTBOND.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.4.6;API RP1171(1st Edition), Section 11.2.1)

46. Cement Bond Evaluation *Do records demonstrate that the bond or seal quality and cement placement were evaluated by cement bond log or other means and demonstrated the bond or seal quality and placement of the cement?* (UNGS.RESWELLDES.CEMENTBOND.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.4.6)

47. Well Completion and Stimulation *Does the process require that well completion and stimulation operations are done to verify that pressure, flow rates, and other mechanical conditions have no adverse impact on the storage reservoir, caprock, or the mechanical integrity of the well?* (UNGS.RESWELLDES.COMPLETION.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.5.1;API RP1171(1st Edition), Section 11.2.1)

48. Well Completion and Stimulation *Do records demonstrate that the pressure, flow rates, and other mechanical conditions have been verified to indicate that there is no adverse impact on the storage reservoir, caprock, or the mechanical integrity of the well?* (UNGS.RESWELLDES.COMPLETION.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.5.1)

49. Fracture Stimulation *Does the process for fracture treatment, if used, ensure that the fracture height or length does not compromise the integrity of the storage reservoir?* (UNGS.RESWELLDES.STIMULATION.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.5.3;API RP1171(1st Edition), Section 11.2.1)

50. Fracture Stimulation *Do records demonstrate that the integrity of the storage reservoir has not been compromised by fracture treatment?* (UNGS.RESWELLDES.STIMULATION.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.5.3)

51. Well Remediation *For wells identified as having compromised mechanical integrity, does the process require evaluation and responsive action within a timeframe corresponding to the severity of the integrity risk?* (UNGS.RESWELLDES.REMEDIATION.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.6.1;API RP1171(1st Edition), Section 11.2.1)

52. Well Remediation *For wells identified as having compromised mechanical integrity, do records demonstrate that they were evaluated and remediated within a time frame corresponding to the severity of the integrity risk?* (UNGS.RESWELLDES.REMEDIATION.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.6.1)

53. Well Closure (Plugging and Abandonment) *Does the process for abandonment of a well require a design for long-term isolation of the storage zone and any other penetrated zones from the surface?* (UNGS.RESWELLDES.CLOSURE.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.1;API RP1171(1st Edition), Section 11.2.1)

54. Well Closure (Plugging and Abandonment) *Do the records demonstrate that well abandonment for long term isolation of the storage zone and any other penetrated zone from the surface was achieved?* (UNGS.RESWELLDES.CLOSURE.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.1)

55. Well Closure (Plugging and Abandonment) Records *Does the process define a retention period for abandonment records?* (UNGS.RESWELLDES.CLOSUREREC.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.1;API RP1171(1st Edition), Section 11.2.1)

56. Well Closure (Plugging and Abandonment) Records *Do records demonstrate that the retention period for abandonment records was followed?* (UNGS.RESWELLDES.CLOSUREREC.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.1)

57. Well Closure (Plugging and Abandonment) Observations *Do field observations indicate that the operator followed the outlined abandonment process?* (UNGS.RESWELLDES.CLOSUREALL.O) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.1)

58. Storage Zone Isolation - Plugs *Does the abandonment process require use of cement plugs and/or mechanical plugs to isolate the storage zone from fluid migration?* (UNGS.RESWELLDES.PLUGS.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.2;API RP1171(1st Edition), Section 11.2.1)

59. Storage Zone Isolation - Plugs *Do records demonstrate which type of abandonment plug was used as defined by API 1171, Section 6.7.2?* (UNGS.RESWELLDES.PLUGS.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.2)

60. Storage Zone Isolation - Determination *Does the process ensure that the location of groundwater and hydrocarbon bearing zones (in addition to the storage zone/s) were determined to prevent communication between any of those zones during and after plugging of the wells?* (UNGS.RESWELLDES.ISOLATION.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.2;API RP1171(1st Edition), Section 11.2.1)

61. Storage Zone Isolation - Determination *Do records indicate the depths of the groundwater and hydrocarbon zones penetrated by the well to be abandoned?* (UNGS.RESWELLDES.ISOLATION.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.2)

62. Storage Zone Isolation - Cement Evaluation *Does the process require that the casing and cement across the water and hydrocarbon zones be properly evaluated before abandoning of the well?* (UNGS.RESWELLDES.CEMENTEVAL.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.2;API RP1171(1st Edition), Section 11.2.1)

63. Storage Zone Isolation - Cement Evaluation *Do records demonstrate that casing and cement evaluations were conducted through zones of importance prior to abandoning?* (UNGS.RESWELLDES.CEMENTEVAL.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.2)

64. Storage Zone Isolation - Cement Plug Depth *Does the process require verification that the abandonment plug is set at the proper depth and has reached sufficient compressive strength?* (UNGS.RESWELLDES.CEMENTPLUGDEPTH.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.2;API RP1171(1st Edition), Section 11.2.1)

65. Storage Zone Isolation - Cement Plug Depth *Do the records indicate that abandonment plug depths were achieved and verified?* (UNGS.RESWELLDES.CEMENTPLUGDEPTH.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.2)

66. Storage Zone Isolation - Cement Plug Properties *Do the records indicate that abandonment plug properties and pressure records of plug testing are maintained?* (UNGS.RESWELLDES.CEMENTPLUGPROP.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.2)

67. Storage Zone Isolation - Plug Deviations *Does the process require that any deviations that threatened the isolation objectives of the abandonment plug are to be corrected?* (UNGS.RESWELLDES.DEVIATIONS.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.2;API RP1171(1st Edition), Section 11.2.1)

68. Storage Zone Isolation - Plug Deviations *Do the records indicate that deviations that threatened the isolation objectives of the abandonment plug were corrected?* (UNGS.RESWELLDES.DEVIATIONS.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.2)

69. Abandoned Well Maintenance - Failed Plug Repair *Does the process include the repair of failed plugs in an abandoned well?* (UNGS.RESWELLDES.PLUGREPAIR.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.3;API RP1171(1st Edition), Section 11.2.1)

70. Abandoned Well Maintenance - Failed Plug Repair *Do records demonstrate that failed abandonment plugs were repaired according to procedure?* (UNGS.RESWELLDES.PLUGREPAIR.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.3)

71. Abandoned Well Maintenance - Well Leak Repair *Does the abandonment process include the repair of a well having any leak indication that may suggest a lack of isolation of the storage reservoir?* (UNGS.RESWELLDES.WELLREPAIR.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.3;API RP1171(1st Edition), Section 11.2.1)

72. Abandoned Well Maintenance - Well Leak Repair *Do records demonstrate that abandoned wells having an indication of leaks were repaired according to procedure?* (UNGS.RESWELLDES.WELLREPAIR.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.3)

73. Abandoned Well Maintenance - Surface Plug *Does the abandonment process require the installation of a surface plug and cap?* (UNGS.RESWELLDES.SURFACEPLUG.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.3;API RP1171(1st Edition), Section 11.2.1)

74. Abandoned Well Maintenance - Surface Plug *Do records indicate that surface plugs and caps were installed in abandoned wells?* (UNGS.RESWELLDES.SURFACEPLUG.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.3)

75. Abandoned Well Maintenance - Cap Identification *Does the process require the abandoned well surface cap to include the API number or another form of identification?* (UNGS.RESWELLDES.CAPIDENTIF.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.3;API RP1171(1st Edition), Section 11.2.1)

76. Abandoned Well Maintenance - Cap Identification *Do field observations indicate evidence of an abandoned well surface cap, along with its identification, installed on each abandoned well?* (UNGS.RESWELLDES.CAPIDENTIF.O) 192.12(b)(1) (API RP1171(1st Edition), Section 6.7.3)

77. EHS - People & Environmental Safeguards *Does the design and construction process incorporate safeguards to protect the environment and the safety and health of workers and the public into well design and during well work activities?* (UNGS.RESWELLDES.EHSPEOPLEENV.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.8.1;API RP1171(1st Edition), Section 5.5.1;API RP1171(1st Edition), Section 11.2.1)

78. EHS - People & Environmental Safeguards *Do records indicate that safeguards to the environment, safety, and health of workers and the public were used in well design and construction, and during well work activities?* (UNGS.RESWELLDES.EHSPEOPLEENV.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.8.1;API RP1171(1st Edition), Section 5.5.1)

79. EHS - Water & Groundwater Safeguards *Does the design and construction process include protections for surface water and ground water from drilling and well work operations?* (UNGS.RESWELLDES.EHSWATER.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.8.1;API RP1171(1st Edition), Section 5.5.1;API RP1171(1st Edition), Section 11.2.1)

80. EHS - Water & Groundwater Safeguards *Do records demonstrate that the surface water and ground water safeguards were used in well design and during drilling and well work operations?* (UNGS.RESWELLDES.EHSWATER.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.8.1;API RP1171(1st Edition), Section 5.5.1)

81. EHS - Monitoring Worksite Conditions *Does the construction process ensure that the worksite is monitored during well drilling, construction, and well work activities to protect the environment and the safety and health of workers and the public?* (UNGS.RESWELLDES.EHSWORKSITE.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.8.1;API RP1171(1st Edition), Section 5.5.1;API RP1171(1st Edition), Section 11.2.1)

82. EHS - Monitoring Worksite Conditions *Do records demonstrate that the well site was monitored during drilling, construction and well work activities to protect the environment and the safety and health of workers and the public?* (UNGS.RESWELLDES.EHSWORKSITE.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.8.1;API RP1171(1st Edition), Section 5.5.1)

83. EHS - Monitoring Worksite Conditions *Do field observations indicate that safeguards and monitoring methods specific to the safety and health of workers, the public, and the environment are in place as per procedure?* (UNGS.RESWELLDES.EHSWORKSITE.O) 192.12(b)(1) (API RP1171(1st Edition), Section 6.8.1;API RP1171(1st Edition), Section 5.5.1)

84. Well Testing and Commissioning *Does the process require that production casing be tested to demonstrate mechanical integrity and suitability for the designed operating conditions prior to commissioning per API RP 1171, Section 6.9.1?* (UNGS.RESWELLDES.WELLTESTING.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.9.1;API RP1171(1st Edition), Section 11.2.1)

85. Well Testing and Commissioning *Do records demonstrate that the production casing was tested to demonstrate mechanical integrity and suitability for designed operating conditions prior to commissioning per API RP 1171 Section 6.9.1?* (UNGS.RESWELLDES.WELLTESTING.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.9.1)

86. Well Testing Design *Does the process require test design such that the maximum pressure on the packer seat and the pressure at any point in the wellbore during the test does not compromise the mechanical integrity of the well?* (UNGS.RESWELLDES.WELLTESTDES.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.9.1;API RP1171(1st Edition), Section 11.2.1)

87. Well Testing Design *Do records demonstrate that the test was designed so the maximum pressure does not compromise the mechanical integrity of the wells?* (UNGS.RESWELLDES.WELLTESTDES.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.9.1)

88. Monitoring of Construction Activities *Does the process require documentation and retention of records of deviations where such deviations from the original design or in the procedures are required to resolve encountered issues or problems during well activities?* (UNGS.RESWELLDES.CONSTRMONITOR.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.10.4;API RP1171(1st Edition), Section 11.2.1)

89. Monitoring of Construction Activities *Do records demonstrate that deviations from the original well design were documented?* (UNGS.RESWELLDES.CONSTRMONITOR.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.10.4)

90. Monitoring Construction Activities - Maintaining Integrity *Does the process require that well issues or problems are resolved in a manner that maintains the functional integrity of the well and reservoir prior to commissioning?* (UNGS.RESWELLDES.MAINTINTEGRITY.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.10.4;API RP1171(1st Edition), Section 11.2.1)

91. Monitoring Construction Activities - Maintaining Integrity *Do records demonstrate that functional integrity was maintained during the resolution of issues or problems prior to commissioning?* (UNGS.RESWELLDES.MAINTINTEGRITY.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.10.4)

92. Well Work Records *Are applicable records available to demonstrate that the items listed in API RP 1171(1st Edition), Section 6.11.1, are being maintained?* (UNGS.RESWELLDES.WELLRECORDS.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.11.1)

93. Well Work Records Retention *Are records for well completion, well construction, and well work activities available to demonstrate that they are being maintained for the life of the facility?* (UNGS.RESWELLDES.WELLRECORDSRET.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.11.1)

94. Permitting, Procedures, Personnel, and Equipment Records *Do records include, as applicable and available, the items listed in API RP 1171, Section 6.11.2?* (UNGS.RESWELLDES.GENRECORDS.R) 192.12(b)(1) (API RP1171(1st Edition), Section 6.11.2)

95. Permitting, Procedures, Personnel, and Equipment Records Retention *Does the process define a retention period for records relating to permitting, procedures, personnel, and equipment?* (UNGS.RESWELLDES.GENRECORDSRET.P) 192.12(b)(1) (API RP1171(1st Edition), Section 6.11.2;API RP1171(1st Edition), Section 11.2.1)

Underground Natural Gas Storage - Reservoirs - Integrity Through Initial Pressure & Inventory

1. Reservoir Integrity Monitoring - Material Balance *Does the process require monitoring of the material balance behavior relative to the original design and expected reservoir behavior?* (UNGS.RESINITIAL.MATBALANCE1.P) 192.12(b)(1) (API RP1171(1st Edition), Section 7.3.1)

2. Reservoir Integrity Monitoring - Material Balance *Do records demonstrate that the monitored material balance behavior of the storage reservoir is consistent with the expected reservoir behavior?* (UNGS.RESINITIAL.MATBALANCE1.R) 192.12(b)(1) (API RP1171(1st Edition), Section 7.3.1)

3. Reservoir Integrity Monitoring - Unexpected Conditions *Does the process require evaluation and correcting of any unexpected condition detected during material balance monitoring?* (UNGS.RESINITIAL.MATBALANCE2.P) 192.12(b)(1) (API RP1171(1st Edition), Section 7.3.1)

4. Reservoir Integrity Monitoring - Unexpected Conditions *Do records demonstrate that unexpected conditions in the material balance were evaluated and corrected?* (UNGS.RESINITIAL.MATBALANCE2.R) 192.12(b)(1) (API RP1171(1st Edition), Section 7.3.1)

5. Monitoring and Analysis Methods - Reservoir Pressure *Does the process require that the average reservoir pressure versus inventory graph be monitored to capture any unexpected conditions?* (UNGS.RESINITIAL.PRESSVSINVENT.P) 192.12(b)(1) (API RP1171(1st Edition), Section 7.3.2)

