

## Assessment and Repair - External Corrosion Direct Assessment (ECDA)

**1. 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) 195.505 (195.452(b)(5);195.452(f)(8);195.555)

**2. 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) 195.505 (195.452(f)(8);195.555)

**3. Qualification of Operator/Vendor Personnel Who Evaluate ECDA Results** *Do the records indicate 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) 195.507 (195.452(l)(1);195.555)

**4. ECDA Plan** *Is there a process in place for conducting ECDA?* (AR.EC.ECDAPLAN.P) 195.588(b)(1) (195.588(b)(2) - (5);195.452(f)(5);195.452(j)(5)(iii))

**5. ECDA Pre-Assessment** *Do the records indicate that the ECDA pre-assessment process complied with NACE SP0502-2010 Section 3?* (AR.EC.ECDAPREASSESS.R) 195.589(c) (195.588(b)(2);195.452(l)(1)(ii);195.452(j)(5)(iii);195.452(f)(5))

**6. Integration of ECDA Results with Other Information** *Does the process include integrating ECDA results with other information?* (AR.EC.ECDAINTEGRATION.P) 195.452(f)(3) (195.452(g);195.588(b))

**7. Integration of ECDA Results with Other Information** *Do the records indicate that the operator integrated other data/information when evaluating data/results?* (AR.EC.ECDAINTEGRATION.R) 195.452(l)(1)(ii) (195.452(f)(3);195.452(g);195.588(b))

**8. ECDA Region Identification** *Do the records indicate that the operator identified ECDA Regions?* (AR.EC.ECDAREGION.R) 195.589(c) (195.588(b)(2)(ii);195.588(b)(3);195.588(b)(5)(ii);195.452(l)(1)(ii);195.452(f)(5);195.452(j)(5)(iii);195.588(b)(1))

**9. ECDA Indirect Examination** *Do the records indicate that the ECDA indirect inspection process complied with NACE SP0502-2010?* (AR.EC.ECDAINDIRECT.R) 195.589(c) (195.588(b)(3);195.452(l)(1)(ii);195.452(f)(5);195.452(j)(5)(iii))

**10. ECDA Direct Examination** *Do the records indicate that excavations, direct examinations, and data collection were performed in accordance with NACE SP0502-2010, Section 5?* (AR.EC.ECDADIRECT.R) 195.589(c) (195.588(b)(4);195.452(l)(1)(ii);195.452(f)(5);195.452(j)(5)(iii))

**11. ECDA Direct Examination** *Were ECDA direct examinations conducted in accordance with the plan?* (AR.EC.ECDADIRECT.O) 195.588(b)(4) (195.588(b)(1);195.452(b)(5);195.452(f)(5);)

**12. Quality of ECDA Data Analysis** *Do the records indicate 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) 195.452(l)(1)(ii) (195.452(g);195.452(f)(3);195.452(j)(5)(iii))

**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) 195.588(b)(4)(iii) (195.452(f)(4))

**14. ECDA Change Control** *Do the records indicate that changes in the ECDA plan have been implemented and documented?* (AR.EC.ECDAPLANMOC.R) 195.589(c) (195.588(b)(4)(iii);195.452(l)(1)(ii);195.452(f)(4))

**15. ECDA Post-Assessment** *Do the records indicate that the requirements for post assessment were implemented?* (AR.EC.ECDAPOSTASSESS.R) 195.589(c) (195.588(b)(5);195.452(l)(1)(ii);195.452(f)(4))

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

**1. Qualification of Personnel Who Conduct SCCDA** *Does the process require that operator and vendor personnel, including supervisors, who apply SCCDA methodology and/or review and evaluate SCCDA assessment results meet appropriate training, experience, and qualification criteria?* (AR.SCC.SCCDAREVQUAL.P) 195.588(c) (195.452(f)(5);195.555)

**2. Qualification of Personnel Who Conduct SCCDA** *Do the records indicate that operator/vendor personnel, including supervisors, who apply SCCDA methodology and/or conduct assessments or review assessment results, are qualified for the tasks they perform?* (AR.SCC.SCCDAREVQUAL.R) 195.507 (195.452(l)(1)(ii);195.588(c);195.555)

**3. SCCDA - The Plan** *Where operator uses direct assessment on an onshore pipeline to evaluate the effects of stress corrosion cracking, does the operator have a Stress Corrosion Cracking Direct Assessment (SCCDA) Plan that includes all the requirements of 195.588(c) and all the requirements and recommendations of NACE SP0204-2015 (IBR)?* (AR.SCC.SCCDAPLAN.P) 195.588(c) (195.452(f)(5))

**4. SCCDA - Pre-Assessment (Data Collection and Evaluation)** *Do the records indicate that data was collected and evaluated / integrated in accordance with the Pre-Assessment data gathering and integration requirements?* (AR.SCC.SCCDAPREASSESS.R) 195.589(c) (195.452(l)(1)(ii);195.588(c);195.452(g))

**5. SCCDA - Indirect Inspections** *Do the records indicate that the operator conducted Indirect Inspections via aboveground or other types of measurements, in accordance with NACE SP0204-2015, Section 4?* (AR.SCC.SCCDAINDIRINSP.R) 195.589(c) (195.452(l)(1)(ii);195.588(c))

**6. SCCDA - Remediate & Mitigate** *Do the records indicate that the operator prioritized and conducted mitigation activities to address locations at which significant SCC has been detected, in accordance with NACE SP0204-2015, Section 6?* (AR.SCC.SCCDAREMEDIATE.R) 195.589(c) (195.452(l)(1)(ii);195.588(c))

**7. SCCDA - Post-Assessment** *Do the records indicate that the operator conducted the Post-Assessment Step to determine whether SCC mitigation is required, in accordance with NACE SP0204-2015, Section 6?* (AR.SCC.SCCDAPOSTASSESS.R) 195.589(c) (195.452(l)(1)(ii);195.588(c);195.452(g))

**8. SCCDA - Periodic Reassessment Interval** *Do the records indicate that the operator determined a re-assessment interval based on analysis of SCCDA results?* (AR.SCC.SCCDAREASSESSINTRVL.R) 195.589(c) (195.452(l)(1)(ii);195.588(c))

**9. SCCDA - Determining Effectiveness** *Do the records indicate that the operator evaluated the effectiveness of the SCCDA approach used in its SCCDA Plan?* (AR.SCC.SCCDAEFFMETHODS.R) 195.589(c) (195.452(l)(1)(ii);195.588(c))

**10. SCCDA - Performance Observations** *From field observations, was SCCDA performed in accordance with the SCCDA plan?* (AR.SCC.SCCDAALL.O) 195.588(c) (195.505)

## Assessment and Repair - Integrity Assessments

**1. ILI Method for Baseline Assessments (Beginning July 1, 2020)** *Beginning July 1, 2020, does the Baseline Assessment Plan include inline inspection tools to assess line pipe based on the range of relevant threats to the pipeline segment?* (AR.IA.BAPMETHOD.P) 195.452(f)(2) (195.452(c)(1)(i);195.452(c)(1)(i)(A))

**2. ILI Method for Baseline Assessments (Beginning July 1, 2020)** *For baseline assessments performed on or after July 1, 2020, were the assessments completed using the appropriate assessment method(s)?* (AR.IA.BAPMETHOD.R) 195.452(l)(1)(ii) (195.452(c)(1)(i))

**3. IMP Assessment Methods** *Does the process specify assessment methods that are appropriate for the pipeline integrity threats?* (AR.IA.METHOD.P) 195.452(f)(5) (195.452(j)(5);195.452(c)(1)(i)(A);195.591;195.588)

**4. IMP Assessment Methods** *Do the records indicate that the assessment methods shown in the assessment plan are appropriate for the pipeline specific integrity threats?* (AR.IA.METHOD.R) 195.452(l)(1)(ii) (195.452(f)(5);195.452(j)(5);195.452(c)(1)(i)(A);195.591;195.588)

**5. IMP Baseline and/or Continual Assessments Prioritized Assessment Schedule** *Does the process for assessment include a prioritized schedule in accordance with 195.452(d) for baseline assessments and 195.452(j) for continual assessments that is based on all the risk factors required by 195.452(e)?* (AR.IA.ASSESSSCHEDULE.P) 195.452(f)(5) (195.452(j)(3);195.452(j)(5);195.452(e);195.452(g);195.591;195.452(d)(1);195.452(n))

**6. IMP Baseline and/or Continual Assessments Prioritized Assessment Schedule** *Do the records indicate that assessments are implemented as specified in the assessment plan?* (AR.IA.ASSESSSCHEDULE.R) 195.452(l)(1)(ii) (195.452(b)(5);195.452(c);195.452(d);195.452(f)(5);195.452(j)(3);195.452(j)(5);195.591)

**7. Qualification of Personnel Who Evaluate Integrity Assessment Results and Perform Information Analysis** *Does the process specify qualification requirements for personnel who review and evaluate integrity assessment results and information analysis?* (AR.IA.REVIEWQUAL.P) 195.452(f)(8) (195.452(g);195.452(h)(2))