6. Monitoring and Analysis Methods - Reservoir Pressure *Do records demonstrate that the average reservoir pressure versus inventory graph was monitored to capture unexpected conditions?* (UNGS.RESINITIAL.PRESSVSINVENT.R) 192.12(b)(1) (API RP1171(1st Edition), Section 7.3.2)

7. Mechanical Integrity Monitoring - Abnormal Operating Conditions *Does the process require that wells and related facilities be monitored for mechanical integrity to discover and correct for abnormal operating conditions?* (UNGS.RESINITIAL.MECHINTEGMONIT.P) 192.12(b)(1) (API RP1171(1st Edition), Section 7.4.1)

8. Mechanical Integrity Monitoring - Abnormal Operating Conditions *Do records demonstrate that the mechanical integrity of wells and related facilities are monitored to discover and correct for abnormal operating conditions?* (UNGS.RESINITIAL.MECHINTEGMONIT.R) 192.12(b)(1) (API RP1171(1st Edition), Section 7.4.1)

9. Recordkeeping of Testing and Monitoring Activities *Do records include the required items, as applicable and available, listed in API RP 1171(1st Edition), Section 7.5?* (UNGS.RESINITIAL.RECORDS.R) 192.12(b)(1) (API RP1171(1st Edition), Section 7.5)

10. Recordkeeping Retention of Testing and Monitoring Activities *Does the process require that records for natural gas storage testing and monitoring activities be maintained for the life of the facility?* (UNGS.RESINITIAL.RECORDSRET.P) 192.12(b)(1) (API RP1171(1st Edition), Section 7.5)

Underground Natural Gas Storage - Reservoirs - Risk Management for Storage Operations

1. Integrity Management Program - Requirements *Are written procedures in place for an Integrity Management Program that meets all of the requirements listed in 192.12(d)(1) and API RP 1171(1st Edition), Section 8?* (UNGS.RESRISK.IMPROGRAM.P) 192.12(d)(1) (192.12(d)(4);192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 8)

2. Integrity Management Program - Requirements *Do records indicate the Integrity Management Program has been fully implemented and documented for all of the requirements listed in 192.12(d)(1) and (d)(4) and API RP 1171(1st Edition), Section 8?* (UNGS.RESRISK.IMPROGRAM.R) 192.12(d)(1) (192.12(d)(4);192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 8)

3. Definition of Risk *How is "risk" defined in the Integrity/Risk Management Program?* (UNGS.RESRISK.DEFINITION.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 8.1)

4. Data Sources and Collection *Does the process require that information be collected and used to determine susceptibility to threats and hazard-related events?* (UNGS.RESRISK.DATASOURCES.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 8.3.2)

5. Data Sources and Collection *Do records demonstrate that appropriate data was collected and used to determine susceptibility to threats and hazard-related events?* (UNGS.RESRISK.DATASOURCES.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 8.3.2)

6. Evaluation of Threats and Hazards *Does the process require evaluation for potential threats and hazards impacting storage wells and reservoirs?* (UNGS.RESRISK.THREATEVAL.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 8.4.2)

7. Evaluation of Threats and Hazards *Do records demonstrate that potential threats and hazards impacting storage wells and reservoir were adequately evaluated?* (UNGS.RESRISK.THREATEVAL.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 8.4.2)

8. Threat and Hazard Interaction *Does the process require that information be collected and used to assess threat and hazard interaction?* (UNGS.RESRISK.THREATINTERACT.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 8.3.2)

9. Threat and Hazard Interaction *Do records demonstrate that appropriate data is used to assess threat and hazard interaction?* (UNGS.RESRISK.THREATINTERACT.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 8.3.2)

10. Exclusion of Threats and Hazards Events *Does the process include provisions for the exclusion of specific hazards or threats events and related threats interactions?* (UNGS.RESRISK.THREATEXCLUDE.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 8.4.1)

11. Exclusion of Threats and Hazards Events *Do records demonstrate that the process was followed for the exclusion of specific hazards or threat events and related threats interactions?* (UNGS.RESRISK.THREATEXCLUDE.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 8.4.1)

12. Baseline Risk Assessment Timeline/Completion *Does the process require the Integrity Management baseline risk assessments for all reservoirs and wells for each UNGSF to be completed in accordance with the timeframes and prioritization required by 192.12(d)(2)?* (UNGS.RESRISK.RISKBASELINE.P) 192.12(d)(2) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 8)

13. Baseline Risk Assessment Timeline/Completion *Do records demonstrate the Integrity Management baseline risk assessments for all reservoirs and wells for each UNGSF are being conducted in accordance with the timeframes and prioritization required in 192.12(d)(2)?* (UNGS.RESRISK.RISKBASELINE.R) 192.12(d)(2) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 8)

14. Risk Assessment - Consistent Process & Methods *Does the process assess risk in a consistent manner and with a consistent methodology?* (UNGS.RESRISK.RISKASSESSMETHOD.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 8.5.2)

15. Risk Assessment - Consistent Process & Methods *Do the records demonstrate that the risk assessment was done in a consistent manner and with a consistent methodology?* (UNGS.RESRISK.RISKASSESSMETHOD.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 8.5.2)

16. Risk Assessment - Results Review *Does the process require review of the risk assessment results to determine whether the risk assessment, resulting prioritization, or ranking accurately represents its facilities and the characterization of the risks?* (UNGS.RESRISK.RISKASSESSRESULT.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 8.5.2)

17. Risk Assessment - Results Review *Do the records demonstrate that the results of the risk assessment were reviewed to determine whether the risk assessment, resulting prioritization, or ranking accurately represents its facilities and the characterization of the risks?* (UNGS.RESRISK.RISKASSESSRESULT.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 8.5.2)

18. Preventive and Mitigative Measures *Does the process require identification and implementation of preventive and mitigative measures to manage risks?* (UNGS.RESRISK.PREVMITIGMETHOD.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 8.6.2)

19. Preventive and Mitigative Measures *Do records demonstrate how the preventative and mitigative measures were identified and implemented to reduce risk?* (UNGS.RESRISK.PREVMITIGMETHOD.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 8.6.2)

20. Risk Management Effectiveness Reviews *Does the process require assessment of the effectiveness of risk monitoring and risk management programs?* (UNGS.RESRISK.RISKMGMTEFFECTIVE.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 8.7.1)

21. Risk Management Effectiveness Reviews *Do records demonstrate how the effectiveness of the risk monitoring and risk management is assessed?* (UNGS.RESRISK.RISKMGMTEFFECTIVE.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 8.7.1)

22. Risk Re-Assessment Review & Update Interval *Does the process require operator to determine the appropriate interval(s) for Integrity Management risk re-assessments for continuous improvement for all reservoirs and wells for each UNGSF in accordance with the requirements in 192.12(d)(3) and RP1171(1st Edition), subsections 8.7.1 and 8.7.2?* (UNGS.RESRISK.RISKREASSESSINTRVL.P) 192.12(d)(3) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 8.7.1;API RP1171(1st Edition) Section 8.7.2)

23. Risk Re-Assessment Review & Update Interval *Do records demonstrate operator determined the appropriate interval(s) for Integrity Management risk re-assessments for continuous improvement for all reservoirs and wells for each UNGSF in accordance with the requirements in 192.12(d)(3) and RP1171(1st Edition), subsections 8.7.1 and 8.7.2?* (UNGS.RESRISK.RISKREASSESSINTRVL.R) 192.12(d)(3) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 8.7.1;API RP1171(1st Edition) Section 8.7.2)

24. Identifying New Threats and Hazards *If new threats or hazards are identified, or the impact of threats or hazards changes markedly, does the process assess the risk associated with the new conditions and evaluate and prioritize risk management options in accordance with the risk assessment?* (UNGS.RESRISK.NEWTHREATS.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 8.7.3)

25. Identifying New Threats and Hazards *Do the records detail the identification of new threats or hazards and how they were evaluated and prioritized in the risk assessment as a result?* (UNGS.RESRISK.NEWTHREATS.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 8.7.3)

26. Integrity Management Program Recordkeeping *Does the written Integrity Management Program require records that are used to demonstrate compliance with §192.12(d) be maintained for the life of the facility?* (UNGS.RESRISK.IMPROGRECORDS.P) 192.12(d)(4) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 8.8)

27. Integrity Management Program Recordkeeping *Are all Integrity Management Program records that are used to demonstrate compliance with §192.12(d) being documented and maintained for the life of the facility?* (UNGS.RESRISK.IMPROGRECORDS.R) 192.12(d)(4) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 8.8)

Underground Natural Gas Storage - Reservoirs - Integrity Monitoring

1. Integrity Maintenance - Site Specific *Do the integrity processes and procedures account for site specific characteristics of the reservoir and wells (API RP1171(1st Edition), Section 9.2.1)?* (UNGS.RESINTEG.INTEGSITESPEC.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.2.1)

2. Integrity Maintenance - Site Specific *Do records demonstrate that integrity-related site-specific characteristics of the reservoir and wells have been accounted for?* (UNGS.RESINTEG.INTEGSITESPEC.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.2.1)

3. Risk-Based Evaluation *Does the process use a risk-based approach for developing the integrity demonstration, verification, and monitoring tasks?* (UNGS.RESINTEG.RISKBASEDEVAL.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.2.2)

4. Risk-Based Evaluation *Do records demonstrate that a risk-based approach was used as the basis for developing the integrity demonstration, verification, and monitoring tasks?* (UNGS.RESINTEG.RISKBASEDEVAL.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.2.2)

5. Risk-Based Integrity Activities Frequency *Does the process use risk assessments to determine the frequency requirements for integrity demonstration, verification, and monitoring tasks or activities?* (UNGS.RESINTEG.RISKBASEDFREQ.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.2.2)

6. Risk-Based Integrity Activities Frequency *Do records demonstrate that risk assessments were used to determine the frequency requirements for integrity demonstration, verification and monitoring tasks?* (UNGS.RESINTEG.RISKBASEDFREQ.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.2.2)

7. Well Integrity Evaluation *What is the process for determining which method(s), including inspection technologies, are to be (or were) used for the initial and subsequent mechanical integrity evaluations of each well (including each third-party well that penetrates the storage reservoir and buffer zone or areas influenced by storage operations)?* (UNGS.RESINTEG.WELLINTEGEVAL.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.1)

8. Well Integrity Evaluation *Do records demonstrate how the ongoing mechanical integrity of each well was initially and subsequently mechanically integrity tested in accordance with the risk/integrity management process?* (UNGS.RESINTEG.WELLINTEGEVAL.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.1)

9. Third-Party Well Integrity Data *Does the process detail how, and how frequently, to request well integrity evaluation data from third-party well owner/operators?* (UNGS.RESINTEG.THIRDPARTYWELLS.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.1)

10. Third-Party Well Integrity Data *Do the records demonstrate that well integrity evaluation data from third party well owner/operators were requested, and evaluated, according to the established frequency?* (UNGS.RESINTEG.THIRDPARTYWELLS.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.1)

11. Well Integrity Evaluation Integration into Risk Program *How are the risk assessment process and the information derived from the initial (and prior) mechanical integrity evaluations of each well used to determine the type and timing of the next mechanical integrity test for each well?* (UNGS.RESINTEG.WELLINTEGRATION.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.1)

12. Well Integrity Evaluation Integration into Risk Program *Do records demonstrate that well mechanical integrity evaluations included initial and subsequent evaluations as determined using the risk assessment and the information derived from the initial evaluation?* (UNGS.RESINTEG.WELLINTEGRATION.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.1)

13. Well Integrity - Monitoring for Annular Gas *Do the procedures require monitoring for the presence of annular gas by measuring and recording annular pressure and/or annular gas flow on a regular basis?* (UNGS.RESINTEG.WELLANNULAR.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.2;API RP1171(1st Edition), Section 11.2.1)

14. Well Integrity - Monitoring for Annular Gas *Do records demonstrate that the presence of annular gas is monitored according to procedure?* (UNGS.RESINTEG.WELLANNULAR.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.2)

15. Well Integrity - Annular Gas Threshold/Limit *Do the procedures define a threshold or limit for the annular pressure and/or annular gas flow?* (UNGS.RESINTEG.WELLANNULARLIMIT.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.2;API RP1171(1st Edition), Section 11.2.1)

16. Well Integrity - Annular Gas Threshold/Limit *Do records demonstrate that the set threshold or limit for pressure monitoring was not exceeded?* (UNGS.RESINTEG.WELLANNULARLIMIT.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.2)

17. Well Integrity - Annular Gas Threshold/Limit Exceeded *Does the process require that each annular gas occurrence that exceeds operator-defined or regulatory-defined threshold levels be evaluated?* (UNGS.RESINTEG.WELLANNULAREXCEEDED.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.2;API RP1171(1st Edition), Section 11.2.1)

18. Well Integrity - Annular Gas Threshold/Limit Exceeded *Do the records demonstrate that each annular gas occurrence that exceeded operator-defined or regulatory-defined threshold levels was evaluated according to the procedure?* (UNGS.RESINTEG.WELLANNULAREXCEEDED.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.2)

19. Well Integrity - Wellhead Visual Inspection *Does the process require the visual inspection of each wellhead assembly for leaks at least annually?* (UNGS.RESINTEG.WELLVISUALINSPECT.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.2;API RP1171(1st Edition), Section 11.2.1)

20. Well Integrity - Wellhead Visual Inspection *Do the records demonstrate that visual inspections of each wellhead assembly for leaks were conducted in accordance with the procedures?* (UNGS.RESINTEG.WELLVISUALINSPECT.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.2)

21. Well Integrity - Wellhead Visual Inspection *Do field observations confirm that wellhead assembly was visually inspected for leaks?* (UNGS.RESINTEG.WELLVISUALINSPECT.O) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.2)

22. Well Integrity - Wellhead Valve Testing *Does the procedure describe how to annually test the operation of the master valve and wellhead pipeline isolation valve for proper function and ability to isolate the well?* (UNGS.RESINTEG.WELLHEADVALVETEST.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.2;API RP1171(1st Edition), Section 11.2.1)

23. Well Integrity - Wellhead Valve Testing *Do records demonstrate that the operation of the master valve and wellhead pipeline isolation valve for proper function and ability to isolate the well is being tested according to procedure?* (UNGS.RESINTEG.WELLHEADVALVETEST.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.2)

24. Well Integrity - Wellhead Valve Maintenance *Do the processes and procedures describe the valve maintenance program for maintaining, repairing, and replacing isolation valves?* (UNGS.RESINTEG.WELLHEADVALVEMAINT.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.2;API RP1171(1st Edition), Section 11.2.1)

25. Well Integrity - Wellhead Valve Maintenance *Do records demonstrate that valves are maintained, repaired, or replaced in accordance with the valve maintenance program for isolation valves?* (UNGS.RESINTEG.WELLHEADVALVEMAINT.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.2)

26. Well Integrity - Subsurface Safety Valve Testing *Do procedures explain how surface and subsurface safety valve systems, where installed, are annually function-tested in accordance with manufacturer's specifications and the operator's procedures?* (UNGS.RESINTEG.WELLSSSVTEST.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.2;API RP1171(1st Edition), Section 11.2.1)

27. Well Integrity - Subsurface Safety Valve Testing *Do records demonstrate that surface and subsurface safety valve systems, where installed, are function-tested at least annually and according to procedure?* (UNGS.RESINTEG.WELLSSSVTEST.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.2)

28. Well Integrity - Closed Well Safety Valve *Where a storage well surface or subsurface automatically-closeable safety valve system is installed, do the safety valve procedures require that it must be manually reopened at the site after closure and not done so remotely?* (UNGS.RESINTEG.CLOSEDSAFETYVALVE.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.2;API RP1171(1st Edition), Section 11.2.1)

29. Well Integrity - Closed Well Safety Valve *Where a storage well surface or subsurface automatically-closeable safety valve system is installed, do the safety valve records demonstrate that it was manually reopened at the site after closure and not done so remotely?* (UNGS.RESINTEG.CLOSEDSAFETYVALVE.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.3.2)

30. Well Integrity - All Observations *Were observed well integrity activities performed adequately and in accordance with established processes? (Reference API RP1171(1st Edition), Section 9)* (UNGS.RESINTEG.WELLINTEGRITY.O) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9)

31. Well & Reservoir Integrity - Recordkeeping *Do the procedures require that all integrity-related inspections, tests, patrols and analyses be documented?* (UNGS.RESINTEG.RECORDS.P) 192.12(d)(4) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 9.8.1)

32. Well & Reservoir Integrity - Recordkeeping *Do records demonstrate that all integrity-related inspections, tests, patrols, and analyses are documented according to procedure?* (UNGS.RESINTEG.RECORDS.R) 192.12(d)(4) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 9.8.1)

33. Well & Reservoir Integrity - Record Retention *Do the process and procedures require that the retention period for storage inventory assessments be the "life of the facility"?* (UNGS.RESINTEG.RECORDRETAIN.P) 192.12(d)(4) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 9.8.2;API RP1171(1st Edition) Section 9.5)

34. Well & Reservoir Integrity - Record Retention *Do records demonstrate that storage inventory assessments are being retained for the life of the facility?* (UNGS.RESINTEG.RECORDRETAIN.R) 192.12(d)(4) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 9.8.2)

35. Integrity Maintenance - Reservoirs *Do the processes and procedures ensure the ongoing functional integrity of reservoirs in accordance with API RP1171(1st Edition), Sections 9.2 and 11.2.1?* (UNGS.RESINTEG.INTEGRESERVOIRS.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.2.1)

36. Integrity Maintenance - Reservoirs *Do the records demonstrate that integrity demonstration, integrity verification and monitoring practices are used to maintain ongoing functional integrity of the reservoir(s)?* (UNGS.RESINTEG.INTEGRESERVOIRS.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.2.1)

37. Integrity Maintenance - Overall *Are there any integrity maintenance activities (i.e., O&M work, well workovers, well-logging, or any integrity verification or monitoring activities) that can be observed during the inspection?* (UNGS.RESINTEG.INTEGOVERALL.O) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 9.2.1)

Underground Natural Gas Storage - Reservoirs - Site Security & Safety

1. Site Security and Safety - Measures *Is there a process or procedure that describes what security and safety measures are required for each well site?* (UNGS.RESSITE.SECURITY.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 10.2.2;API RP1171(1st Edition) Section 10.1;API RP1171(1st Edition) Section 11.9.1;API RP1171(1st Edition), Section 11.2.1)

2. Site Security and Safety - Fences *Do processes describe how fences or enclosures at well sites comply with applicable fire codes and regulations, where applicable?* (UNGS.RESSITE.FENCES.P) 192.12(b)(2) (192.12(b)(1);API RP1171 Section 10.3.2)

3. Site Security and Safety - Fences *Do records demonstrate compliance with applicable fire codes and regulations for control of site ingress and egress, where applicable?* (UNGS.RESSITE.FENCES.R) 192.12(b)(2) (192.12(b)(1);API RP1171 Section 10.3.2)

4. Site Security and Safety - Fences *Are well location areas secure (which may include fences or enclosures, barriers, chains on valves, locks on fence gate, security cameras, etc.), and do fences or enclosures comply with applicable fire codes and regulations?* (UNGS.RESSITE.FENCES.O) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 10.3.2;API RP1171(1st Edition) Section 11.9.1)

5. Signage *Does the process require that there is permanent weatherproof signage installed at each well site?* (UNGS.RESSITE.SIGNAGE.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 10.4.1)

6. Signage *Do records demonstrate that there is a sign at each well site?* (UNGS.RESSITE.SIGNAGE.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 10.4.1)

7. Signage *Is a permanent weatherproof signage installed at each well site?* (UNGS.RESSITE.SIGNAGE.O) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 10.4.1)

8. Emergency Preparedness/Response Plan *Is there a written emergency preparedness / emergency response plan in place that addresses accidental releases, equipment failure, natural disasters, and third-party emergencies?* (UNGS.RESSITE.EMERGPLAN.P) 192.12(c) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 10.6.1)

9. Emergency Preparedness/Response Plan - Reviews & Effectiveness *Is the emergency preparedness / emergency response plan (ER Plan manual) required to be reviewed for effectiveness and updated at intervals not exceeding 15 months, but at least once each calendar year?* (UNGS.RESSITE.EMERGPLANRVW.P) 192.12(c) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 11.4.2;API RP1171(1st Edition) Section 10.6.1)

10. Emergency Preparedness/Response Plan - Reviews & Effectiveness *Do records demonstrate the emergency preparedness / emergency response plan (ER Plan manual) was reviewed and updated at intervals not exceeding 15 months, but at least once each calendar year?* (UNGS.RESSITE.EMERGPLANRVW.R) 192.12(c) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 11.4.2;API RP1171(1st Edition) Section 10.6.1)

11. Emergency Preparedness/Response Plan - Accessibility *Is the most current Emergency Response Plan (manual) required to be made available and readily accessible to operations, maintenance, and storage personnel where the work is performed?* (UNGS.RESSITE.EMERGPLANAVAIL.P) 192.12(c) (192.12(b)(2);192.12(b)(1))

12. Emergency Preparedness/Response Plan - Accessibility *Do field observations confirm the most current Emergency Response Plan (manual) is available and readily accessible to operations, maintenance, and storage personnel where the work is performed?* (UNGS.RESSITE.EMERGPLANAVAIL.O) 192.12(c) (192.12(b)(2);192.12(b)(1))

13. Emergency Preparedness/Response Plan - Drills and Exercises *Do records demonstrate that the emergency preparedness/response plan exercises (drills and tabletop exercises) were conducted and documented?* (UNGS.RESSITE.EMERGPLANDRILLS.R) 192.12(c) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 11.4.2;API RP1171(1st Edition) Section 10.6.1)

14. Emergency Preparedness/Response Plan - Drills *Is an observed emergency preparedness drill or tabletop exercise conducted adequately and in accordance with the established plan?* (UNGS.RESSITE.EMERGPLANDRILLS.O) 192.12(c) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 10.6.1;API RP1171(1st Edition) Section 11.4.2)

15. Emergency Preparedness/Response Plan - Training *Does the process require training for storage operations and applicable staff in the use of the emergency preparedness/response plan?* (UNGS.RESSITE.ERTRAINING.P) 192.12(b)(2) (192.12(b)(1);192.12(c);API RP1171(1st Edition) Section 11.4.2;API RP1171(1st Edition) Section 10.6.2;API RP1171(1st Edition), Section 11.2.1)

16. Emergency Preparedness/Response Plan - Training *Do records demonstrate that storage facility staff were trained in the use of the emergency preparedness/response plan?* (UNGS.RESSITE.ERTRAINING.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.4.2;API RP1171(1st Edition) Section 10.6.2)

17. Emergency Preparedness/Response Plan - Training *Do field observations confirm emergency preparedness/response plan training was conducted adequately and in accordance with the established process?* (UNGS.RESSITE.ERTRAINING.O) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.4.2;API RP1171(1st Edition) Section 10.6.2)

18. Blowout Contingency Plan *Is there a current written Blowout Contingency Plan in place?* (UNGS.RESSITE.BLOWOUTPLAN.P) 192.12(c) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 10.6.3)

19. Blowout Contingency Plan *Do records demonstrate that the Blowout Contingency Plan was followed according to procedure when activated or when conducted as a drill or tabletop exercise?* (UNGS.RESSITE.BLOWOUTPLAN.R) 192.12(c) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 10.6.3)

20. Blowout Contingency Plan - Observations *Is an observed BCP drill and/or tabletop exercise conducted adequately and in accordance with the Plan?* (UNGS.RESSITE.BLOWOUTPLAN.O) 192.12(c) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 10.6.3)

21. Blowout Contingency Plan - Reviews *Is the Blowout Contingency Plan required to be reviewed for effectiveness and updated at intervals not exceeding 15 months, but at least once each calendar year?* (UNGS.RESSITE.BLOWOUTPLANRVW.P) 192.12(c) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 10.6.3;API RP1171(1st Edition) Section 11.4.2)

22. Blowout Contingency Plan - Reviews *Do records demonstrate the Blowout Contingency Plan was reviewed for effectiveness and updated at intervals not exceeding 15 months, but at least once each calendar year?* (UNGS.RESSITE.BLOWOUTPLANRVW.R) 192.12(c) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 10.6.3;API RP1171(1st Edition) Section 11.4.2;API RP1171(1st Edition) Section 11.11)

Underground Natural Gas Storage - Reservoirs - Procedures & Training

1. Operations and Maintenance Procedures *Are there written procedures in place for conducting operations and maintenance (O&M) activities (including drilling and other well entry work) of UNGS facilities, including activities required to establish and maintain functional integrity?* (UNGS.RESPROCED.OMPROCED.P) 192.12(c) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 11.2.1;API RP1171(1st Edition) Section 11.2.2)

2. Operations and Maintenance Procedures *Do records indicate that the activities required by the Operations and Maintenance Procedures to establish and maintain functional integrity were properly documented/recorded and retained, as required by §192.12(c)?* (UNGS.RESPROCED.OMPROCED.R) 192.12(c) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 11.2.1;API RP1171(1st Edition) Section 11.2.2)

3. Operations and Maintenance Procedures - Coverage *Do records demonstrate O&M procedures covering storage wells and reservoirs includes all work activities performed by contractors/vendors and the operator's personnel?* (UNGS.RESPROCED.OMPROCEDSCOPE.R) 192.12(c) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 11.3.2;API RP1171(1st Edition) Section 11.3.1)

4. Operations and Maintenance Procedures - In Place *Do records demonstrate that the Operation and Maintenance procedures were in place prior to commencing operations of a new storage facility or beginning an activity not yet implemented?* (UNGS.RESPROCED.OMPROCEDIMPL.R) 192.12(c) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 11.3.1)

5. Operations and Maintenance Procedures - Accessibility *Are the most current O&M procedural manuals required to be made available and readily accessible to operations, maintenance, and storage personnel where the work is performed?* (UNGS.RESPROCED.OMPROCEDAVAIL.P) 192.12(c) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 11.2.1)

6. Operations and Maintenance Procedures - Accessibility *Do field observations confirm current O&M procedures are available and readily accessible to operations, maintenance, and storage personnel?* (UNGS.RESPROCED.OMPROCEDAVAIL.O) 192.12(c) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition) Section 11.2.1)

7. Operations and Maintenance Procedures - Reviews *Are the Operations and Maintenance procedures (manuals) required to be reviewed and updated at intervals not exceeding 15 months, but at least once each calendar year?* (UNGS.RESPROCED.OMPROCEDRVW.P) 192.12(c) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition), Section 11.2.2)

8. Operations and Maintenance Procedures - Reviews *Do records demonstrate the Operations and Maintenance procedures (manuals) have been reviewed and updated at intervals not exceeding 15 months, but at least once each calendar year?* (UNGS.RESPROCED.OMPROCEDRVW.R) 192.12(c) (192.12(b)(2);192.12(b)(1);API RP1171(1st Edition), Section 11.2.2)

9. Control Room - Interactions and Communications *Does the process or procedure describe the interaction and communication between operations & maintenance personnel and the control room for maintaining reservoir and well functional integrity during normal, abnormal, and emergency conditions?* (UNGS.RESPROCED.CONTROLROOM.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.7.1;API RP1171(1st Edition), Section 11.2.1)

10. Control Room - Interactions and Communications *Do records demonstrate that there are communications between operations & maintenance personnel and the control room for maintaining reservoir and well functional integrity during normal, abnormal, and emergency conditions?* (UNGS.RESPROCED.CONTROLROOM.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.7.1)

11. Safety and Environmental Programs - Safeguards *Do the process and procedures incorporate safeguards for the Environment, Safety, and Health into storage design, construction, and operations?* (UNGS.RESPROCED.SFTYENVPROGENV.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.9.1;API RP1171(1st Edition), Section 11.2.1)

12. Safety and Environmental Programs - Safeguards *Do records demonstrate that safeguards for the Environment, Safety, and Health are incorporated into storage design, construction, and operations?* (UNGS.RESPROCED.SFTYENVPROGENV.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.9.1)

13. Safety and Environmental Programs - Site Security *Do the process and procedures incorporate safeguards for Site Security into storage design, construction, and operations?* (UNGS.RESPROCED.SFTYENVPROGSECUR.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.9.1;API RP1171(1st Edition), Section 11.2.1)

14. Safety and Environmental Programs - Site Security *Do records demonstrate that safeguards for Site Security are incorporated into storage design, construction, and operations?* (UNGS.RESPROCED.SFTYENVPROGSECUR.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.9.1)

15. Management of Change *Do the process or procedures require that changes are accomplished in a controlled manner (use of a Management of Change process)?* (UNGS.RESPROCED.MOC.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.11.1;API RP1171(1st Edition), Section 11.2.1)

16. Management of Change *Do records demonstrate that changes are made in a controlled manner (and in accordance with the MOC or equivalent process)?* (UNGS.RESPROCED.MOC.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.11.1)