## **8. Qualification of Personnel Who Evaluate Integrity Assessment Results and Perform Information Analysis**

*Do the records indicate that personnel who review and evaluate integrity assessment results and information analysis are qualified?* (AR.IA.REVIEWQUAL.R) 195.452(l)(1)(ii) (195.452(f)(8);195.452(g);195.452(h)(2))

## **9. Industry Practices**

*Does the process incorporate recognized industry practices, or an acceptable alternative method, in performing integrity assessments?* (AR.IA.STANDARDS.P) 195.452(f)(5) (195.452(b)(6))

## **10. Industry Practices**

*Do the records indicate that recognized industry practices, or an acceptable alternative method, have been incorporated in performing integrity assessments?* (AR.IA.STANDARDS.R) 195.452(l)(1)(ii) (195.452(b)(6))

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

## **1. Qualification of Personnel Performing ILI**

*Does the process identify the qualification requirements for personnel who perform ILI (In Line Inspections)?* (AR.IL.ILIIMPLPERQUAL.P) 195.452(f)(5) (195.591)

## **2. Qualification of Personnel Performing ILI**

*Do the records indicate that personnel who perform ILI (In Line Inspections) are qualified and certified (where applicable)?* (AR.IL.ILIIMPLPERQUAL.R) 195.591 (195.452(l)(1)(ii);195.452(f)(5))

## **3. Qualification of Personnel Who Evaluate ILI Results and Perform Information Analysis**

*Does the process specify qualification requirements for personnel who review and evaluate ILI integrity assessment results and information analysis?* (AR.IL.ILIREVIEWQUAL.P) 195.452(f)(8) (195.452(g))

## **4. Qualification of Personnel Who Evaluate ILI Results and Perform Information Analysis**

*Do the records indicate that personnel who review and evaluate ILI integrity assessment results and information analysis are qualified?* (AR.IL.ILIREVIEWQUAL.R) 195.452(l)(1)(ii) (195.452(f)(8);195.452(g))

## **5. ILI Specifications**

*Does the process include adequate ILI requirements for the qualification of in-line inspection systems, including personnel, equipment, processes, and software utilization?* (AR.IL.ILISPECS.P) 195.452(f)(5) (195.452(h);195.452(j);195.591)

**6. ILI Specifications** *Do the records indicate that ILI requirements for the qualification of in-line inspection systems, including personnel, equipment, processes, and software utilization were included and followed?* (AR.IL.ILISPECS.R) 195.452(l)(1)(ii) (195.452(f)(5);195.452(h);195.452(j);195.591)

**7. Validation of ILI Results** *Does the process include the validation of ILI results?* (AR.IL.ILIVALIDATE.P) 195.452(f)(4) (195.452(j)(5)(i);195.452(h);195.591)

**8. Validation of ILI Results** *Do the records for validating ILI assessment results indicate that the process was implemented?* (AR.IL.ILIVALIDATE.R) 195.452(l)(1)(ii) (195.452(j)(5)(i);195.452(f)(4);195.452(h);195.452(c)(1);195.591;195.452(c)(1)(i)(A))

**9. Integration of ILI Results with Other Information** *Does the process for evaluating ILI results include integration of all available information about the integrity of the pipeline?* (AR.IL.ILIINTEGRATION.P) 195.452(f)(3) (195.452(g);195.452(h))

**10. Integration of ILI Results with Other Information** *Do the records indicate that the operator integrated other data/information when evaluating ILI tool data/results?* (AR.IL.ILIINTEGRATION.R) 195.452(l)(1)(ii) (195.452(g);195.452(f)(3);195.452(h))

**11. Compliance with ILI Procedures** *Have the ILI procedures been followed?* (AR.IL.ILIIMPLEMENT.O) 195.452(b)(5)

**12. Petitioning the PHMSA Administrator When Lines Cannot be Modified to Accommodate ILI** *Beginning July 1, 2020, does the process include provisions to petition the PHMSA Administrator when IM-covered segments cannot be modified to accommodate ILI?* (AR.IL.PETIONILI.P) 195.402(c)(3) (195.452(n))

**13. Petitioning the PHMSA Administrator when Lines Cannot be Modified to Accommodate ILI** *Were petitions filed because pipelines could not be modified to accommodate ILI?* (AR.IL.PETIONILI.R) 195.452(n)

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

**1. Pipeline Assessment Methods** *Does the process specify assessment methods that are appropriate for the pipeline integrity threats?* (AR.PA.METHOD.P) 195.402(c) (195.416(c);195.591;195.588(a);195.588(b);195.588(c))

**2. Pipeline Assessment Methods** *Do records indicate that the assessment methods shown in the assessment plan are appropriate for the pipeline specific integrity threats?* (AR.PA.METHOD.R) 195.404(c) (195.416(c);195.591;195.588(a);195.588(b);195.588(c))

**3. Qualification of Personnel Who Analyze Pipeline Data Obtained from Assessment** *Does the process specify qualification requirements for a person who analyze the data obtained from an assessment?* (AR.PA.REVIEWQUAL.P) 195.402(c) (195.416(e);195.591)

**4. Qualification of Personnel Who Analyze Pipeline Data Obtained from Assessment** *Do records indicate that personnel who analyze the data obtained from an assessment are qualified?* (AR.PA.REVIEWQUAL.R) 195.404(c) (195.416(e);195.591)

**5. Industry Practices** *Does the process to perform pipeline assessments incorporate required industry practices in performing pipeline assessments and identifying anomalies?* (AR.PA.STANDARDS.P) 195.402(c) (195.591)

**6. Industry Practices** *Do records indicate that pipeline in-line inspection assessments used industry practices in performing pipeline assessments and identifying anomalies?* (AR.PA.STANDARDS.R) 195.404(c) (195.591;195.416(c))

**7. Timely Discovery** *Does the pipeline assessment process define "discovery of condition" and the required time frame for identification of anomalies to be remediated?* (AR.PA.DISCOVERY.P) 195.402(c) (195.416(f);195.401(b)(1);195.416(h))

**8. Timely Discovery** *Do records indicate that "discovery of condition" results for all anomalies occurred promptly, but no later than 180 days after the completion of the pipeline assessment?* (AR.PA.DISCOVERY.R) 195.404(c) (195.416(f);195.401(b)(1);195.416(h))

**9. Crack Remediation Criteria** *If the pipeline is susceptible to cracking, does the process include criteria for remedial actions to address integrity issues raised by the assessment method?* (AR.PA.CRACKREMEDIATION.P) 195.402(c) (195.416;195.401(b)(1);195.591)

**10. Crack Remediation Criteria** *If the pipeline is susceptible to cracking, do records indicate that the remedial actions have been documented?* (AR.PA.CRACKREMEDIATION.R) 195.404(c) (195.416(g);195.416(h);195.401(b)(1);195.591)

## Assessment and Repair - Integrity Assessment Via Pressure Test

**1. Pressure Test Acceptance Criteria and Procedures** *Does the process define acceptance criteria for a successful pressure test?* (AR.PTI.PRESSTESTACCEP.P) 195.452(f)(5) (195.304;195.305;195.306;195.308;195.452(j)(5)(ii))

**2. Quality and Effectiveness of Corrosion Control Program** *Does the process require that the effectiveness of the corrosion control program be evaluated when using pressure testing as an integrity assessment?* (AR.PTI.PRESSTESTCORR.P) 195.452(f)(3) (195.452(g)(3))

**3. Conduct of Pressure Tests** *Was the pressure test conducted in accordance with the procedures?* (AR.PTI.PRESSTESTRESULT.O) 195.452(b)(5) (195.452(c)(1)(i)(B);195.452(j)(5)(ii);195.304)

**4. Conduct of Pressure Tests** *Do the pressure test records indicate compliance with Part 195, Subpart E?* (AR.PTI.PRESSTESTRESULT.R) 195.310 (195.452(f)(2);195.452(f)(5);195.452(c);195.452(l)(1)(ii))

**5. Quality and Effectiveness of Corrosion Control Program** *When pressure testing was used as the integrity assessment method, do the records indicate that the effectiveness of the corrosion control program was documented?* (AR.PTI.PRESSTESTCORR.R) 195.452(l)(1)(ii) (195.452(f)(3);195.452(g)(3))



## Assessment and Repair - Integrity Assessment Via Pressure Test - Risk Based Alternative

**1. Risk Based Alternative to Pressure Testing** *If applicable per 195.303, does the process include the review of risk classification of pipeline segments which have not been pressure tested (Risk Classification A)?* (AR.PTIRB.RISKBASEDALT.P) 195.303(a) (195.303(g))

**2. Risk Based Alternative to Pressure Testing** *If applicable per 195.303, do the records indicate that the risk classification of pipeline segments not pressure tested have been reviewed?* (AR.PTIRB.RISKBASEDALT.R) 195.303(h) (195.303(g))

## Assessment and Repair - Other Technology

**1. Other Technology Process** *If "Other Technologies" are used, does the process provide an equivalent understanding of the condition of the line pipe?* (AR.OT.OTPLAN.P) 195.452(f)(5) (195.452(c)(1)(i)(D);195.452(j)(5)(iv);195.416(d))

**2. Other Technology Process** *Do the records indicate that the Other Technology integrity assessments were performed in accordance with procedures and vendor recommendations?* (AR.OT.OTPLAN.R) 195.452(l)(1)(ii) (195.452(j)(5)(iv);195.452(f)(5);195.452(c)(1)(i)(D);195.416(d))