17. Management of Change - Program Revisions *Does the process require that program documentation, framework, and procedures are revised before the change is implemented?* (UNGS.RESPROCED.MOCREVISE.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.11.1)

18. Management of Change - Program Revisions *Do records demonstrate that the program documentation, framework and procedures were revised before the change was implemented?* (UNGS.RESPROCED.MOCREVISE.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.11.1)

19. Training of O&M Personnel - Notify Changes *Does the process require that operating personnel be notified of changes whenever changes are made to the operating procedures specified in API RP1171, Section 11.3?* (UNGS.RESPROCED.TRAINOM.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.12.2;API RP1171(1st Edition), Section 11.2.1)

20. Training of O&M Personnel - Notify Changes *Do records detail how the MOC process for the notification of changes to the operating procedures was followed?* (UNGS.RESPROCED.TRAINOM.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.12.2)

21. Training of O&M Personnel - Change Related Training *Does the process require that the operating personnel be trained, and the training documented, whenever changes are made to the operating procedures specified in API RP1171(1st Edition), Section 11.3?* (UNGS.RESPROCED.TRAINOMCHGS.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.12.2;API RP1171(1st Edition) Section 11.3;API RP1171(1st Edition), Section 11.2.1)

22. Training of O&M Personnel - Change Related Training *Do records demonstrate that operating personnel were trained when an applicable change was made to the operating procedures?* (UNGS.RESPROCED.TRAINOMCHGS.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.12.2;API RP1171(1st Edition) Section 11.3)

23. Training Records - Retention *What is the established retention interval for training records?* (UNGS.RESPROCED.TRAINRECORDS.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.13.2;API RP1171(1st Edition) Section 11.13.3)

24. Training Records - Retention *Do records demonstrate that training records retention meets the operator established interval?* (UNGS.RESPROCED.TRAINRECORDS.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.13.2;API RP1171(1st Edition) Section 11.13.3)

25. Records and Documentation *Does the process include a list of the necessary documents that need to be recorded for compliance with procedures as required in API RP1171(1st Edition), Section 11?* (UNGS.RESPROCED.RECORDSDOC.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.13.1)

26. Records Retention *Does the process establish a retention interval for all records that satisfy API RP1171(1st Edition), Section 11 requirements and operator requirements?* (UNGS.RESPROCED.RETENTION.P) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.13.3)

27. Records Retention *Do records demonstrate that the records retention intervals are followed for the API RP1171(1st Edition) Section 11 requirements and operator requirements??* (UNGS.RESPROCED.RETENTION.R) 192.12(b)(2) (192.12(b)(1);API RP1171(1st Edition) Section 11.13.3)

Underground Natural Gas Storage - Caverns - Geological & Geomechanical Evaluation

1. Geomechanical Properties - Testing Specimens *Does the process for core testing require that ASTM D4543 be used?* (UNGS.CAVERNGEOL.SPECIMENTEST1.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 5.4.2.3)

2. Geomechanical Properties - Testing Specimens *Do records for core testing demonstrate that ASTM D4543 was used?* (UNGS.CAVERNGEOL.SPECIMENTEST1.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 5.4.2.3)

3. Geomechanical Properties - Testing Specimens *Does the process for triaxial core testing require that the specimen have a length to diameter ratio of 2.0 to 2.5 and a diameter not less than 1-7/8 inches?* (UNGS.CAVERNGEOL.SPECIMENTEST2.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 5.4.2.3)

4. Geomechanical Properties - Testing Specimens *Do records demonstrate that triaxial core testing maintained a specimen length to diameter ratio of 2.0 to 2.5 and a diameter not less than 1-7/8 inches?* (UNGS.CAVERNGEOL.SPECIMENTEST2.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 5.4.2.3)

5. Geomechanical Properties - Indirect Tension Tests *Does the process require Brazilian indirect tension testing of core samples to meet or exceed the method specified by ASTM D3967?* (UNGS.CAVERNGEOL.TENSIONTEST.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 5.4.2.4)

6. Geomechanical Properties - Indirect Tension Tests *Do records indicate that the specific method outlined by ASTM D3967 was met or exceeded? followed?* (UNGS.CAVERNGEOL.TENSIONTEST.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 5.4.2.4)

7. Geomechanical Properties - Triaxial Compression Tests *Does the process for triaxial compression testing of cores require that the procedures of ASTM D7012 be followed or exceeded?* (UNGS.CAVERNGEOL.TRIAXIALTEST.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 5.4.2.5.1)

8. Geomechanical Properties - Triaxial Compression Tests *Do record demonstrate that ASTM D7012 was used for triaxial compression testing of cores?* (UNGS.CAVERNGEOL.TRIAXIALTEST.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 5.4.2.5.1)

9. Geomechanical Properties - Triaxial Creep Tests *Does the process for triaxial creep tests require that the procedure meet or exceed the Triaxial Compression Method specified by ASTM D7070?* (UNGS.CAVERNGEOL.TRIAXIALCREEP.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 5.4.2.6)

10. Geomechanical Properties - Triaxial Creep Tests *Do records demonstrate that the process for triaxial creep tests exceed or meet ASTM D7070?* (UNGS.CAVERNGEOL.TRIAXIALCREEP.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 5.4.2.6)

11. Geomechanical Properties - Stress Tests *Does the process require procedures that meet or exceed ASTM D4645 if a stress test is performed?* (UNGS.CAVERNGEOL.STRESSTEST.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 5.4.4)

12. Geomechanical Properties - Stress Tests *Do records demonstrate that the stress test procedures meet or exceed ASTM D4645?* (UNGS.CAVERNGEOL.STRESSTEST.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 5.4.4)

13. Geomechanical Properties - Maximum Pressure Established *Does the process require that maximum pressure be limited to ensure gas containment?* (UNGS.CAVERNGEOL.MAXPRESS.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 5.5.6)

14. Geomechanical Properties - Maximum Pressure Established *Do records demonstrate that a maximum pressure was established to ensure gas containment?* (UNGS.CAVERNGEOL.MAXPRESS.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 5.5.6)

Underground Natural Gas Storage - Caverns - Well Design

1. National Registry - Notification of Changes *Were notifications for changes to the storage facility submitted per §191.22(c) and with accurate information?* (UNGS.RPT.REGISTRYCHGSNOTIF.R) 191.22(c)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

2. Well Design - General *Does the process ensure that the design of the well system will contain the stored gas?* (UNGS.CAVERNWELLDES.WELLDESGEN.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.1)

3. Well Design - General *Do records demonstrate that the well system was designed to ensure that gas containment is sufficient?* (UNGS.CAVERNWELLDES.WELLDESGEN.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.1)

4. Conductor Casing Hole Section *Does the design process include that a conductor casing be installed in the first section of the well system?* (UNGS.CAVERNWELLDES.CONDUCTORCASING.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.2.2)

5. Conductor Casing Hole Section *Do records demonstrate that a conductor casing was installed as the first line of casing for the system?* (UNGS.CAVERNWELLDES.CONDUCTORCASING.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.2.2)

6. Intermediate Casing Hole Section *Does the design process for domal salts require that two casing strings be set into the salt?* (UNGS.CAVERNWELLDES.INTERMEDCASING.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.2.4)

7. Intermediate Casing Hole Section *Do records indicate that there are two casing strings set in the domal salt?* (UNGS.CAVERNWELLDES.INTERMEDCASING.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.2.4)

8. Conductor Casing Design - Driven Conductors *For driven conductor casings, does the design process require that the conductor casing to withstand lithostatic (overburden) pressure at the anticipated setting depth?* (UNGS.CAVERNWELLDES.CONDUCTOR1.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.3)

9. Conductor Casing Design - Driven Conductors *Do records demonstrate that the design of the conductor casing was calculated to withstand lithostatic (overburden) pressures at the anticipated setting depth when it was driven into the ground?* (UNGS.CAVERNWELLDES.CONDUCTOR1.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.3)

10. Conductor Casing Design - Augered Conductors *For augered conductor casings, does the design process require the collapse design of the conductor casing be calculated to withstand the differential pressures during cementing?* (UNGS.CAVERNWELLDES.CONDUCTOR2.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.3)

11. Conductor Casing Design - Augered Conductors *Do records demonstrate that the design of the conductor casing was calculated to withstand differential pressures during cementing?* (UNGS.CAVERNWELLDES.CONDUCTOR2.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.3)

12. Surface Casing Design - Collapse Design *Does the process require that the surface casing be designed to withstand pressures encountered during cementing?* (UNGS.CAVERNWELLDES.SURFCASING1.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.4)

13. Surface Casing Design - Collapse Design *Do records demonstrate that the surface casing was designed to withstand pressures encountered during cementing?* (UNGS.CAVERNWELLDES.SURFCASING1.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.4)

14. Surface Casing Design - Burst Design *Does the design process require that gas bearing formations be accounted for in the burst design?* (UNGS.CAVERNWELLDES.SURFCASING2.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.4)

15. Surface Casing Design - Burst Design *Do records demonstrate that the burst design of the surface casing account for known gas bearing formations?* (UNGS.CAVERNWELLDES.SURFCASING2.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.4)

16. Surface Casing Design - Bedded Salt Well *For bedded salt well design, does the design process require that the top of the surface casing be based on maximum operating pressure?* (UNGS.CAVERNWELLDES.SURFCASING3.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.4)

17. Surface Casing Design - Bedded Salt Well *For bedded salt well design, do records demonstrate that the design of the top of the surface casing were based on maximum operating pressures?* (UNGS.CAVERNWELLDES.SURFCASING3.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.4)

18. Surface Casing Design - Bedded Salt Well *For bedded salt well design, does the design process require that the bottom of the surface casing be based on the cementing differential pressures?* (UNGS.CAVERNWELLDES.SURFCASING4.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.4)

19. Surface Casing Design - Bedded Salt Well *For bedded salt well design, do records demonstrate that the design of the bottom of the surface casing handle cementing differential pressures?* (UNGS.CAVERNWELLDES.SURFCASING4.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.4)

20. Intermediate Casing Design - Collapse Pressure *Does the design process require that the collapse pressure of the intermediate casing be designed to the casing cementing pressures?* (UNGS.CAVERNWELLDES.INTERMEDCASING1.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.5)

21. Intermediate Casing Design - Collapse Pressure *Do records demonstrate that the collapse pressure of the intermediate casing was designed to withstand casing cementing pressures?* (UNGS.CAVERNWELLDES.INTERMEDCASING1.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.5)

22. Intermediate Casing Design - Burst Pressure *Does the design process require that the burst pressure of the intermediate casing be based on maximum operating pressure for the top portion and on cementing differential pressures for the bottom portion of the casing?* (UNGS.CAVERNWELLDES.INTERMEDCASING2.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.5)

23. Intermediate Casing Design - Burst Pressure *Do records indicate that the burst pressure design account for maximum operating pressure and cementing differential pressures?* (UNGS.CAVERNWELLDES.INTERMEDCASING2.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.5)

24. Intermediate Casing Design - Welding *Does the design process have welding and inspection procedures developed if the intermediate casing has welded connections?* (UNGS.CAVERNWELLDES.INTERMEDCASING3.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.5)

25. Intermediate Casing Design - Welding *Do records demonstrate that welding and inspections procedures were developed for welded connections of the intermediate casing?* (UNGS.CAVERNWELLDES.INTERMEDCASING3.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.5)

26. Intermediate Casing Design - Welded NDT *Does the design process require welded connections be inspected by X-ray or NDT methods if there are welded connections for the intermediate casing?* (UNGS.CAVERNWELLDES.INTERMEDCASING4.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.5)

27. Intermediate Casing Design - Welded NDT *Do records demonstrate that welded connections were inspected by X-ray or NDT methods for welded intermediate casing?* (UNGS.CAVERNWELLDES.INTERMEDCASING4.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.5)

28. Production Casing Design - Strength *Does the design process for the tensile, collapse and burst strengths follow the requirements of API 1170(1st Edition), Section 6.3.6 for production casing?* (UNGS.CAVERNWELLDES.PRODCASING1.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.6)

29. Production Casing Design - Strength *Do records demonstrate that the design of the production casing met the requirements of API 1170(1st Edition) Section 6.3.6?* (UNGS.CAVERNWELLDES.PRODCASING1.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.6)

30. Production Casing Design - Welded Connections *Does the design process require that welded connections be used for the production casing?* (UNGS.CAVERNWELLDES.PRODCASING2.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.6)

31. Production Casing Design - Welded Connections *Do records demonstrate that welded connections were used for the production casing?* (UNGS.CAVERNWELLDES.PRODCASING2.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.6)

32. Production Casing Design - Welded NDT *Does the design process require welded connections to be inspected by X-ray or NDT methods if there are welded connections for the production casing?* (UNGS.CAVERNWELLDES.PRODCASING3.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.6)

33. Production Casing Design - Welded NDT *Do records demonstrate that welded connections were inspected by X-ray or NDT methods for the welded production casing?* (UNGS.CAVERNWELLDES.PRODCASING3.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.3.6)

34. Wellhead Design *Does the design process for the wellhead meet requirements of API RP1170(1st Edition), Section 6.4.2?* (UNGS.CAVERNWELLDES.WELLHEAD.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.4.2)

35. Wellhead Design *Do records demonstrate that the design of the wellhead meets the requirements of API RP1170(1st Edition), Section 6.4.2?* (UNGS.CAVERNWELLDES.WELLHEAD.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.4.2)

36. Bradenhead Design - Welding Inspection *Does the design process require Bradenhead welded connections be inspected by X-ray or NDT methods?* (UNGS.CAVERNWELLDES.BRADENHEAD.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.4.5)

37. Bradenhead Design - Welding Inspection *Do records demonstrate that Bradenhead welded connections were inspected by X-ray or NDT methods?* (UNGS.CAVERNWELLDES.BRADENHEAD.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.4.5)

38. Casing Hanger Design - Fit Inside Bradenhead *Does the design process require the casing hanger to fit in the bowl of the Bradenhead and fully close around the O.D. of the production casing?* (UNGS.CAVERNWELLDES.CASINGHANGER1.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.4.6)

39. Casing Hanger Design - Fit Inside Bradenhead *Do records demonstrate that the casing hanger fits in the bowl of the Bradenhead to allow full closure around the O.D. of the production casing?* (UNGS.CAVERNWELLDES.CASINGHANGER1.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.4.6)

40. Casing Hanger Design - Weight *Does the design process for the casing account for the entire weight of the casing string?* (UNGS.CAVERNWELLDES.CASINGHANGER2.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.4.6)

41. Casing Hanger Design - Weight *Do records demonstrate that the casing hanger was designed to handle the entire weight of the casing string?* (UNGS.CAVERNWELLDES.CASINGHANGER2.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.4.6)

42. Bradenhead Flange Adapter *Does the design process for the wellhead require that a double studded adapter pack-off flange be used if the Bradenhead Flange has lower pressure rating than the wellhead components above it?* (UNGS.CAVERNWELLDES.ADAPTERFLANGE.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.4.7)

43. Bradenhead Flange Adapter *Do records indicate that a double studded adapter pack off flange was installed if the Bradenhead flange has a lower pressure rating than the wellhead components above it?* (UNGS.CAVERNWELLDES.ADAPTERFLANGE.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.4.7)

44. Manual Solution Mining Valves *Does the wellhead design process include suitable pressure rated manual solution mining valves installed for injection and removal of blanket materials?* (UNGS.CAVERNWELLDES.MANUALVALVES.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.4.11)

45. Manual Solution Mining Valves *Do records indicate that manual valves were installed on the wellhead?* (UNGS.CAVERNWELLDES.MANUALVALVES.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.4.11)

46. Manual Gas Storage Valves During Conversion *Does the wellhead design process include a manual gas storage valve be placed on the storage wellhead during conversion workover?* (UNGS.CAVERNWELLDES.CONVERSIONVALVES.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 6.4.11)

Underground Natural Gas Storage - Caverns - Drilling

1. Drilling Rig Selection *Does the process include the requirements of API 1170(1st Edition), Section 7.1 for rig selection?* (UNGS.CAVERNDRILL.RIGSELECTION.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.1.1)

2. Drilling Rig Selection *Do records demonstrate that the rig selection was based on API 1170(1st Edition), Section 7.1 criteria?* (UNGS.CAVERNDRILL.RIGSELECTION.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.1.1)

3. Blow-Out Preventer (BOP) System *Does the process require the use and test of a BOP system to ensure well control during drilling of the pilot hole of each hole section?* (UNGS.CAVERNDRILL.BOP.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.1.3)

4. Blow-Out Preventer (BOP) System *Do records demonstrate that a BOP system was used and tested to maintain well control during drilling operations?* (UNGS.CAVERNDRILL.BOP.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.1.3)

5. Drilling Fluid Selection - Halite *Does the process require that a salt saturated drilling fluid to be used when drilling through halite formations?* (UNGS.CAVERNDRILL.DRILLINGFLUID1.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.2.3)

6. Drilling Fluid Selection - Halite *Do records indicate that a salt saturated drilling fluid was used when drilling through halite formations?* (UNGS.CAVERNDRILL.DRILLINGFLUID1.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.2.3)

7. Drilling Fluid Selection - Soluble Salts *Does the process require that highly soluble salts be accounted for when selecting a drilling fluid?* (UNGS.CAVERNDRILL.DRILLINGFLUID2.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.2.3)

8. Drilling Fluid Selection - Soluble Salts *Do records indicate that highly soluble salts were accounted for when selecting a drilling fluid?* (UNGS.CAVERNDRILL.DRILLINGFLUID2.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.2.3)

9. Production Casing - Cement Bond Log *Does the process allow sufficient time after cementing given before a cement bond log can be run?* (UNGS.CAVERNDRILL.CASINGLOG.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.4.3)

10. Production Casing - Cement Bond Log *Do records indicate that sufficient time was given before the bond long was completed?* (UNGS.CAVERNDRILL.CASINGLOG.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.4.3)

11. Cementing - Isolation of Storage Zone *Does the process for cement design provide isolation of the storage zone from all sources of porosity and permeability and secure the casing in the borehole?* (UNGS.CAVERNDRILL.CEMENTZONE.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.6.1)

12. Cementing - Isolation of Storage Zone *Do records demonstrate that the cement design isolates the storage zone from all sources of porosity and permeability and secures the casing in the borehole?* (UNGS.CAVERNDRILL.CEMENTZONE.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.6.1)

13. Cementing - Cement to Surface *Does the process require all cemented strings to be cemented to surface?* (UNGS.CAVERNDRILL.CEMENT2SURF.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.6.1)

14. Cementing - Cement to Surface *Do records indicate that all cemented strings are cemented to surface?* (UNGS.CAVERNDRILL.CEMENT2SURF.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.6.1)

15. Cementing - Quality and Testing *Does the process require cement quality and testing to meet or exceed API 10A and API 10F?* (UNGS.CAVERNDRILL.CEMENTTEST.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.6.1)

16. Cementing - Quality and Testing *Do records indicate that cement quality and testing meet or exceed API 10A and API 10F?* (UNGS.CAVERNDRILL.CEMENTTEST.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.6.1)

17. Cementing - Excess Cement Volume *Does the process require that an excess cement volume be calculated based on the open-hole caliper log?* (UNGS.CAVERNDRILL.CEMENTVOL.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.6.1)

18. Cementing - Excess Cement Volume *Do records demonstrate that an excess amount of cement volume was calculated based on open-hole caliper log?* (UNGS.CAVERNDRILL.CEMENTVOL.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.6.1)

19. Casing Centralizers *Does the design process require that casing centralizers be used to center the casing?* (UNGS.CAVERNDRILL.CENTRALIZERS.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.6.2)

20. Casing Centralizers *Do records demonstrate that casing centralizers were used to achieve the proper placement of cement around the casing?* (UNGS.CAVERNDRILL.CENTRALIZERS.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.6.2)

21. Production Casing Cement Bond *Does the process ensure that a proper bond be created between the production casing, cement, and the surrounding salt to ensure a seal for containment of pressurized gas?* (UNGS.CAVERNDRILL.CEMENTBOND.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.6.9)

22. Production Casing Cement Bond *Do records demonstrate that a proper bond was created between the production casing, cement and surrounding salt?* (UNGS.CAVERNDRILL.CEMENTBOND.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.6.9)

23. Cavern Drilling Completion *Does the process require that all drilling fluid in the wellbore be displaced by clean, fully saturated brine water?* (UNGS.CAVERNDRILL.COMPLETION.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.7)

24. Cavern Drilling Completion *Do records demonstrate that the wellbore was displaced with clean, fully saturated brine water?* (UNGS.CAVERNDRILL.COMPLETION.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 7.7)

Underground Natural Gas Storage - Caverns - Solution Mining

1. Cavern Roof Development *Does the design process require that the roof of the cavern be developed based on detailed planning, modeling and execution?* (UNGS.CAVERNMINE.ROOFDEVEL.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.2.2.4)

2. Cavern Roof Development *Do records demonstrate that the roof of the cavern was designed based on detailed planning, modeling and execution?* (UNGS.CAVERNMINE.ROOFDEVEL.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.2.2.4)

3. Cavern Roof Development - Production Casing Cement Curing Time *Does the process allow sufficient time for the production casing cement to reach full compressive strength before pressuring the annular space to the MAOP?* (UNGS.CAVERNMINE.CEMENTCURE.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.2.3)

4. Cavern Roof Development - Production Casing Cement Curing Time *Do records indicate that there was sufficient time for the production casing cement to reach full compressive strength before pressuring the annular space to the MAOP?* (UNGS.CAVERNMINE.CEMENTCURE.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.2.3)

5. Cavern Roof Development - Blanket Interface *Does the process require that a blanket material be placed in the roof of the cavern and the blanket-water interface to be carefully monitored and periodically verified with a wireline log along with other methods?* (UNGS.CAVERNMINE.BLANKETINTERFACE.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.2.3;API RP1170(1st Edition), Section 8.2.2.4)

6. Cavern Roof Development - Blanket Interface *Do records demonstrate that a blanket material was placed in the roof of the cavern and that the blanket-water interface was carefully monitored and periodically verified with a wireline log along with other methods?* (UNGS.CAVERNMINE.BLANKETINTERFACE.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.2.3;API RP1170(1st Edition), Section 8.2.2.4)

7. Cavern Roof Development - Roof Controls *Does the process require the use of roof controls during reverse circulation so that the salt neck below the casing seat is left intact?* (UNGS.CAVERNMINE.ROOFCONTROLS.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.2.4.3)

8. Cavern Roof Development - Roof Controls *Do records demonstrate that roof controls were utilized during reverse circulation so that the salt neck below the casing seat remained intact?* (UNGS.CAVERNMINE.ROOFCONTROLS.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.2.4.3)

9. Cavern Development - Solution Mining Model *Does the design process require that a solution mining model be used to develop the salt cavern?* (UNGS.CAVERNMINE.MININGMODEL.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.2.5)

10. Cavern Development - Solution Mining Model *Do records demonstrate that a solution mining model was used to develop the salt cavern?* (UNGS.CAVERNMINE.MININGMODEL.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.2.5)

11. Upper Cavern Development - Roof Growth Controls *Does the design process require that upward roof growth be controlled by planned use of raw water injection points, flow rates, and blanket material positioning?* (UNGS.CAVERNMINE.ROOFGROWTH.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.3.4)

12. Upper Cavern Development - Roof Growth Controls *Do records demonstrate that upward roof growth was controlled through planned use of raw water injection points, flow rates, and blanket material positioning?* (UNGS.CAVERNMINE.ROOFGROWTH.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.3.4)

13. Upper Cavern Development - Confirm Roof Shape *Does the design process require that frequent interface logs and sonar surveys be performed to confirm desired roof shape and volume?* (UNGS.CAVERNMINE.ROOFSHAPE .P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.3.4)

14. Upper Cavern Development - Confirm Roof Shape *Do records indicate that frequent interface logs and sonar surveys were used to confirm desired roof shape and volume?* (UNGS.CAVERNMINE.ROOFSHAPE.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.3.4)

15. ESD Equipment *Does the process used during solution mining require the use of ESD valves?* (UNGS.CAVERNMINE.ESDEQUIP.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.4.1)

16. ESD Equipment *Do records indicate that ESD valves were used during solution mining?* (UNGS.CAVERNMINE.ESDEQUIP.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.4.1)

17. Hanging String Sizing *Does the design process require that the hanging string be sized based on the criteria of API 1170, Section 8.4.2.2?* (UNGS.CAVERNMINE.HANGINGSTRING.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.4.2.2)

18. Hanging String Sizing *Do records demonstrate that the hanging string size is based on the criteria in API 1170(1st Edition), Section 8.4.2.2?* (UNGS.CAVERNMINE.HANGINGSTRING.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.4.2.2)

19. Hanging String Connections *Does the design process require that hanging string connections be made-up to manufacturer's specifications?* (UNGS.CAVERNMINE.CONNECTIONS.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.4.2.5)

20. Hanging String Connections *Do records demonstrate that the hanging string connections were made up to manufacturer's specifications?* (UNGS.CAVERNMINE.CONNECTIONS.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.4.2.5)

21. Fluids Injection Rates *Does the process during mining require fluid injection rates to be metered and recorded?* (UNGS.CAVERNMINE.FLUIDINJECTION.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.4.3)

22. Fluids Injection Rates *Do records indicate that fluid injection rates were metered and recorded during solution mining?* (UNGS.CAVERNMINE.FLUIDINJECTION.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.4.3)

23. Instrumentation, Control, and Shutdown Devices *Does the process require that the system components have instrumentation control and shutdown during the solution mining process?* (UNGS.CAVERNMINE.SHUTDOWN.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.5.1)

24. Instrumentation, Control, and Shutdown Devices *Do records indicate that the cavern system components have instrumentation control and shutdown during the mining process?* (UNGS.CAVERNMINE.SHUTDOWN.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.5.1)

25. Cavern Overpressure Protection System *Does the process require that OPP be installed if the cavern system is connected to a plant pump with the capacity to increase pressure of the cavern over MAOP?* (UNGS.CAVERNMINE.PRESSPROTECT.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.5.4)

26. Cavern Overpressure Protection System *Do records demonstrate that OPP was used for the cavern system if the cavern system was connected to a plant pump with the capacity to increase pressure of the cavern over MAOP?* (UNGS.CAVERNMINE.PRESSPROTECT.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.5.4)

27. Cavern Monitoring *Does the process require that the cavern be monitored throughout the solution mining and debrining processes?* (UNGS.CAVERNMINE.MONITORING.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.6.1)

28. Cavern Monitoring *Do records demonstrate that the cavern was monitored during the mining and debrining processes?* (UNGS.CAVERNMINE.MONITORING.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.6.1)

29. Returned Brine Salinity and Chemistry *Does the process require that the salinity of the brine in/out of the cavern be measured during the mining process?* (UNGS.CAVERNMINE.SALINITY.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.6.5)

30. Returned Brine Salinity and Chemistry *Do records indicate that the salinity of the water in/out of the cavern was/is measured during the mining process?* (UNGS.CAVERNMINE.SALINITY.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.6.5)

31. Workover to Configure for Gas Storage Service *Does the conversion to gas storage process require that a workover (including a casing inspection of the production casing, installation of the gas storage wellhead, and a mechanical integrity test) is performed?* (UNGS.CAVERNMINE.WORKOVER.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.8.1)

32. Workover to Configure for Gas Storage Service *Do records indicate that a workover (including a casing inspection, installation of a gas storage wellhead, and a mechanical integrity test) was performed before conversion to gas storage?* (UNGS.CAVERNMINE.WORKOVER.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.8.1)

33. Inspection of Re-Used Solution Mining Hanging Strings *Does the process require that hanging strings be inspected by a full body electromagnetic and ultrasonic inspection and a thread and coupling inspection if the hanging string were to be reused?* (UNGS.CAVERNMINE.STRINGINSP1.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.8.2)

34. Inspection of Re-Used Solution Mining Hanging Strings Joints *Does the process require that hanging strings joints or connections that fail the inspection be removed and discarded?* (UNGS.CAVERNMINE.STRINGINSP2.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.8.2)

35. Inspection of Re-Used Solution Mining Hanging Strings *Do records indicate that an inspection was done on all reused hanging strings and that joints or connections that failed the inspection were removed and discarded?* (UNGS.CAVERNMINE.STRINGINSP.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.8.2)

36. Cavern Sonar Survey *Does the process require a sonar survey be conducted to verify the final cavern geometry?* (UNGS.CAVERNMINE.SONARSURVEY.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.8.4;API RP1170(1st Edition), Section 8.10.2.2)

37. Cavern Sonar Survey *Do records indicate that a final sonar survey was conducted to verify the cavern geometry?* (UNGS.CAVERNMINE.SONARSURVEY.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.8.4;API RP1170(1st Edition), Section 8.10.2.2)