**3. Other Technology Process** *Has the process for the use of "Other Technology" been followed?* (AR.OT.OTPLAN.O) 195.452(b)(5) (195.416(d))

**4. Qualification Requirements for Personnel Who Evaluate Results of Other Technology Integrity Assessments** *Does the process specify qualification requirements for personnel who review and evaluate the results of an integrity assessment and information analysis using Other Technology?* (AR.OT.ASSESSMENTREVIEW.P) 195.452(f)(8) (195.452(j)(5);195.416(d))

**5. Qualification Requirements for Personnel Who Evaluate Results of Other Technology Integrity Assessments** *Do the records pertaining to the selected integrity assessments indicate that personnel who review and evaluate the results of an integrity assessment and information analysis using Other Technology are qualified?* (AR.OT.ASSESSMENTREVIEW.R) 195.452(l)(1)(ii) (195.452(f)(8);195.452(j)(5);195.416(d))

## Assessment and Repair - Repair Criteria (HCA)

**1. Timely Discovery** *Does the integrity assessment process define "discovery of condition" and the required time frame for anomalies in a pipeline segment that can affect an HCA? (AR.RCHCA.DISCOVERY.P) 195.452(f)(4) (195.452(h)(2))*

**2. IM Schedule** *Does the process include developing a prioritized schedule for evaluating and remediating all identified repair conditions consistent with the repair criteria and within the time frames found in 195.452(h)(4)? (AR.RCHCA.IMSCHEDULE.P) 195.452(f)(4) (195.452(h)(3);195.452(h)(4))*

**3. Consideration of Risk Consequence Factors when Scheduling Repairs in IM-Covered Segments** *For assets covered by the IM program, does the process require that the risk to people, property, and the environment be considered in prioritizing the correction of conditions? (AR.RCHCA.IMSCHEDULE2.P) 195.402(c)(3) (195.401(b)(3))*

**4. Timely Discovery** *Do the records indicate that "discovery of condition" results for all anomalies occurred promptly, but no later than 180 days after the completion of the integrity assessment? (AR.RCHCA.DISCOVERY.R) 195.452(l)(1)(ii) (195.452(h)(2);195.452(f)(4))*

**5. Inclusion of All IM Repair Criteria** *Does the process include criteria for remedial action to address integrity issues raised by the assessment methods and information analysis? (AR.RCHCA.IMPRC.P) 195.452(f)(4) (195.452(h)(1);195.452(h)(4))*

**6. Remedial Actions (IM)** *Do records indicate that anomaly remediation and documentation of remediation was performed in accordance with the process? (AR.RCHCA.REMEDIATION.R) 195.452(l)(1)(ii) (195.452(h)(3);195.452(h)(4);195.452(b)(5);195.569)*

**7. Inclusion of All IM Repair Criteria** *Do records indicate that prompt action was taken to address all anomalous conditions discovered through the integrity assessment or information analysis? (AR.RCHCA.IMPRC.R) 195.452(l)(1)(ii) (195.452(f)(4);195.452(h)(1);195.452(h)(4))*

**8. Remedial Actions (IM)** *From an observation of a remediation or repair at an excavation site, are anomaly remediation activities adequate, performed in accordance with the categorized remediation/repair schedule, and documented? (AR.RCHCA.REMEDIATION.O) 195.452(b)(5) (195.402(a);195.402(c)(14);195.422(a);195.569;195.589(c))*

**9. Remedial Actions (IM)** *Does the process require that remedial actions be performed in a manner that addresses the integrity issues raised by the assessment methods used and information analysis?* (AR.RCHCA.REMEDIATION.P) 195.452(f)(4) (195.452(h)(1);195.422(b))

**10. Pressure Reduction** *Does the process for pressure reduction meet the code requirements?* (AR.RCHCA.PRESSREDUCE.P) 195.452(f)(4) (195.428;195.452(h)(1)(i);195.452(h)(1)(ii))

**11. Pressure Reduction** *Do the integrity assessment records indicate that the pressure reduction taken was acceptable and promptly implemented?* (AR.RCHCA.PRESSREDUCE.R) 195.452(l)(1)(ii) (195.404(a);195.404(b);195.452(h)(1)(ii);195.452(h)(4)(i);195.55(a);195.56)

**12. IM Schedule** *Do the records indicate that the operator has met the schedule for remediating a condition in accordance with 195.452(h)(4)?* (AR.RCHCA.IMSCHEDULE.R) 195.452(l)(1)(ii) (195.452(h)(3);195.452(h)(4))

**13. Consideration of Risk Consequence Factors when Scheduling Repairs in IM-Covered Segments** *Do records demonstrate that the risk to people, property, and the environment was considered when prioritizing the correction of conditions occurring on assets covered by the IM program?* (AR.RCHCA.IMSCHEDULE2.R) 195.401(b)(3) (195.452(l)(1)(ii);195.404(c)(1);195.589(c))

**14. Crack Remediation Criteria** *If the pipeline is susceptible to cracking, does the process include criteria for remedial actions to address integrity issues raised by the assessment method?* (AR.RCHCA.CRACKREMEDIATION.P) 195.452(f)(4) (195.452(h);195.588(c))

**15. Crack Remediation Criteria** *If the pipeline is susceptible to cracking, do the records indicate that the remedial actions have been documented?* (AR.RCHCA.CRACKREMEDIATION.R) 195.452(l)(1)(ii) (195.452(f)(4);195.452(h)(4)(iii)(G);195.588(c))

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

**1. Repair Criteria in Non-HCA Segments** *For non-HCA pipeline segments, do the integrity assessment and maintenance processes include adequate criteria for determining the need for, and timeliness of, pipeline defect repairs?* (AR.RCOM.REPAIRNONHCA.P) 195.402(c)(3) (195.401(b)(1);195.422(a);195.422(b);195.585(a);195.585(b);195.401(b)(3))

**2. Repair Criteria in Non-HCA Segments** *For non-HCA pipeline segments, do the records for selected ILI and remediation projects indicate that conditions were repaired that posed a threat to pipeline integrity?* (AR.RCOM.REPAIRNONHCA.R) 195.404(c) (195.585(a);195.585(b);195.422(a);195.422(b);195.401(b)(1);195.401(b)(3))

**3. Remedial Actions (OM) in Non-HCA Segments** *Do the performance and documentation of remediation meet procedural requirements for non-IM repairs?* (AR.RCOM.REMEDIATIONOM.O) 195.422(a) (195.422(b);195.401(b)(1);195.402(a);195.402(c)(14);195.579(c);195.569)

## Assessment and Repair - Repair Methods and Practices

**1. Safety While Making Repair** *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) 195.402(c)(14) (195.422(a);195.452(h)(1))

**2. Safety While Making Repair** *Are repairs made in a safe manner and to prevent injury to persons and/or property damage?* (AR.RMP.SAFETY.O) 195.422(a) (195.402(c)(14);195.452(h)(1))

**3. Permissible Repair Methods** *Does the process identify permissible repair methods for each type of defect?* (AR.RMP.METHOD.P) 195.402(c)(3) (195.452(h)(1);195.585)

**4. Permissible Repair Methods** *From the review of the results of integrity assessment and remediation projects, were all repairs performed in accordance with procedures and applicable sections of 49 CFR Part 195?* (AR.RMP.METHOD.R) 195.404(c)(1) (195.422(a);195.422(b);195.452(h)(1);195.401(b)(1);195.401(b)(2))

**5. Qualification of Personnel Performing Pipeline Repair** *From the records review of the results of integrity assessment and remediation projects, were personnel performing repairs, other than welding, qualified for the task they performed?* (AR.RMP.REPAIRQUAL.R) 195.505(b) (195.507(a);195.505(c);195.452(h)(1);195.452(b)(5))

**6. Repair Records** *Do the repair records document all the information needed to understand the conditions of the pipe and its environment and also provide the information needed to support the Integrity Management program, when applicable?* (AR.RMP.PIPECONDITION.R) 195.404(c)(1) (195.404(c)(2);195.452(l)(1)(ii))

**7. Replacement Components** *Were all replaced line pipe and/or components designed and constructed as required by Part 195?* (AR.RMP.REPLACESTD.R) 195.404(a)(1) (195.422(b))

**8. Pipe Movements** *From a review of selected records, were pipeline movements performed in accordance with 195.424?* (AR.RMP.PIPEMOVE.R) 195.424(a) (195.424(b);195.424(c))

**9. Welder Qualification** *From the review of the results of integrity assessment and remediation projects, were repairs requiring welding performed by qualified welders using qualified welding procedures?* (AR.RMP.WELDERQUAL.R) 195.214(a) (195.214(b);195.222(a);195.222(b))

**10. Repair of Weld Defects** *From the review of the results of integrity assessment and remediation projects, were defects on new welds repaired in accordance with §195.226 or §195.230?* (AR.RMP.WELDQUAL.R) 195.226(a) (195.226(b);195.226(c);195.230(a);195.230(b);195.230(c))