38. Installing the Gas Storage Service Wellhead *Does the process require that any reused components from the wellhead be removed, inspected, and tested prior to re-use for gas storage?* (UNGS.CAVERNMINE.REUSEDCOMP.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.8.5)

39. Installing the Gas Storage Service Wellhead *Do records demonstrate that any reused components from the wellhead be removed, inspected, and tested prior to re-use in gas service?* (UNGS.CAVERNMINE.REUSEDCOMP.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.8.5)

40. Installing Debrining Strings - Salvaged Strings *Does the process require that debrining strings of unknown quality (salvaged) be discarded?* (UNGS.CAVERNMINE.DEBRININGSTRING1.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.8.6)

41. Installing Debrining Strings - Salvaged Strings *Do records demonstrate that debrining strings of unknown quality (salvaged) be discarded?* (UNGS.CAVERNMINE.DEBRININGSTRING1.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.8.6)

42. Installing Debrining Strings - Testing Connections *Does the process require that each connection of the debrining string be pressure tested?* (UNGS.CAVERNMINE.DEBRININGSTRING2.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.8.6)

43. Installing Debrining Strings - Testing Connections *Do records demonstrate that each connection of the debrining string were successfully pressure tested?* (UNGS.CAVERNMINE.DEBRININGSTRING2.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.8.6)

44. Conducting a Mechanical Integrity Test (MIT) *Does the process require that a nitrogen/brine interface MIT be performed to ensure cavern integrity before it is placed into gas service?* (UNGS.CAVERNMINE.CAVERNMIT.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.8.7)

45. Conducting a Mechanical Integrity Test (MIT) *Do records demonstrate that a nitrogen/brine interface MIT was performed, prior to placing cavern into gas service, to ensure cavern integrity?* (UNGS.CAVERNMINE.CAVERNMIT.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.8.7)

46. Monitoring During Debrining *Does the process require that the debrining piping be monitored during the debrining process?* (UNGS.CAVERNMINE.MONITORDEBRINE.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.9.6)

47. Monitoring During Debrining *Do records demonstrate that the debrining piping was monitored during the debrining process?* (UNGS.CAVERNMINE.MONITORDEBRINE.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.9.6)

48. Existing Cavern Conversions *Does the process ensure that a converted cavern (cavern not initially intended for gas storage) meet the same criteria as a developed natural gas storage cavern and undergo a thorough review as stated in API 1170(1st Edition), Section 8.10?* (UNGS.CAVERNMINE.CONVERTEDCAVERN.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.10.1)

49. Existing Cavern Conversions *Do records indicate that a converted cavern undergo a thorough review as outlined in API RP1170(1st Edition), Section 8.10?* (UNGS.CAVERNMINE.CONVERTEDCAVERN.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.10.1)

50. Cavern Enlargement *Does the enlarging process for caverns include the criteria outlined in API 1170(1st Edition), Section 8.12?* (UNGS.CAVERNMINE.ENLARGEMENT.P) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.12)

51. Cavern Enlargement *Do records indicate that the cavern was enlarged based on the criteria outlined in API 1170(1st Edition), Section 8.12?* (UNGS.CAVERNMINE.ENLARGEMENT.R) 192.12(a)(1) (192.12(a)(2);API RP1170(1st Edition), Section 8.12)

Underground Natural Gas Storage - Caverns - Risk Management (RP1171, Sect. 8)

1. Integrity Management Program - Requirements *Are there written procedures in place for an Integrity Management Program that meets all of the requirements listed in 192.12(d)(1) and API RP 1171(1st Edition), Section 8?* (UNGS.CAVERNRISK.IMPROGRAM.P) 192.12(d)(1) (192.12(d)(4);192.12(a)(3);192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8)

2. Integrity Management Program - Requirements *Do records indicate the Integrity Management Program has been fully implemented and documented for all of the requirements listed in 192.12(d)(1) and (d)(4) and API RP 1171(1st Edition), Section 8?* (UNGS.CAVERNRISK.IMPROGRAM.R) 192.12(d)(1) (192.12(d)(4);192.12(a)(3);192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8)

3. Definition of Risk *How is "risk" defined in the Integrity/Risk Management Program?* (UNGS.CAVERNRISK.DEFINITION.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.1)

4. Data Sources and Collection *Does the process require that information be collected and used to determine susceptibility to threats and hazard-related events?* (UNGS.CAVERNRISK.DATASOURCES.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.3.2)

5. Data Sources and Collection *Do records demonstrate that appropriate data was collected and used to determine susceptibility to threats and hazard-related events?* (UNGS.CAVERNRISK.DATASOURCES.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.3.2)

6. Evaluation of Threats and Hazards *Does the process require evaluation for potential threats and hazards impacting storage wells and caverns?* (UNGS.CAVERNRISK.THREATEVAL.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.4.2)

7. Evaluation of Threats and Hazards *Do records demonstrate that potential threats and hazards impacting storage wells and cavern were adequately evaluated?* (UNGS.CAVERNRISK.THREATEVAL.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.4.2)

8. Threat and Hazard Interaction *Does the process require that information be collected and used to assess threat and hazard interaction?* (UNGS.CAVERNRISK.THREATINTERACT.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.3.2)

9. Threat and Hazard Interaction *Do records demonstrate that appropriate data is used to assess threat and hazard interaction?* (UNGS.CAVERNRISK.THREATINTERACT.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.3.2)

10. Exclusion of Threats and Hazards Events *Does the process include provisions for the exclusion of specific hazards or threats events and related threats interactions?* (UNGS.CAVERNRISK.THREATEXCLUDE.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.4.1)

11. Exclusion of Threats and Hazards Events *Do records demonstrate that the process was followed for the exclusion of specific hazards or threat events and related threats interactions?* (UNGS.CAVERNRISK.THREATEXCLUDE.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.4.1)

12. Baseline Risk Assessment Timeline/Completion *Does the process require the Integrity Management baseline risk assessments for all caverns and wells for each UNGSF to be completed in accordance with the timeframes and prioritization required by 192.12(d)(2)?* (UNGS.CAVERNRISK.RISKBASELINE.P) 192.12(d)(2) (192.12(a)(3);192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8)

13. Baseline Risk Assessment Timeline/Completion *Do records demonstrate the Integrity Management baseline risk assessments for all caverns and wells for each UNGSF are being conducted in accordance with the timeframes and prioritization required in 192.12(d)(2)?* (UNGS.CAVERNRISK.RISKBASELINE.R) 192.12(d)(2) (192.12(a)(3);192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8)

14. Risk Assessment - Consistent Process & Methods *Does the process assess risk in a consistent manner and with a consistent methodology?* (UNGS.CAVERNRISK.RISKASSESSMETHOD.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1171 (1st Edition)Section 8.5.2)

15. Risk Assessment - Consistent Process & Methods *Do the records demonstrate that the risk assessment was done in a consistent manner and with a consistent methodology?* (UNGS.CAVERNRISK.RISKASSESSMETHOD.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.5.2)

16. Risk Assessment - Results Review *Does the process require review of the risk assessment results to determine whether the risk assessment, resulting prioritization, or ranking accurately represents its facilities and the characterization of the risks?* (UNGS.CAVERNRISK.RISKASSESSRESULT.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.5.2)

17. Risk Assessment - Results Review *Do the records demonstrate that the results of the risk assessment were reviewed to determine whether the risk assessment, resulting prioritization, or ranking accurately represents its facilities and the characterization of the risks?* (UNGS.CAVERNRISK.RISKASSESSRESULT.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.5.2)

18. Preventive and Mitigative Measures *Does the process require identification and implementation of preventive and mitigative measures to manage risks?* (UNGS.CAVERNRISK.PREVMITIGMETHOD.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.6.2)

19. Preventive and Mitigative Measures *Do records demonstrate how the preventative and mitigative measures were identified and implemented to reduce risk?* (UNGS.CAVERNRISK.PREVMITIGMETHOD.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.6.2)

20. Risk Management Effectiveness Reviews *Does the process require assessment of the effectiveness of risk monitoring and risk management programs?* (UNGS.CAVERNRISK.RISKMGMTEFFECTIVE.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.7.1)

21. Risk Management Effectiveness Reviews *Do records demonstrate how the effectiveness of the risk monitoring and risk management is assessed?* (UNGS.CAVERNRISK.RISKMGMTEFFECTIVE.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.7.1)

22. Risk Re-Assessment Review & Update Interval *Does the process require operator to determine the appropriate interval(s) for Integrity Management risk re-assessments for continuous improvement for all caverns and wells for each UNGSF in accordance with the requirements in 192.12(d)(3) and RP1171(1st Edition), subsections 8.7.1 and 8.7.2?* (UNGS.CAVERNRISK.RISKREASSESSINTRVL.P) 192.12(d)(3) (192.12(a)(3);192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.7.1;API RP1171(1st Edition) Section 8.7.2)

23. Risk Re-Assessment Review & Update Interval *Do records demonstrate operator determined the appropriate interval(s) for Integrity Management risk re-assessments for continuous improvement for all caverns and wells for each UNGSF in accordance with the requirements in 192.12(d)(3) and RP1171(1st Edition), subsections 8.7.1 and 8.7.2?* (UNGS.CAVERNRISK.RISKREASSESSINTRVL.R) 192.12(d)(3) (192.12(a)(3);192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.7.1;API RP1171(1st Edition) Section 8.7.2)

24. Identifying New Threats and Hazards *If new threats or hazards are identified, or the impact of threats or hazards changes markedly, does the process assess the risk associated with the new conditions and evaluate and prioritize risk management options in accordance with the risk assessment?* (UNGS.CAVERNRISK.NEWTHREATS.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.7.3)

25. Identifying New Threats and Hazards *Do the records detail the identification of new threats or hazards and how they were evaluated and prioritized in the risk assessment as a result?* (UNGS.CAVERNRISK.NEWTHREATS.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.7.3)

26. Integrity Management Program Recordkeeping *Does the written Integrity Management Program require records that are used to demonstrate compliance with 192.12(d) be maintained for the life of the facility?* (UNGS.CAVERNRISK.IMPROGRECORDS.P) 192.12(d)(4) (192.12(a)(3);192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.8)

27. Integrity Management Program Recordkeeping *Are all Integrity Management Program records that are used to demonstrate compliance with 192.12(d) being documented and maintained for the life of the facility?* (UNGS.CAVERNRISK.IMPROGRECORDS.R) 192.12(d)(4) (192.12(a)(3);192.12(a)(1);192.12(a)(2);API RP1171(1st Edition) Section 8.8)

Underground Natural Gas Storage - Caverns - Gas Storage Operations

1. Maximum Storage Operating Pressure *Does the process establish a maximum and minimum storage operating pressure?* (UNGS.CAVERNOPS.MAOPLIMIT.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.1)

2. Maximum Storage Operating Pressure *Do records demonstrate that a maximum and minimum operating pressure have been established?* (UNGS.CAVERNOPS.MAOPLIMIT.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.1)

3. Maximum Storage Operating Pressure - Converted to Wellhead Pressure *If the wellhead is the monitoring point of record for pressure, does the process convert the maximum and minimum pressure at the casing seat to a maximum and minimum wellhead pressure?* (UNGS.CAVERNOPS.MAOPWELLHEAD.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.1)

4. Maximum Storage Operating Pressure - Converted to Wellhead Pressure *Do records demonstrate that the casing seat pressure was converted to a maximum and minimum wellhead pressure (if the wellhead is the monitoring point of record for pressure)?* (UNGS.CAVERNOPS.MAOPWELLHEAD.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.1)

5. Wellhead Replacement Prior to Service *Does the process require the replacement of solution mined wellheads before commencing natural gas storage service?* (UNGS.CAVERNOPS.WELLHEADREPL.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.2.1)

6. Wellhead Replacement Prior to Service *Do records demonstrate that the solution mined wellhead has been changed prior to commencing gas operations?* (UNGS.CAVERNOPS.WELLHEADREPL.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.2.1)

7. Emergency Shutdown (ESD) Valve *Does the process require that an Emergency Shutdown (ESD) Valve is installed at or near the manual valves (wing valves) to isolate the cavern in the event of an emergency?* (UNGS.CAVERNOPS.ESDVALVE.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.2.2)

8. Emergency Shutdown (ESD) Valve *Do records demonstrate that ESD valves are installed at or near the manual valves (wing valves) for isolation purposes?* (UNGS.CAVERNOPS.ESDVALVE.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.2.2)

9. Emergency Shutdown (ESD) Instrumentation Flange *If an instrument flange is located between the wing valve and ESD valve, and it is used to gather real-time pressure data, does the process ensure that the flange is rated for the same pressure as the valves?* (UNGS.CAVERNOPS.ESDFLANGE.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.2.2)

10. Emergency Shutdown (ESD) Instrumentation Flange *Do records demonstrate that instrument flanges are rated for the same pressure as the valves surrounding the instrument flange?* (UNGS.CAVERNOPS.ESDFLANGE.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.2.2)

11. Detecting Upset Conditions During Debrining *Does the process require monitoring equipment to detect upset conditions during the debrining process?* (UNGS.CAVERNOPS.UPSETCOND.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.3.1)

12. Detecting Upset Conditions During Debrining *Do records demonstrate that upset conditions are monitored during the debrining process?* (UNGS.CAVERNOPS.UPSETCOND.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.3.1)

13. Detecting Upset Conditions During Debrining - ESD *Does the process ensure that monitoring equipment that is used as a warning device be connected to the ESD system to automatically close-in the cavern?* (UNGS.CAVERNOPS.ESDUPSETCOND.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.3.1)

14. Detecting Upset Conditions During Debrining - ESD *Do records demonstrate that the monitoring devices that are connected to an ESD system are tested on a periodic basis?* (UNGS.CAVERNOPS.ESDUPSETCOND.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.3.1)

15. Emergency Shutdown (ESD) System *Does the process require an Emergency Shutdown (ESD) system to isolate the cavern and wellhead from any attached piping in an emergency?* (UNGS.CAVERNOPS.ESDSYSTEM.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.3.4)

16. Emergency Shutdown (ESD) System *Do records demonstrate that an ESD system is installed to isolate the cavern(s) in an emergency?* (UNGS.CAVERNOPS.ESDSYSTEM.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.3.4)

17. Emergency Shutdown (ESD) System *Do field observations on the presence of monitoring equipment and the ESD system on the cavern and testing/calibration of the monitoring equipment and/or ESD system match with the process and records?* (UNGS.CAVERNOPS.ESDSYSTEM.O) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.3.4)