**11. Inspection of Welds** *From the review of the results of remediation projects, were new welds inspected and examined in accordance with §195.228 or §195.234?* (AR.RMP.WELDINSPECT.R) 195.228(a) (195.228(b);195.234(a);195.234(b);195.234(c);195.234(d);195.234(e))

**12. Non-Destructive Examination (NDE) of Pipeline for Cracking When Exposed for Repair** *Does the process include appropriate NDE method(s) and other information gathering during the evaluation of cracks and cracking?* (AR.RMP.CRACKNDE.P) 195.452(f)(4) (195.452(h))

**13. Non-Destructive Examination (NDE) of Pipeline for Cracking When Exposed for Repair** *Do the records indicate that appropriate NDE method(s) were used and other information was gathered related to the evaluation of cracking?* (AR.RMP.CRACKNDE.R) 195.452(l)(1)(ii) (195.452(f)(4);195.452(h);195.404(c))

## Assessment and Repair - Special Permits

**1. Special Permits - All Four Assessment Methods** *If a pipeline operates under a special permit, has the process been modified to incorporate the requirements of the permit for the selected integrity assessment method(s)?* (AR.SP.METHODSP.P) 190.341(d) (195.452(j)(5))

**2. Special Permits - All Four Assessment Methods** *If a pipeline is operated under a special permit, from a review of selected records, were any one of the four accepted integrity assessment methods performed?* (AR.SP.METHODSP.R) 190.341(d) (195.452(j)(5))

**3. Special Permits - Repair** *If a pipeline is operated under a special permit, has the process been modified to incorporate the requirements of the permit for required repairs?* (AR.SP.REPAIRSP.P) 190.341(d)

**4. Special Permits - Repair** *If a pipeline is operated under a special permit, from a review of selected records, were repairs performed in accordance with the requirements of the permit?* (AR.SP.REPAIRSP.R) 190.341(d)

## CRM, SCADA, and Leak Detection - General

**1. Control Room Management Criteria** *Do procedures adequately address the process and criteria to determine which facilities are control rooms?* (CR.CRMGEN.CRMCRITERIA.P) 195.446(a)

**2. Control Room Management** *Are CRM procedures formalized and controlled?* (CR.CRMGEN.CRMMGMT.P) 195.446(a)

**3. Control Room Management** *Are procedures approved, in place, and implemented?* (CR.CRMGEN.CRMIMPLEMENT.R) 195.446(a)

**4. Control Room Management** *Are procedures readily available to controllers in the control room?* (CR.CRMGEN.CRMPROCLOCATION.O) 195.446(a)

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

**1. Roles and Responsibilities** *Are there clear processes to describe each controller's physical domain of responsibility for pipelines and other facility assets? (CR.CRMRR.RESPONSIBLE.P) 195.446(b)(1)*

**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) 195.446(b)(1)*

**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) 195.446(b)(1)*

**4. Roles and Responsibilities** *Do processes address a controller's role during temporary impromptu (unplanned) changes in controller responsibilities? (CR.CRMRR.RESPCHANGE.P) 195.446(b)(1)*

**5. 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) 195.446(b)(1)*

**6. Controller Authority** *Have processes been established to define the controllers' authority and responsibilities when an abnormal operating condition is detected? (CR.CRMRR.AUTHORITYABNORMAL.P) 195.446(b)(2)*

**7. Overpressure Limits** *Are controllers aware of the current MOPs of all pipeline segments for which they are responsible, and have they been assigned the responsibility to maintain those pipelines at or below the MOP? (CR.CRMRR.PRESSLIMITS.O) 195.446(b)(2)*

**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) 195.446(b)(3) (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) 195.446(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) 195.446(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) 195.446(b)(4) (195.446(c)(5))

**12. Shift Change Process** *Do observations indicate adequate hand-over of responsibility to the oncoming shift?* (CR.CRMRR.HANDOVER.O) 195.446(b)(4) (195.446(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) 195.446(b)(4) (195.446(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) 195.446(b)(4) (195.446(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) 195.446(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) 195.446(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) 195.446(b)(4)



**18. Shift Change Process - Console Coverage** *Do processes maintain adequate console coverage during shift hand-over?* (CR.CRMRR.CONSOLECOVERAGE.P) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(c)(1)

**4. SCADA Display Hardware** *Has section 5 of API RP 1165(1st Edition) regarding display hardware been implemented?*  
(CR.SCADA.DISPLAYHARDWARE.R) 195.446(c)(1)

**5. SCADA Display Layout** *Has section 6 of API RP 1165(1st Edition) regarding display layout and organization been implemented?* (CR.SCADA.DISPLAYLAYOUT.R) 195.446(c)(1)

**6. SCADA Display Navigation** *Has section 7 of API RP 1165(1st Edition) regarding display navigation been implemented?* (CR.SCADA.DISPLAYNAVIGATION.R) 195.446(c)(1)

**7. SCADA Display Objects** *Has section 8 of API RP 1165(1st Edition) regarding display object characteristics been implemented?* (CR.SCADA.DISPLAYOBJECTS.O) 195.446(c)(1)

**8. SCADA Display Dynamics** *Has section 9 of API RP 1165(1st Edition) regarding display object dynamics been implemented?* (CR.SCADA.DISPLAYDYNAMICS.R) 195.446(c)(1)

**9. SCADA Control Selection** *Has section 10 of API RP 1165(1st Edition) control selection and techniques been implemented?* (CR.SCADA.CONTROLSELECTION.R) 195.446(c)(1)

**10. SCADA Administration** *Has section 11 of API RP 1165(1st Edition) administration been implemented?* (CR.SCADA.ADMINISTRATION.R) 195.446(c)(1)

**11. 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) 195.446(c)(1)

**12. Setpoints** *Does the process adequately define safety-related points?* (CR.SCADA.SETPOINT.P) 195.446(c)(2) (195.406(b))

**13. Setpoints** *Do records indicate safety-related points have been adequately implemented?* (CR.SCADA.SETPOINT.R) 195.446(c)(2)

**14. 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) 195.446(c)(2)

**15. Point-to-Point Verification** *Have required point-to-point verifications been performed?* (CR.SCADA.POINTVERIFY.R) 195.446(c)(2)

**16. Point-to-Point Verification Extent** *Are there adequate processes for the thoroughness of the point-to-point verification?* (CR.SCADA.POINTVERIFYEXTENT.P) 195.446(c)(2)

**17. Point-to-Point Verification Extent** *Do records demonstrate adequate thoroughness of the point-to-point verification?* (CR.SCADA.POINTVERIFYEXTENT.R) 195.446(c)(2)

**18. Point-to-Point Verification Extent** *Is there an adequate process for defining when the point-to-point verification must be completed?* (CR.SCADA.POINTVERFIYINTVL.P) 195.446(c)(2)

**19. Point-to-Point Verification Extent** *Do records indicate the point-to-point verification has been completed at the required intervals?* (CR.SCADA.POINTVERFIYINTVL.R) 195.446(c)(2)

**20. Point-to-Point Verification** *Are point-to-point verifications performed adequately when required?* (CR.SCADA.POINTVERIFY.O) 195.446(c)(2)

**21. 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) 195.446(c)(3)

**22. 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) 195.446(c)(3)

**23. Backup SCADA System** *Is there a backup SCADA system?* (CR.SCADA.BACKUPSCADA.O) 195.446(c)(4)

**24. Backup SCADA Development** *Has the use of the backup SCADA system for development work been defined?* (CR.SCADA.BACKUPSCADADEV.P) 195.446(c)(4)

**25. 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) 195.446(c)(4)

**26. 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) 195.446(c)(4)

**27. Backup SCADA Verification** *Are there 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.P) 195.446(c)(4)

**28. 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) 195.446(c)(4)

**29. 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.BACKUPSCADADEQUACY.R) 195.446(c)(4)

**30. Backup SCADA Transfer** *Do processes adequately address and test the logistics of transferring control to a backup control room?* (CR.SCADA.BACKUPSCADATRANSFER.P) 195.446(c)(4)

**31. 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) 195.446(c)(4)

**32. 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) 195.446(c)(4)

**33. SCADA Overpressure Protection on Pressure Breakout Tanks** *Does the process adequately test applicable SCADA controlled overpressure protection devices on pressurized breakout tanks?* (CR.SCADA.SCADAOVERPRESSTESTBO.P) 195.428(b)

**34. SCADA Overpressure Protection on Pressure Breakout Tanks** *Do records indicate adequate inspection and testing of SCADA overpressure protection devices on pressurized breakout tanks?* (CR.SCADA.SCADAOVERPRESSTESTBO.R) 195.404(a)(1)(vii) (195.404(c)(3);195.428(b))

**35. SCADA Overfill Protection** *Do records indicate adequate inspection and testing of SCADA overfill protection systems?* (CR.SCADA.SCADAOVERFILL.R) 195.404(a)(1)(vii) (195.404(c)(3);195.428(d))

**36. SCADA Overfill Protection** *Is an adequate process/procedure in place for testing applicable SCADA controlled overfill protection devices?* (CR.SCADA.SCADAOVERFILL.P) 195.428(d) (195.446(b);195.446(c))

## 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) 195.446(d)

**2. Fatigue Risk Reduction** *Does the fatigue mitigation plan adequately address how the program reduces the risk associated with controller fatigue?* (CR.CRMFM.FATIGUERISKS.P) 195.446(d) (195.446(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) 195.446(d) (195.446(a);195.446(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) 195.446(d)

**5. Scheduled Shift Length** *Is the scheduled shift length less than or equal to 12 hours (not including shift hand-over) or is there a documented technical basis to show that shift lengths and schedule rotations are adequate to provide controllers off-duty time sufficient to achieve 8 hours of continuous sleep?* (CR.CRMFM.SHIFTLENGTH.R) 195.446(d)(1)

**6. Establishing Shift Length** *Does the operator factor in all time the individual is working for the company when establishing shift lengths and schedule rotations 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) 195.446(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.SCHEDULETIMEOFF.R) 195.446(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) 195.446(d)

**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) 195.446(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 reduction of the risk associated with controller fatigue?* (CR.CRMFM.MAXHOS.P) 195.446(d)(4)

**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.DOCSCCHEDULE.P) 195.446(d)(4)

**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) 195.446(d)(4)

**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) 195.446(d)(4)

**14. Number of Qualified Controllers** *Do operations include a sufficient number of qualified controllers?* (CR.CRMFM.CONTROLLERNUMBERS.O) 195.446(d)(4)

**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) 195.446(d)(4)

**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) 195.446(d)(4)

**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) 195.446(d)(4)

**18. Deviations from HOS Limits** *Is there a formal process for approving deviations from the maximum HOS limits?* (CR.CRMFM.HOSDEVIATIONS.P) 195.446(d)(4)

**19. Fatigue Education** *Does the program require that fatigue education/training is required for all controllers and control room supervisors?* (CR.CRMFM.FATIGUEEDUCATE.P) 195.446(d)(2) (195.446(d)(3))

**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) 195.446(d)(2) (195.446(d)(3);195.402(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) 195.446(d)(2)

**22. Fatigue Education** *Is periodic fatigue education/training documented for all controllers and control room supervisors?* (CR.CRMFM.FATIGUEEDUCATE.R) 195.446(d)(2) (195.446(d)(3))

**23. Fatigue Training Content** *Has controller and supervisor training to recognize the effects of fatigue been documented?* (CR.CRMFM.FATIGUECONTENT.R) 195.446(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) 195.446(e)

**2. Alarm Malfunction** *Is there a process to identify and correct inaccurate or malfunctioning alarms?* (CR.CRMAM.ALARMMALFUNCTION.P) 195.446(e)(1)

**3. Alarm Systems** *Does the review of safety-related alarms account for different alarm designs and all alarm types/priorities?* (CR.CRMAM.ALARMREVIEW.P) 195.446(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) 195.446(h) (195.446(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) 195.446(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) 195.446(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) 195.446(e)(2)

**8. Alarm Point Verification** *Do records verify that monthly reviews and analysis of alarm points have been performed?* (CR.CRMAM.ALARMVERIFY.R) 195.446(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) 195.446(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) 195.446(e)(3)

**11. Verification of SCADA Settings** *Do processes require that any calibration or change to field instruments require verification of alarm setpoints and alarm descriptions?* (CR.CRMAM.VERIFICATION.P) 195.446(e)(3)

**12. 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) 195.446(e)(3)

**13. 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) 195.446(e)(4)

**14. 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) 195.446(e)(4)

**15. 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) 195.446(e)(5)

**16. Monitoring Work Load** *Is the process of monitoring and analyzing general activity comprehensive?* (CR.CRMAM.WORKLOADMONITORING.P) 195.446(e)(5)

**17. 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) 195.446(e)(5)

**18. Analysis of Controller Performance** *Has an analysis been performed to determine if controller(s) performance is currently adequate?* (CR.CRMAM.PERFORMANCEANALYSIS.R) 195.446(e)(5)

**19. Alarm Deficiency Resolution** *Is there a process to address how deficiencies found in implementing 195.446(e)(1) through 195.446(e)(5) will be resolved?* (CR.CRMAM.DEFICIENCIES.P) 195.446(e)(6)

**20. Alarm Management Deficiencies** *Do records indicate deficiencies found in implementing 195.446(e)(1) through 195.446(e)(5) have been resolved?* (CR.CRMAM.DEFICIENCIES.R) 195.446(e)(6)

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

**1. Meetings on CRM Changes** *Is there a process to mandate a control room representative will participate in meetings where changes that could directly or indirectly affect control room operations (including routine maintenance and repairs) are being considered, designed and implemented?* (CR.CRMCMGT.CHANGEMEETINGS.P) 195.446(f)(1)

**2. Training on CRM Changes** *Before implementing changes, do records indicate controllers were provided with notification and training to assure their ability to safely incorporate the proposed change into operations?* (CR.CRMCMGT.CHANGETRAINING.R) 195.446(f)(1)

**3. 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) 195.446(f)(2)

**4. Change Coordination** *Does the process assure changes in field equipment (e.g., relocating a valve or replacing a valve) that could affect control room operations are coordinated with control room personnel?* (CR.CRMCMGT.CHANGECOORDINATION.P) 195.446(f)(1)

**5. Change Coordination** *Do records indicate that changes in field equipment (e.g., relocating a valve or replacing a valve) that could affect control room operations were coordinated with control room personnel?* (CR.CRMCMGT.CHANGECOORDINATION.R) 195.446(f)(1)

**6. 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) 195.446(f)(2)

**7. 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) 195.446(f)(2)

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

**1. Reportable Accident (Review)** *Is there a formal, structured approach for reviewing and critiquing reportable events to identify lessons learned?* (CR.CRMEXP.REPORTABLEACCIDENTREVIEW.P) 195.446(g)(1)

**2. Reportable Accident (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.REPORTABLEACCIDENTREVIEW.R) 195.446(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) 195.446(g)(2) (195.446(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) 195.446(g)(2) (195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(h)(1)

**8. 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.R) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(h)(6)

**15. Control Room Team Training - Frequency** *Do processes define the frequency of new and recurring team training?* (CR.CRMTRAIN.TEAMTRAINFREQ.P) 195.446(h)(6)

**16. Control Room Team Training - Completeness** *Do processes address all operational modes and operational collaboration/control?* (CR.CRMTRAIN.TEAMTRAINCOMPLETE.P) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(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) 195.446(j)(1)

**5. CRM Records** *Are records sufficient to demonstrate compliance with the CRM rule?* (CR.CRMCOMP.RECORDS.R) 195.446(j)(1)

**6. Electronic Records** *Are electronic records properly stored, safeguarded, and readily retrievable?* (CR.CRMCOMP.ELECTRONICRECORDS.R) 195.446(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) 195.446(j)(2)

**8. Deviation Records** *Were all deviations documented in a way that demonstrates they were necessary for safe operation?* (CR.CRMCOMP.DEVIATIONS.R) 195.446(j)(2)

## CRM, SCADA, and Leak Detection - Leak Detection (Non-CPM)

**1. Leak Detection System Evaluation of Capability** *Does the process adequately address the evaluation of the operators leak detection system and require modification as necessary?* (CR.LD.LDEVAL.P) 195.444(a) (195.444(b);195.452(i)(3))

**2. Leak Detection System Effectiveness** *Do the processes adequately describe that the operator has an effective system for detecting leaks?* (CR.LD.LDEFFECTIVE.P) 195.402(a) (195.134(a);195.134(b);195.444(a);195.444(b))

**3. Requirements for LD System Evaluation of Capability** *Do records show that the operator evaluated the capability of its leak detection system to protect the public, property, and the environment and modified as necessary?* (CR.LD.EVAL.R) 195.444(a) (195.444(b);195.134(a);195.134(b))

**4. Leak Detection Method** *Do records demonstrate the operator's leak detection system is performing within the system design requirements?* (CR.LD.LDSYSTEM.R) 195.404(c) (195.134(b);195.444(b))

**5. Pipeline Controller Training** *Do the processes define and require that pipeline controllers are trained to recognize leaks based on the system implemented?* (CR.LD.LDTRAINING.P) 195.505(h)

**6. Pipeline Controller Training** *Do records show that pipeline controllers are trained to recognize leaks using the chosen leak detection method/system?* (CR.LD.LDTRAINING.R) 195.507(a) (195.507(b))

**7. Pipeline Controller Training** *Are the Pipeline Controllers trained to recognize leaks?* (CR.LD.LDTRAINING.O) 195.505

**8. Alarm Display** *Do the processes define and describe the alarms appropriate for the leak detection system implemented?* (CR.LD.ALARMDISPLAY.P) 195.444(b)

**9. Alarm Display** *Are the Leak Detection alarms adequate?* (CR.LD.ALARMDISPLAY.O) 195.444(b)



**10. System Testing** *Do the processes define and describe the testing of the Leak Detection System? (CR.LD.LDSTEST.P) 195.444(b) (195.134(b))*

**11. System Testing** *Have leak detection system testing records and results been retained/available and indicate adequate results? (CR.LD.LDSTEST.R) 195.134(b) (195.444(b))*

**12. Parameter and System Changes** *Are parameter and/or system changes required to be reflected in the leak detection system? (CR.LD.LDSMOC.P) 195.444(b) (195.134(b))*