18. Monitoring the Production Casing Annulus *If the production casing annular space is monitored for pressure, does the process ensure that the pressure tap is not inside the wing valve?* (UNGS.CAVERNOPS.ANNULUSPRESS.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.3.5.2)

19. Monitoring the Production Casing Annulus *Do records demonstrate that there is no pressure tap within the wing valve?* (UNGS.CAVERNOPS.ANNULUSPRESS.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.3.5.2)

20. Monitoring the Production Casing Annulus *Do field observations related to wellhead configuration, pressure taps, and annulus pressure monitoring match with the process and records?* (UNGS.CAVERNOPS.ANNULUSPRESS.O) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.3.5.2)

21. Testing of Gauges, Transmitters, and Safety Devices *Do procedures require the testing and calibrating of wellhead gauges, transmitters, and safety devices to be conducted annually?* (UNGS.CAVERNOPS.TESTDEVICES.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.4.1)

22. Testing of Gauges, Transmitters, and Safety Devices *Do records demonstrate that wellhead gauges, transmitters, and safety devices are tested and calibrated on an annual basis?* (UNGS.CAVERNOPS.TESTDEVICES.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.4.1)

23. Replacement of Gauges, Transmitters, and Safety Devices *Does the process require that any malfunctioning equipment/devices be repaired or replaced if it fails testing/calibration?* (UNGS.CAVERNOPS.REPLDEVICES.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.4.1)

24. Replacement of Gauges, Transmitters, and Safety Devices *Do records demonstrate that any malfunctioning equipment has repaired or replaced?* (UNGS.CAVERNOPS.REPLDEVICES.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.4.1)

25. Testing or Replacement of Gauges, Transmitters, and Safety Devices *Do field observations of testing, calibration, and/or the repair / replacement of gauges, transmitters, and safety devices match with the procedures and records?* (UNGS.CAVERNOPS.TESTDEVICES.O) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.4.1)

26. Workover on a Pressurized Cavern *Are there procedures in place for conducting a well workover with the cavern under pressure?* (UNGS.CAVERNOPS.WORKOVER.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.5.2.3)

27. Workover on a Pressurized Cavern *Do records demonstrate that procedures were designed to provide for maximum anticipated cavern pressure prior to conducting pressurized workovers?* (UNGS.CAVERNOPS.WORKOVER.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.5.2.3)

28. Workover on a Pressurized Cavern - Equipment Rating *Does the process ensure that the rig(s) and equipment to be used for the workover is designed for the maximum anticipated pressure?* (UNGS.CAVERNOPS.WORKOVEREQUIP.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.5.2.3)

29. Workover on a Pressurized Cavern - Equipment Rating *Do records demonstrate that the rig(s) and equipment used for the workover were rated for the maximum anticipated cavern pressure?* (UNGS.CAVERNOPS.WORKOVEREQUIP.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.5.2.3)

30. Lockout and Tagout Systems *Is there a process for Lockout and Tagout (LOTO) at the storage facility to protect workers from hazardous energy sources?* (UNGS.CAVERNOPS.LOTO.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.6.8)

31. Lockout and Tagout Systems *Do records demonstrate that the Lockout and Tagout (LOTO) procedures were followed?* (UNGS.CAVERNOPS.LOTO.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.6.8)

32. Lockout and Tagout Systems *Do field observations of the Lockout and Tagout procedures in use demonstrate that it being properly performed?* (UNGS.CAVERNOPS.LOTO.O) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.6.8)

33. O&M Procedure Manuals - Written *Are there written procedures in place for conducting Operation and Maintenance (O&M) activities of UNGS facilities, including activities such as workovers and activities required to establish and maintain functional integrity?* (UNGS.CAVERNOPS.OMPROCED.P) 192.12(c) (192.12(a)(3);192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.7.1)

34. O&M Procedure Manuals - Written *Do records indicate that the activities required by the Operations and Maintenance procedures to establish and maintain functional integrity were properly documented/recorded and retained, as required by 192.12(c)?* (UNGS.CAVERNOPS.OMPROCED.R) 192.12(c) (192.12(a);API RP1170(1st Edition), Section 9.7.1;API RP1170(1st Edition), Section 9.7.4)

35. O&M Procedure Manuals - Implementation *Do records demonstrate O&M procedures covering storage wells and reservoirs were developed and implemented prior to commencing operations or beginning an activity not yet implemented?* (UNGS.CAVERNOPS.OMPROCEDIMPL.R) 192.12(c) (192.12(a))

36. O&M Procedure Manuals - Other Components *Do the O&M Procedures include any other components related to the safe operation and necessary maintenance of the cavern or facility?* (UNGS.CAVERNOPS.OMPROCEDOTHER.P) 192.12(c) (192.12(a);API RP1170(1st Edition), Section 9.7.1;API RP1170(1st Edition), Section 9.6)

37. O&M Procedure Manuals - Other Components *Do the records demonstrate that the other components of the O&M or Other Procedures related to the safe operation and necessary maintenance of the cavern or facility were conducted in accordance with the established procedures?* (UNGS.CAVERNOPS.OMPROCEDOTHER.R) 192.12(c) (192.12(a);API RP1170(1st Edition), Section 9.7.1;API RP1170(1st Edition), Section 9.6)

38. O&M Procedure Manuals - Reviews *Are the Operation and Maintenance (O&M) procedures (manuals) required to be reviewed and updated at intervals not exceeding 15 months, but at least once each calendar year?* (UNGS.CAVERNOPS.OMPROCEDRVW.P) 192.12(c) (192.12(a))

39. O&M Procedure Manuals - Reviews *Do records demonstrate that the Operation and Maintenance (O&M) procedures (manuals) have been reviewed and updated at intervals not exceeding 15 months, but at least once each calendar year?* (UNGS.CAVERNOPS.OMPROCEDRVW.R) 192.12(c) (192.12(a))

40. O&M Procedure Manuals - Accessibility *Do field observations confirm current O&M procedures are available and readily accessible to operations, maintenance, and storage personnel?* (UNGS.CAVERNOPS.OMPROCEDAVAIL.O) 192.12(c) (192.12(a))

41. O&M Procedures - Records Requirements *Do the O&M Procedures include requirements for records documentation and retention?* (UNGS.CAVERNOPS.OMRECORDS.P) 192.12(c) (192.12(a);API RP1170(1st Edition), Section 9.7.4;API RP1170(1st Edition), Section 9.7.1)

42. O&M Procedures - Records Requirements *Do records demonstrate that the required O&M inspections, testing, calibration, and monitoring activities are documented and retained in accordance with the O&M Procedure requirements?* (UNGS.CAVERNOPS.OMRECORDS.R) 192.12(c) (192.12(a);API RP1170(1st Edition), Section 9.7.4;API RP1170(1st Edition), Section 9.7.1)

43. Emergency Plans and Procedures *Is there an Emergency Response Plan in place to provide for the safe control or shutdown of the storage facility, including the storage cavern(s), in the event of a failure or other emergency condition?* (UNGS.CAVERNOPS.EMERGPLAN.P) 192.12(c) (192.12(a);API RP1170(1st Edition), Section 9.7.1;API RP1170(1st Edition), Section 9.7.2.1)

44. Emergency Plans and Procedures *Do records demonstrate that the Emergency Response Plan provides for the safe control or shutdown of the storage facility, including the storage cavern(s), in the event of a failure or other emergency condition?* (UNGS.CAVERNOPS.EMERGPLAN.R) 192.12(c) (192.12(a);API RP1170(1st Edition), Section 9.7.1)

45. Emergency Response Plans - Annual Review *Is the Emergency Response Plan / Emergency Preparedness Plan (or manual) required to be reviewed and updated at intervals not exceeding 15 months, but at least once each calendar year?* (UNGS.CAVERNOPS.EMERGPLANRVW.P) 192.12(c) (192.12(a))

46. Emergency Response Plans - Annual Review *Do records demonstrate the Emergency Response Plan / Emergency Preparedness Plan (or manual) was reviewed and updated at intervals not exceeding 15 months, but at least once each calendar year?* (UNGS.CAVERNOPS.EMERGPLANRVW.R) 192.12(c) (192.12(a))

47. Blowout Contingency Plan *Is there a Blowout Contingency Plan in place to address an uncontrolled release of gas (loss of well control) from the cavern?* (UNGS.CAVERNOPS.BLOWOUTPLAN.P) 192.12(c) (192.12(a);API RP1170(1st Edition), Section 9.7.3;API RP1170(1st Edition), Section 9.7.1)

48. Blowout Contingency Plan *Do records demonstrate that procedures in the Blowout Contingency Plan were designed to address an uncontrolled release of gas (loss of well control) from the cavern?* (UNGS.CAVERNOPS.BLOWOUTPLAN.R) 192.12(c) (192.12(a);API RP1170(1st Edition), Section 9.7.3;API RP1170(1st Edition), Section 9.7.1)

49. Operations and Maintenance (O&M) Training *Is there a personnel Training Program in place to address normal (routine) operations, abnormal operations, and emergency conditions?* (UNGS.CAVERNOPS.OMTRAINING.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);192.12(c);API RP1170(1st Edition), Section 9.7.5;API RP1170(1st Edition), Section 9.7.1)

50. Operations and Maintenance (O&M) Training *Do records demonstrate that the Training Program was designed to address normal (routine) operations, abnormal operations, and emergency conditions?* (UNGS.CAVERNOPS.OMTRAINING.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 9.7.5;API RP1170(1st Edition), Section 9.7.1)

Underground Natural Gas Storage - Caverns - Integrity Monitoring

1. Cavern System Integrity Monitoring Program *Is there a formally written Integrity Monitoring Program in place?* (UNGS.CAVERNINTEG.IMMONITOR.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.3;API RP1170(1st Edition), Section 10.1)

2. Cavern System Integrity Monitoring Program *Do records demonstrate that the Integrity Monitoring Program has been formally written and implemented?* (UNGS.CAVERNINTEG.IMMONITOR.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.3;API RP1170(1st Edition), Section 10.1)

3. Holistic and Comprehensive Approach to Integrity *Is a holistic and comprehensive approach in place for monitoring cavern integrity for design, monitoring, and engineering evaluation?* (UNGS.CAVERNINTEG.IMAPPROACH.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.2)

4. Holistic and Comprehensive Approach to Integrity *Do records demonstrate that a holistic and comprehensive approach to cavern system integrity has been undertaken?* (UNGS.CAVERNINTEG.IMAPPROACH.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.2)

5. Cavern System Integrity Monitoring - Methods *Does the process require monitoring of the cavern system to ensure ongoing functional integrity using the monitoring methods listed in RP1170 Section 10.1 Table 1 in the Integrity Monitoring Program?* (UNGS.CAVERNINTEG.IMMETHODS.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.1;API RP1170(1st Edition), Section 10.3;API RP1170(1st Edition), Section 10.4)

6. Cavern System Integrity Monitoring - Methods *Do records demonstrate that the cavern system is being monitored to ensure ongoing functional integrity?* (UNGS.CAVERNINTEG.IMMETHODS.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.1;API RP1170(1st Edition), Section 10.3;API RP1170(1st Edition), Section 10.4)

7. Cavern System Integrity Monitoring - Observations *Do field observations verify that the cavern system is being monitored according to procedures and to ensure the continuance of functional integrity?* (UNGS.CAVERNINTEG.IMMETHODS.O) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.1;API RP1170(1st Edition), Section 10.3;API RP1170(1st Edition), Section 10.4)

8. Integrity Monitoring Program - Components *Does the Integrity Monitoring Program include identification of cavern systems components to be monitored?* (UNGS.CAVERNINTEG.IMPROGCOMP.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.3)

9. Integrity Monitoring Program - Components *Do records demonstrate what cavern systems components need to be monitored per the Integrity Monitoring Program?* (UNGS.CAVERNINTEG.IMPROGCOMP.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.3)

10. Integrity Monitoring Program - Cavern Volume & Inventory *Does the Integrity Monitoring Program require cavern volume and inventory verification?* (UNGS.CAVERNINTEG.IMPROGVOL.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.3)

11. Integrity Monitoring Program - Cavern Volume & Inventory *Do records reflect that cavern volume and inventory verification have been conducted in accordance with the Integrity Monitoring Program?* (UNGS.CAVERNINTEG.IMPROGVOL.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.3)

12. Cavern System Integrity Monitoring - Methods 2 *Do records demonstrate that all of the employed integrity monitoring methods are being conducted/applied according to the Integrity Monitoring Program procedure(s)?* (UNGS.CAVERNINTEG.IMMETHODS2.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.1;API RP1170(1st Edition), Section 10.3;API RP1170(1st Edition), Section 10.4)

13. Integrity Monitoring Program - Frequency *Does the Integrity Monitoring Program require a specific monitoring frequency for each integrity monitoring method employed?* (UNGS.CAVERNINTEG.IMPROGFREQ.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.3)

14. Integrity Monitoring Program - Frequency *Do records demonstrate that the frequency of cavern integrity monitoring has been followed in accordance with the Integrity Monitoring Program?* (UNGS.CAVERNINTEG.IMPROGFREQ.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.3)

15. Integrity Monitoring Program - Data Analysis *Does the Integrity Monitoring Program require incorporation of data analysis from inspections and reporting?* (UNGS.CAVERNINTEG.IMPROGDATA.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.3)

16. Integrity Monitoring Program - Data Analysis *Do records demonstrate that the data from inspections and reporting has been analyzed and incorporated into the Integrity Monitoring Program?* (UNGS.CAVERNINTEG.IMPROGDATA.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.3)

17. Integrity Monitoring Program - Archiving Results *Is there a process in place to archive results of the Integrity Monitoring Program?* (UNGS.CAVERNINTEG.IMPROGRESULTS.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.3)

18. Integrity Monitoring Program - Archiving Results *Do records demonstrate that the results of the Integrity Monitoring Program have been properly archived?* (UNGS.CAVERNINTEG.IMPROGRESULTS.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.3)

19. Integrity Monitoring Program - Effectiveness Reviews *Is there a process to periodically review the effectiveness of the Integrity Monitoring Program and the monitoring methods employed?* (UNGS.CAVERNINTEG.IMPROGEFF.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.4;API RP1170(1st Edition), Section 10.3;API RP1170(1st Edition), Section 10.1)

20. Integrity Monitoring Program - Effectiveness Reviews *Do records demonstrate that the Integrity Monitoring Program and the monitoring methods have been reviewed for effectiveness?* (UNGS.CAVERNINTEG.IMPROGEFF.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 10.4;API RP1170(1st Edition), Section 10.3;API RP1170(1st Edition), Section 10.1)