**13. Integration of Leak Detection Presentation with SCADA** *Are the leak detection system data, communication, and controller interfaces appropriately integrated with the SCADA displays? (CR.LD.LDSCADA.P) 195.134(b) (195.444(b))*

**14. Field Instrumentation Accuracy and Calibration** *Is the accuracy and calibration of field instrumentation used in the leak detection system appropriately assured? (CR.LD.LDSINSTRUMENT.P) 195.134(b) (195.444(b))*

**15. Field Instrumentation Accuracy and Calibration** *Do records indicate the calibration of field instrumentation used in the leak detection system was performed? (CR.LD.LDSINSTRUMENT.R) 195.444(b) (195.446(j))*

**16. LDS Threat Protection/Security** *Is the Leak Detection System adequately protected from security threats? (CR.LD.LDSPROTECT.P) 195.402(a)*

## CRM, SCADA, and Leak Detection - Leak Detection (CPM)

**1. Leak Detection Measures** *Do records demonstrate the operator has identified, considered, or implemented CPM leak detection measures to mitigate the consequences of a pipeline failure? (CR.CPM.CPMSYS.R) 195.446(g) (195.452(i)(3))*

**2. Output of CPM System** *What is the output of the CPM System?* (CR.CPM.CPMOUTPUT.P) 195.402(a) (195.446(b))

**3. Automatic Closed-Loop Control Response to Alarm** *Is automatic closed-loop control response to alarm conditions used?* (CR.CPM.ALARMLOOP.P) 195.402(a) (195.446(c);195.446(e))

**4. Requirements for CPM Systems** *If Computational Pipeline Monitoring (CPM) is used, does it comply with guidance in API 1130(3rd Edition) requirements in operating, maintaining, testing, record-keeping, and dispatcher training?* (CR.CPM.CPM.P) 195.402(a) (195.444(c);195.446(b);195.446(c))

**5. Pipeline Controller Training** *Are the Pipeline Controllers trained in the recognition of CPM alarms?* (CR.CPM.CPMTRAINING.P) 195.444(b) (195.444(c);API-1130(3rd Edition);195.505(h))

**6. Pipeline Controller Training** *Do records show that pipeline controllers are trained to recognize Leaks using the chosen leak detection method/system?* (CR.CPM.CPMTRAINING.R) 195.444(b) (195.444(c);195.505(h);API-1130(3rd Edition))

**7. Pipeline Controller Training** *Are the Pipeline Controllers trained in the recognition of CPM alarms?* (CR.CPM.CPMTRAINING.O) 195.444(b) (195.444(c);API-1130(3rd Edition);195.505(h))

**8. Alarm Display** *Are alarms in compliance with Section 5.4.3 of API 1130(3rd Edition)?* (CR.CPM.ALARMDISPLAY.P) 195.444(c) (API-1130(3rd Edition))

**9. Alarm Credibility** *Do alarms conform to API-1130(3rd Edition)?* (CR.CPM.ALARMCRED.P) 195.444(c) (API-1130(3rd Edition);195.134;195.446(e))

**10. System Testing** *Does testing of the CPM System conform to API-1130(3rd Edition)?* (CR.CPM.CPMSTEST.P) 195.444(c) (API-1130(3rd Edition);195.134)

**11. Initial System Testing** *Does initial testing of the CPM System conform to API-1130(3rd Edition)?*  
(CR.CPM.CPMSTESTINITIAL.P) 195.134(c) (API-1130(3rd Edition))

**12. Initial System Testing** *Have initial system testing records and results been retained/available and indicate adequate results?* (CR.CPM.CPMSTESTINITIAL.R) 195.134(c) (API-1130)

**13. Parameter and System Changes** *Are parameter and/or system changes required to be reflected in the leak detection system?* (CR.CPM.CPMSMOC.P) 195.444(b) (195.134;195.444(c);API-1130(3rd Edition))

**14. Integration of Leak Detection Presentation with SCADA** *Are the CPM system data, communication, and controller interfaces appropriately integrated with the SCADA displays?* (CR.CPM.CPMSCADA.P) 195.134(b) (195.134(c);195.446(c);195.444(b);195.444(c);API-1130(3rd Edition))

**15. Field Instrumentation Accuracy and Calibration** *Is the accuracy and calibration of field instrumentation used in the leak detection system appropriately assured?* (CR.CPM.CPMSINSTRUMENT.P) 195.444(b) (195.134(b);195.134(c);195.444(c);API-1130(3rd Edition))

**16. Field Instrumentation Accuracy and Calibration** *Do records indicate the calibration of field instrumentation used in the leak detection system was performed?* (CR.CPM.CPMSINSTRUMENT.R) 195.444(b) (API-1130(3rd Edition);195.444(c);195.446(j))

**17. CPM Threat Protection/Security** *Is the CPM system adequately protected from security threats?*  
(CR.CPM.CPMPROTECT.P) 195.402(a)

## Design and Construction - Biofuels

**1. Chemical Compatibility - Special Considerations** *Do records verify determination that the product to be transported (hazardous liquids, CO<sub>2</sub>, biofuels) is chemically compatible with the pipeline, its components, and other commodities?*  
(DC.DN.CHEMCOMPATIBLE.R) 195.4

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

**2. Biofuel Special Considerations - Design Requirements** *Does the process require certain Subpart C design requirements relating to biofuel transport be addressed? (DC.DN.DESIGN.P) 195.100 (195.116(c);195.126;195.118(c))*  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**3. Biofuel Special Considerations - Design Requirements** *Do records indicate that certain Subpart C design requirements relating to biofuel transport have been addressed? (DC.DN.DESIGN.R) 195.100 (195.116(c);195.126;195.118(c))*  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**4. Biofuel Special Considerations - Construction Requirements** *Do records indicate certain Subpart D construction requirements relating to biofuel transport have been addressed? (DC.DN.CONSTRUCT.R) 195.200 (195.260(c);195.262(e))*  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**5. Qualifying Metallic Components Other Than Pipe** *Do records indicate metallic components other than pipe have been qualified for use? (DC.DN.METALLIC.R) 195.101(a) (195.101(b))*  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**6. Valve Specifications - Ethanol Compatibility** *Do records indicate pipeline system valves meet the compatibility requirements of 195.116(c)? (DC.DN.VALVEBIOFUELS.R) 195.116(c)*  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

## Design and Construction - Construction

**1. Written Construction Specifications or Standards** *Does the operator have written construction specifications or standards as required of 195.202? (DC.CO.SPECS.P) 195.202*

**2. Written Construction Specifications or Standards** *Do the operator's written records demonstrate compliance with their written specifications or as required by 195.202? (DC.CO.SPECS.R) 195.202*

**3. Written Construction Specifications or Standards** *Do observations validate operator compliance with specifications or standards?* (DC.CO.SPECS.O) 195.202

**4. Material Inspection** *Does the process specify that prior to installation, pipe and components are visually inspected at the site of installation to ensure they are not damaged?* (DC.CO.INSPECTION.P) 195.202 (195.206)

**5. Material Inspection** *Prior to installation, are pipe and components visually inspected at the site of installation to ensure they are not damaged?* (DC.CO.INSPECTION.O) 195.206

**6. Transportation of Pipe by Truck** *Does the operator have specifications requiring that TRUCK transportation for certain pipe (see considerations) is in accordance with §195.207(c) and API RP 5LT(1st Edition) ?* (DC.CO.TRUCKTRANSPORT.P) 195.202 (195.207(c))

**7. Transportation of Pipe by Truck** *Does the operator have records showing that truck transportation for certain pipe (see considerations) is in accordance with §195.207(c) and API RP 5LT(1st Edition)?* (DC.CO.TRUCKTRANSPORT.R) 195.207(c)

**8. Transportation of Pipe by Truck** *Do field observations confirm that the operator has performed truck transportation for certain pipe (see considerations) in accordance with §195.207(c) and API RP 5LT(1st Edition)?* (DC.CO.TRUCKTRANSPORT.O) 195.207(c)

**9. Transportation of Pipe by Rail** *Does the operator have specifications requiring that Railroad transportation for certain pipe (see considerations) is in accordance with §195.207(a) and API RP 5L1(7th Edition)?* (DC.CO.RAILTRANSPORT.P) 195.202 (195.207(a))

**10. Transportation of Pipe by Rail** *Does the operator have records showing that Railroad transportation for certain pipe (see considerations) is in accordance with §195.207(a) and API RP 5L1(7th Edition)?* (DC.CO.RAILTRANSPORT.R) 195.207(a)

**11. Transportation of Pipe by Rail** *Do field observations confirm that Railroad transportation for certain pipe (see considerations) was in accordance with §195.207(a) and API RP 5L1(7th Edition)?* (DC.CO.RAILTRANSPORT.O) 195.207(a)

**12. Transportation of Pipe by Ship or Barge** *Does the operator have specifications requiring that Ship or Barge transportation for certain pipe (see considerations) is in accordance with §195.207(b) and API RP 5LW(3rd Edition)?*  
(DC.CO.SHIPBARGETRANSPORT.P) 195.202 (195.207(b))

**13. Transportation of Pipe by Ship or Barge** *Does the operator have records showing that Ship or Barge transportation for certain pipe (see considerations) is in accordance with §195.207(b) and API RP 5LW(3rd Edition)?*  
(DC.CO.SHIPBARGETRANSPORT.R) 195.207(b)

**14. Transportation of Pipe by Ship or Barge** *Do field observations confirm that the operator has used Ship or Barge transportation for certain pipe (see considerations) in accordance with §195.207(b) and API RP 5LW(3rd Edition)?*  
(DC.CO.SHIPBARGETRANSPORT.O) 195.207(b)

**15. Pipeline Location** *Does the process specify the required pipeline location (and any additional depth of cover requirements)?* (DC.CO.LOCATION.P) 195.202 (195.210(a);195.210(b))

**16. Pipeline Location** *Do records indicate the required pipeline location (and any additional depth of cover requirements)?*  
(DC.CO.LOCATION.R) 195.210(a) (195.210(b))

**17. Pipeline Location** *Do observed pipeline locations (and any additional depth of cover) comply with 195.210?*  
(DC.CO.LOCATION.O) 195.210(a) (195.210(b))

**18. Pipe Installation** *Does the process require that pipe is installed in a manner that minimizes secondary stresses and the possibility of damage to the pipe and coating?* (DC.CO.INSTALL.P) 195.202 (195.246(a))

**19. Pipe Installation** *Do records demonstrate that pipe is installed in a manner that minimizes secondary stresses and the possibility of damage to the pipe and coating?* (DC.CO.INSTALL.R) 195.202 (195.246(a))

**20. Pipe Installation** *Is pipe installed in a manner that minimizes secondary stresses and minimizes possibility of damage to pipe and coating?* (DC.CO.INSTALL.O) 195.246(a)

**21. Installation Offshore** *Does the process specify that off shore piping is installed so that the top of the pipe is below the underwater natural bottom or as otherwise allowed by 195.246(b)?* (DC.CO.INSTALLOFFSHORE.P) 195.202 (195.246(b))

**22. Installation Offshore** *Do records indicate offshore piping was installed so that the top of the pipe is below the underwater natural bottom or as otherwise allowed by 195.246(b)?* (DC.CO.INSTALLOFFSHORE.R) 195.246(b)

**23. Cover Over Buried Pipeline** *Does the process specify that piping is installed with a depth of cover as specified in 195.248?* (DC.CO.COVER.P) 195.202 (195.248(a);195.248(b);195.210(b))

**24. Cover Over Buried Pipeline** *Do records indicate that piping is installed with a depth of cover as specified in 195.248?* (DC.CO.COVER.R) 195.266(b) (195.248(a);195.248(b))

**25. Cover Over Buried Pipeline** *Do field observations confirm piping is installed with a depth of cover as specified in 195.248?* (DC.CO.COVER.O) 195.248(a) (195.248(b))

**26. Above Ground Component Installation** *Does the process specify that above ground components are installed as allowed by 195.254?* (DC.CO.INSTALLABOVEGRND.P) 195.202 (195.254(a);195.254(b))

**27. Above Ground Component Installation** *Do records verify that above ground components are installed as allowed by 195.254?* (DC.CO.INSTALLABOVEGRND.R) 195.266 (195.254(a);195.254(b))

**28. Above Ground Component Installation** *Are above ground components installed as allowed by 195.254?* (DC.CO.INSTALLABOVEGRND.O) 195.254(a) (195.254(b))

**29. Valve Accessibility** *Does the process specify that valves are accessible to authorized employees and protected from damage or tampering?* (DC.CO.VALVEPROTECT.P) 195.258(a)

**30. Valve Accessibility** *Do records indicate that valves were constructed to provide adequate accessibility and space for authorized employees and protected from damage or tampering?* (DC.CO.VALVEPROTECT.R) 195.266(f) (195.258(a))

**31. Valve Accessibility** *Are valves accessible to authorized employees and protected from damage or tampering?* (DC.CO.VALVEPROTECT.O) 195.258(a)

**32. Submerged Valve Marking - Offshore** *Does the process specify that offshore submerged valves are located or marked in order to facilitate quick location when operation of the valve is required?* (DC.CO.VALVEMARKOFFSHORE.P) 195.202 (195.258(b))

**33. Submerged Valve Marking - Offshore** *Are offshore submerged valves located or marked in order to facilitate quick location when operation of the valve is required?* (DC.CO.VALVEMARKOFFSHORE.R) 195.266(f) (195.258(b))

**34. Submerged Valve Marking - Inland Navigable Waters** *Do written specifications or standards and drawings specify that submerged valves located in inland navigable waters are located or marked in order to facilitate quick location when operation of the valve is required?* (DC.CO.VALVEMARKNAVWATER.P) 195.202 (195.258(b))

**35. Submerged Valve Marking - Inland Navigable Waters** *Are submerged valves located in inland navigable waters located or marked in order to facilitate quick location when operation of the valve is required?* (DC.CO.VALVEMARKNAVWATER.O) 195.258(b)

**36. Valve Locations** *Do written specifications or standards specify valves to be located as required?* (DC.CO.VALVELOCATION.P) 195.202 (195.260(a);195.260(b);195.260(c);195.260(d);195.260(e);195.260(f);195.260(g))

**37. Valve Locations** *Do records indicate that valves are located as specified by §195.260?* (DC.CO.VALVELOCATION.R) 195.266(f) (195.260(a);195.260(b);195.260(c);195.260(d);195.260(e);195.260(f);195.260(g))

**38. Valve Locations** *Do field observations verify valves are located as specified by §195.260?* (DC.CO.VALVELOCATION.O) 195.260(a) (195.260(b);195.260(c);195.260(d);195.260(e);195.260(f);195.260(g))



**39. Bending of Pipe.** *Does the construction process meet the requirements of 195.212 for bending pipe?* (DC.CO.FIELD BEND.P) 195.202 (195.212(a);195.212(b);195.212(c))

**40. Bending of Pipe.** *Does pipe bending meet the requirements of 195.212?* (DC.CO.FIELD BEND.O) 195.212(a) (195.212(b);195.212(c))

**41. Construction Records** *Does the process require applicable construction records to be maintained for the life of each pipeline?* (DC.CO.RECORDS.P) 195.202 (195.266(a);195.266(b);195.266(c);195.266(d);195.266(e);195.266(f))

**42. Construction Records** *Do records indicate that construction records are being maintained for the life of each pipeline?* (DC.CO.RECORDS.R) 195.266(a) (195.266(b);195.266(c);195.266(d);195.266(e);195.266(f))

**43. Clearance Between Pipe and Underground Structures** *Does clearance requirements between pipe and underground structures comply with 195.250?* (DC.CO.CLEAR.P) 195.202 (195.250)

**44. Clearance Between Pipe and Underground Structures** *Do records demonstrate that clearance requirements between pipe and underground structures comply with 195.250?* (DC.CO.CLEAR.R) 195.202 (195.250)

**45. Clearance Between Pipe and Underground Structures** *Does clearance between pipe and underground structures comply with 195.250?* (DC.CO.CLEAR.O) 195.250

**46. Backfilling** *Is backfilling required to be performed in a manner that provides firm support and does not damage the pipe and coating?* (DC.CO.BACKFILL.P) 195.202 (195.252(a);195.252(b))

**47. Backfilling** *Do records demonstrate that backfilling is required to be performed in a manner that provides firm support and does not damage the pipe and coating?* (DC.CO.BACKFILL.R) 195.202 (195.252)

**48. Backfilling** *Is backfilling performed in a manner that provides firm support and does not damage the pipe and coating?* (DC.CO.BACKFILL.O) 195.252(a) (195.252(b))

**49. Crossing of Railroads and Highways** *Is pipe at railroad and highway crossings required to be installed to adequately withstand dynamic forces exerted by anticipated traffic loads?* (DC.CO.EXTLOADXINGS.P) 195.202 (195.256)

**50. Crossing of Railroads and Highways** *Do records indicate pipe at selected railroad and highway crossings was installed to adequately withstand dynamic forces exerted by anticipated traffic loads?* (DC.CO.EXTLOADXINGS.R) 195.266(b) (195.256)

**51. Crossing of Railroads and Highways** *Do field observations verify pipe being installed at railroad and highway crossings is adequate to withstand dynamic forces exerted by anticipated traffic loads?* (DC.CO.EXTLOADXINGS.O) 195.202 (195.256)

**52. ASV Flow Modeling** *Do the operator's procedures adequately describe and require flow modeling for ASVs?* (DC.CO.ASVFLOWMODEL.P) 195.202 (195.419(f))

**53. ASV Flow Modeling** *Do the records demonstrate the flow modeling was conducted as required in accordance with §195.419?* (DC.CO.ASVFLOWMODEL.R) 195.202 (195.419(f))

**54. RMV Installation Requirements within HCAs** *Do the operator's specifications require RMVs or AETs located in could affect or HCA areas to be installed to meet the appropriate valve spacing requirements?* (DC.CO.RMVINSTALLHCA.P) 195.202 (195.258(c);195.258(d);195.258(e);195.419)

**55. RMV Installation Requirements within HCAs** *Do records demonstrate RMVs or AETs were located in could affect or HCA areas to meet the appropriate valve spacing requirements?* (DC.CO.RMVINSTALLHCA.R) 195.202 (195.258(c);195.258(d);195.258(e);195.419)