Underground Natural Gas Storage - Caverns - Abandonment

1. Cavern Abandonment - Removal of Gas *Does the cavern abandonment process include the evacuation of natural gas, to the extent practicable, with saturated brine or with raw water?* (UNGS.CAVERNABAND.GASREMOVE.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 11.3)

2. Cavern Abandonment - Removal of Gas *Do records demonstrate that the cavern has been evacuated to the maximum practicable extent?* (UNGS.CAVERNABAND.GASREMOVE.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 11.3)

3. Cavern Abandonment - Long-Term Well Monitoring *Does the cavern abandonment process require a long-term monitoring program for cavern wells that are not plugged?* (UNGS.CAVERNABAND.MONITOR.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 11.8)

4. Cavern Abandonment - Long-Term Well Monitoring *Do records demonstrate that a long-term monitoring program was developed and implemented for cavern wells that are not plugged?* (UNGS.CAVERNABAND.MONITOR.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 11.8)

5. Cavern Abandonment - Long-Term Monitoring Program *Does the long-term monitoring program for abandoned cavern wells follow the criteria of API RP1170(1st Edition), Section 10.3 for integrity monitoring programs?* (UNGS.CAVERNABAND.MONITORPROG.P) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 11.8;API RP1170(1st Edition), Section 10.3)

6. Cavern Abandonment - Long-Term Monitoring Program *Do records demonstrate that the long-term monitoring program for abandoned cavern wells follows API RP1170(1st Edition), Section 10.3?* (UNGS.CAVERNABAND.MONITORPROG.R) 192.12(a)(3) (192.12(a)(1);192.12(a)(2);API RP1170(1st Edition), Section 11.8;API RP1170(1st Edition), Section 10.3)

Section 114 - Section 114 - Gas Transmission

1. Scoping - Inspection Coverage *What are your assets comprised of?* (SRN.114.INSPECTCVRG.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

2. Scoping - Gas Transportation *Do you transport natural gas as a specific commodity (i.e., not a byproduct or constituent of another substance)?* (SRN.114.GASTRANSPORT.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

3. Scoping - Driver or Engines *Do you use natural gas-fueled drivers or engines to compress natural gas?* (SRN.114.DRIVERENGINE.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

4. Scoping - Use of Natural Gas *Do you use natural gas for fuel or power appurtenances or instrument gas on regulated facilities?* (SRN.114.NGUSE.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

5. Compressors *Do the maintenance and operations procedures for compressors include provisions to minimize fugitive natural gas losses?* (114.114.COMPRESSOR.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

6. Drivers & Engines *Do maintenance procedures include measures for monitoring and correcting incomplete combustion of natural gas in driver or engine exhausts and taking corrective action if identified?* (114.114.DRIVERENGINE.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

7. Leaks & Releases - Identification of Fugitive Emissions *Do procedures provide a methodology for identifying sources of fugitive natural gas emissions in the system?* (114.114.LKRLSID.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

8. Leaks & Releases - Venting *Do procedures identify measures for minimizing natural gas release volumes associated with non-emergency venting and blowdowns from operations and maintenance?* (114.114.LKRLSVENT.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

9. Leaks & Releases - Investigation of Unanticipated Vented Releases *Do procedures provide for investigation of any unanticipated vented releases of natural gas, and if so, what are the associated actions?* (114.114.LKRLSUNEXPCTVENT.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

10. Leaks & Releases - Leak Data Collection and Analysis *Do procedures include a methodology to collect, retain and analyze detailed information from detected natural gas leaks, including those eliminated by lubrication, adjustment, tightening or otherwise below thresholds for regulatory reporting?* (114.114.LKRLSLKDATA.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

11. Leaks & Releases - Detecting Leaks *Do procedures include instructions for personnel to detect leaks to help further reduce emission in stations and along the right of way?* (114.114.LKRLSDETECTLK.P) 49 U.S.C. 60108(a)

12. Leak Mitigation & Repair - Repair Procedures *Do procedures provide alternatives to cutouts (to reduce emissions)?* (114.114.LKMITGRPRREPAIR.P) 49 U.S.C. 60108(a)

13. Testing - Emergency Shutdown Devices *Do procedures contain measures for ensuring ESD testing minimizes natural gas releases?* (114.114.TESTESD.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

14. Testing - Relief Valves *Do relief valve testing procedures include measures to minimize natural gas releases?* (114.114.TESTRELIEFVLV.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

15. Flaring *Do procedures for flaring from pipeline facilities for transporting natural gas include measures for minimization of natural gas emissions?* (114.114.FLARE.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

16. General - Feedback to Design/Configuration Practices *Do operation and maintenance procedures contain mechanisms for identifying potential design/configuration changes for reducing natural gas releases?* (114.114.GNLDSGNCNFG.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

17. General - Compressor Station *Do procedures contain mechanisms for minimizing natural gas emissions from operations and maintenance activities within a compressor station (i.e., beyond compressor/driver-specific procedures)?* (114.114.GNLCMPSTATION.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

18. Leak-Prone: Leaks & Releases *What procedures are in place to monitor for and identify pipe segments that are leak-prone, and what criteria (e.g., frequency of leak or failure events) are specified for determining a pipeline segment is leak-prone?* (114.LEAKPRONE.LKRLS.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

19. Leak-Prone: Leaks & Releases - Leak Data Collection and Analysis *Do procedures include a methodology to collect, retain and analyze detailed information from detected leaks, including those eliminated by lubrication, adjustment, tightening or otherwise below thresholds for regulatory reporting?* (114.LEAKPRONE.LKRLSLKDATA.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

20. Leak-Prone: Leaks Mitigation & Repair - Replacement and Remediation (Example Section 114 Materials) *Do procedures identify cast iron, unprotected steel, wrought iron, and vintage plastic pipe with known leak issues?* (114.LEAKPRONE.LKMITGRPREXAMPLE.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

21. Leak-Prone: Leak Mitigation & Repair - Replacement and Remediation (Other Materials) *Do procedures clearly define a process to address replacement or remediation of pipe segments with known leak issues beyond those specifically identified in Section 114?* (114.LEAKPRONE.LKMITGRPROTHER.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Section 114 - Section 114 - Underground Natural Gas Storage

1. Scoping - Inspection Coverage *What are your assets comprised of?* (SRN.114.INSPECTCVRG.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

2. Scoping - Gas Transportation *Do you transport natural gas as a specific commodity (i.e., not a byproduct or constituent of another substance)?* (SRN.114.GASTRANSPORT.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

3. Scoping - Driver or Engines *Do you use natural gas-fueled drivers or engines to compress natural gas?* (SRN.114.DRIVERENGINE.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

4. Scoping - Use of Natural Gas *Do you use natural gas for fuel or power appurtenances or instrument gas on regulated facilities?* (SRN.114.NGUSE.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

5. Compressors *Do the maintenance and operations procedures for compressors include provisions to minimize fugitive natural gas losses?* (114.114.COMPRESSOR.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

6. Drivers & Engines *Do maintenance procedures include measures for monitoring and correcting incomplete combustion of natural gas in driver or engine exhausts and taking corrective action if identified?* (114.114.DRIVERENGINE.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

7. Leaks & Releases - Venting *Do procedures identify measures for minimizing natural gas release volumes associated with non-emergency venting and blowdowns from operations and maintenance?* (114.114.LKRLSVENT.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

8. Leaks & Releases - Investigation of Unanticipated Vented Releases *Do procedures provide for investigation of any unanticipated vented releases of natural gas, and if so, what are the associated actions?* (114.114.LKRLSUNEXPCTVENT.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

9. Leaks & Releases - Leak Data Collection and Analysis *Do procedures include a methodology to collect, retain and analyze detailed information from detected natural gas leaks, including those eliminated by lubrication, adjustment, tightening or otherwise below thresholds for regulatory reporting?* (114.114.LKRLSLKDATA.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

10. Leaks & Releases - Wellhead *Do procedures provide for periodic leakage surveys around the wellhead?* (114.114.LKRLSWELLHD.P) 49 U.S.C. 60108(a)

11. Leaks & Releases - Annulus *Do procedures provide for periodic checking of wellhead annuluses for indications of leaks (e.g., unexplained pressure variations)?* (114.114.LKRLSANN.P) 49 U.S.C. 60108(a)

12. Leaks & Releases - Field Integrity *Do procedures provide for leak surveys for well casing containment or geologic issues?* (114.114.LKRLSFIELD.P) 49 U.S.C. 60108(a)

13. Testing - Relief Valves *Do relief valve testing procedures include measures to minimize natural gas releases?* (114.114.TESTRELIEFVLV.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

14. General - Feedback to Design/Configuration Practices *Do operation and maintenance procedures contain mechanisms for identifying potential design/configuration changes for reducing natural gas releases?* (114.114.GNLDSGNCNFG.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

15. Leak-Prone: Leaks & Releases *What procedures are in place to monitor for and identify pipe segments that are leak-prone, and what criteria (e.g., frequency of leak or failure events) are specified for determining a pipeline segment is leak-prone?* (114.LEAKPRONE.LKRLS.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

16. Leak-Prone: Leaks & Releases - Leak Data Collection and Analysis *Do procedures include a methodology to collect, retain and analyze detailed information from detected leaks, including those eliminated by lubrication, adjustment, tightening or otherwise below thresholds for regulatory reporting?* (114.LEAKPRONE.LKRLSLKDATA.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

17. Leak-Prone: Leaks Mitigation & Repair - Replacement and Remediation (Example Section 114 Materials) *Do procedures identify cast iron, unprotected steel, wrought iron, and vintage plastic pipe with known leak issues?* (114.LEAKPRONE.LKMITGRPREXAMPLE.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

18. Leak-Prone: Leak Mitigation & Repair - Replacement and Remediation (Other Materials) *Do procedures clearly define a process to address replacement or remediation of pipe segments with known leak issues beyond those specifically identified in Section 114?* (114.LEAKPRONE.LKMITGRPROTHER.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Section 114 - Section 114 - Gas Gathering & Boosting

1. Scoping - Inspection Coverage *What are your assets comprised of?* (SRN.114.INSPECTCVRG.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

2. Scoping - Gas Transportation *Do you transport natural gas as a specific commodity (i.e., not a byproduct or constituent of another substance)?* (SRN.114.GASTRANSPORT.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

3. Scoping - Driver or Engines *Do you use natural gas-fueled drivers or engines to compress natural gas?* (SRN.114.DRIVERENGINE.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

4. Scoping - Use of Natural Gas *Do you use natural gas for fuel or power appurtenances or instrument gas on regulated facilities?* (SRN.114.NGUSE.S)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

5. Compressors *Do the maintenance and operations procedures for compressors include provisions to minimize fugitive natural gas losses?* (114.114.COMPRESSOR.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

6. Drivers & Engines *Do maintenance procedures include measures for monitoring and correcting incomplete combustion of natural gas in driver or engine exhausts and taking corrective action if identified?* (114.114.DRIVERENGINE.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

7. Leaks & Releases - Identification of Fugitive Emissions *Do procedures provide a methodology for identifying sources of fugitive natural gas emissions in the system?* (114.114.LKRLSID.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

8. Leaks & Releases - Venting *Do procedures identify measures for minimizing natural gas release volumes associated with non-emergency venting and blowdowns from operations and maintenance?* (114.114.LKRLSVENT.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

9. Leaks & Releases - Investigation of Unanticipated Vented Releases *Do procedures provide for investigation of any unanticipated vented releases of natural gas, and if so, what are the associated actions?* (114.114.LKRLSUNEXPCTVENT.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

10. Leaks & Releases - Leak Data Collection and Analysis *Do procedures include a methodology to collect, retain and analyze detailed information from detected natural gas leaks, including those eliminated by lubrication, adjustment, tightening or otherwise below thresholds for regulatory reporting?* (114.114.LKRLSLKDATA.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

11. Testing - Emergency Shutdown Devices *Do procedures contain measures for ensuring ESD testing minimizes natural gas releases?* (114.114.TESTESD.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

12. Testing - Relief Valves *Do relief valve testing procedures include measures to minimize natural gas releases?* (114.114.TESTRELIEFVLV.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

13. Flaring *Do procedures for flaring from pipeline facilities for transporting natural gas include measures for minimization of natural gas emissions?* (114.114.FLARE.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

14. General - Feedback to Design/Configuration Practices *Do operation and maintenance procedures contain mechanisms for identifying potential design/configuration changes for reducing natural gas releases?* (114.114.GNLDSGNCNFG.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

15. General - Compressor Station *Do procedures contain mechanisms for minimizing natural gas emissions from operations and maintenance activities within a compressor station (i.e., beyond compressor/driver-specific procedures)?* (114.114.GNLCMPSTATION.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

16. Leak-Prone: Leaks & Releases *What procedures are in place to monitor for and identify pipe segments that are leak-prone, and what criteria (e.g., frequency of leak or failure events) are specified for determining a pipeline segment is leak-prone?* (114.LEAKPRONE.LKRLS.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

17. Leak-Prone: Leaks & Releases - Leak Data Collection and Analysis *Do procedures include a methodology to collect, retain and analyze detailed information from detected leaks, including those eliminated by lubrication, adjustment, tightening or otherwise below thresholds for regulatory reporting?* (114.LEAKPRONE.LKRLSLKDATA.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

18. Leak-Prone: Leaks Mitigation & Repair - Replacement and Remediation (Example Section 114 Materials) *Do procedures identify cast iron, unprotected steel, wrought iron, and vintage plastic pipe with known leak issues?* (114.LEAKPRONE.LKMITGRPREXAMPLE.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

19. Leak-Prone: Leak Mitigation & Repair - Replacement and Remediation (Other Materials) *Do procedures clearly define a process to address replacement or remediation of pipe segments with known leak issues beyond those specifically identified in Section 114?* (114.LEAKPRONE.LKMITGRPROTHER.P) 49 U.S.C. 60108(a)
Note: this question is presented in multiple places so you will see multiple instances of it on this report.

Generic Questions - Generic Questions - Special Permits

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

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

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

Generic Questions - Generic Questions

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

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

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

Generic Questions - NTSB Recommendations Review

1. NTSB Recommendations Review *Does the operator have procedures in place for reviewing NTSB Recommendations?* (GENERIC.NTSB.NTSBREVIEW.P)

2. NTSB Recommendations Review *Do the records verify operator conducted reviews of NTSB recommendations and implemented appropriate actions?* (GENERIC.NTSB.NTSBREVIEW.R)