**56. RMV Installation Requirements** *Do the operator's specifications require RMVs or AETs to be installed to meet the appropriate valve spacing requirements?* (DC.CO.RMVINSTALL.P) 195.202 (195.258(c);195.258(d);195.258(e);195.419)

**57. RMV Installation Requirements** *Do the records demonstrate RMVs or AETs were installed to meet the appropriate valve spacing requirements?* (DC.CO.RMVINSTALL.R) 195.266(f) (195.258(c);195.258(d);195.258(e);195.419)

**58. RMV Installation Requirements** *Do field observations verify that RMVs or alternative equivalent technologies were installed to meet the appropriate valve spacing requirements?* (DC.CO.RMVINSTALL.O) 195.202 (195.258(c);195.258(d);195.258(e);195.419)

## Design and Construction - Construction - Pump Stations

**1. Material Inspection** *Prior to installation, are pipe and components visually inspected at the site of installation to ensure they are not damaged?* (DC.PS.INSPECTION.O) 195.206

**2. Pipe Installation** *Does the process require that pipe is installed in a manner that minimizes secondary stresses and the possibility of damage to the pipe and coating?* (DC.PS.INSTALL.P) 195.202 (195.246(a))

**3. Pipe Installation** *Is pipe installed in a manner that minimizes secondary stresses and minimizes possibility of damage to pipe and coating?* (DC.PS.INSTALL.O) 195.246(a)

**4. Cover Over Buried Pipeline** *Does the process specify that piping is installed with a depth of cover as specified in 195.248?* (DC.PS.COVER.P) 195.202 (195.248(a))

**5. Cover Over Buried Pipeline** *Do records indicate that piping is installed with a depth of cover as specified in 195.248?* (DC.PS.COVER.R) 195.266(b) (195.248(a))

**6. Cover Over Buried Pipeline** *Do field observations confirm piping is installed with a depth of cover as specified in 195.248?* (DC.PS.COVER.O) 195.248(a)

**7. Above Ground Component Installation** *Does the process specify that above ground components are installed as allowed by 195.254?* (DC.PS.INSTALLABOVEGRND.P) 195.202 (195.254(a);195.254(b))

**8. Above Ground Component Installation** *Do records verify that above ground components are installed as allowed by 195.254?* (DC.PS.INSTALLABOVEGRND.R) 195.266 (195.254(a);195.254(b))

**9. Above Ground Component Installation** *Are above ground components installed as allowed by 195.254?* (DC.PS.INSTALLABOVEGRND.O) 195.254(a) (195.254(b))

**10. Valve Accessibility** *Does the process specify that valves are accessible to authorized employees and protected from damage or tampering?* (DC.PS.VALVEPROTECT.P) 195.258(a)

**11. Valve Accessibility** *Do records indicate that valves are accessible to authorized employees and protected from damage or tampering?* (DC.PS.VALVEPROTECT.R) 195.266(f) (195.258(a))

**12. Valve Accessibility** *Are valves accessible to authorized employees and protected from damage or tampering?* (DC.PS.VALVEPROTECT.O) 195.258(a)

**13. Valve Locations** *Does the process specify that valves are located as specified by 195.260?* (DC.PS.VALVELOCATION.P) 195.202 (195.260(a);195.260(b);195.260(c);195.260(d);195.260(e);195.260(f))

**14. Valve Locations** *Do records indicate that valves are located as specified by 195.260?* (DC.PS.VALVELOCATION.R) 195.266(f) (195.260(a);195.260(b);195.260(c);195.260(d);195.260(e);195.260(f))

**15. Valve Locations** *Are valves located as specified by 195.260?* (DC.PS.VALVELOCATION.O) 195.260(a) (195.260(b);195.260(c);195.260(d);195.260(e);195.260(f))

**16. Pumping Equipment - Specification** *Does the process require pumping equipment to meet the requirements 195.262? (DC.PS.PMPSPEC.P) 195.202 (195.262(a);195.262(b);195.262(c);195.262(d);195.262(e))*

**17. Pumping Equipment - Ventilation** *Is adequate ventilation provided in pump station buildings to prevent the accumulation of hazardous vapors? (DC.PS.PMPVENTILATE.O) 195.262(a)*

**18. Pumping Equipment - Hazardous Vapors** *Do pumping station buildings have devices to warn of the presence of hazardous vapors? (DC.PS.PMPVAPOR.O) 195.262(a)*

**19. Pumping Equipment - Overpressure Protection** *Does the process specify that pumping stations have overpressure safety devices and emergency shutdown capability? (DC.PS.PMPOVERPRESS.P) 195.202 (195.262(b))*

**20. Pumping Equipment - Overpressure Protection** *Do pumping stations have overpressure safety devices and emergency shutdown capability? (DC.PS.PMPOVERPRESS.O) 195.262(b)*

**21. Pumping Equipment - Safety Device Testing** *Do records indicate safety devices tested before pumping stations used? (DC.PS.PMPSAFETYDEVICETEST.R) 195.262(c)*

**22. Pumping Equipment - Safety Device Testing** *Do field observations verify safety devices are/were tested before pumping stations are used? (DC.PS.PMPSAFETYDEVICETEST.O) 195.262(c)*

**23. Pumping Equipment - Controlled Property** *Is pumping equipment installed on property that is under the control of the operator and at least 15.2 m (50 ft) from the boundary of the pump station? (DC.PS.PMPPROPERTY.O) 195.262(d)*

**24. Pumping Equipment- Fire Protection** *Is fire protection installed at each pump station? (DC.PS.PMPFIREPROT.O) 195.262(e)*

**25. Material Inspection** *Does the process specify that prior to installation, pipe and components are visually inspected at the site of installation to ensure they are not damaged?* (DC.PS.INSPECTION.P) 195.202 (195.206)

**26. Bending of Pipe.** *Does the construction process meet the requirements of 195.212 for bending pipe?* (DC.PS.FIELD BEND.P) 195.202 (195.212(a);195.212(b);195.212(c))

**27. Bending of Pipe.** *Does pipe bending meet the requirements of 195.212?* (DC.PS.FIELD BEND.O) 195.212(a) (195.212(b);195.212(c))

**28. Construction Records** *Does the process require applicable construction records to be maintained for the life of each pipeline?* (DC.PS.RECORDS.P) 195.202 (195.266(a);195.266(b);195.266(c);195.266(d);195.266(e);195.266(f))

**29. Construction Records** *Do records indicate that construction records are being maintained for the life of each pipeline?* (DC.PS.RECORDS.R) 195.266(a) (195.266(b);195.266(c);195.266(d);195.266(e);195.266(f))

**30. Clearance Between Pipe and Underground Structures** *Do clearance requirements between pipe and underground structures comply with 195.250?* (DC.PS.CLEAR.P) 195.202 (195.250)

**31. Clearance Between Pipe and Underground Structures** *Does the clearance between pipe and underground structures comply with 195.250?* (DC.PS.CLEAR.O) 195.250

**32. Backfilling** *Is backfilling required to be performed in a manner that provides firm support and does not damage the pipe and coating?* (DC.PS.BACKFILL.P) 195.202 (195.252(a);195.252(b))

**33. Backfilling** *Is backfilling performed in a manner that provides firm support and does not damage the pipe and coating?* (DC.PS.BACKFILL.O) 195.252(a) (195.252(b))

## Design and Construction - Construction Weld Inspection

**1. Weld Inspection Standards** Are welds required to be inspected to ensure compliance with the requirements of 195.228? (DC.WELDINS.P) 195.228(a) (195.228(b))

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

**2. Weld Inspection Standards** Do records indicate welds are inspected to ensure compliance with the requirements of 195.228? (DC.WELDINS.P) 195.228(a) (195.228(b);195.234)

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

**3. Weld Inspection Standards** Are welds being inspected to ensure compliance with the requirements of 195.228? (DC.WELDINS.P) 195.228(a) (195.228(b);195.234)

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

**4. Repair or Removal of Weld Defects** Are welds that are unacceptable required to be removed and/or repaired as specified by 195.230 and are repair procedures in place? (DC.WELDINS.P) 195.202 (195.230(a);195.230(b);195.230(c))

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

**5. Repair or Removal of Weld Defects** Do records indicate that unacceptable welds are removed and/or repaired? (DC.WELDINS.P) 195.230(a) (195.230(b);195.230(c))

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

**6. Repair or Removal of Weld Defects** Are unacceptable welds being removed and/or repaired? (DC.WELDINS.P) 195.230(a) (195.230(b);195.230(c))

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

**7. Nondestructive Test and Interpretation Procedures** Are there processes for nondestructive testing and for determining standards of acceptability? (DC.WELDINS.P) 195.234(a) (195.234(b);195.234(c))

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

**8. Nondestructive Test and Interpretation Procedures** Do records indicate adequate nondestructive testing and determination of standards of acceptability? (DC.WELDINS.P) 195.234(a) (195.234(b);195.234(c))

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

**9. Nondestructive Test and Interpretation Procedures** Are NDT activities performed in accordance with approved processes? (DC.WELDINSF.WELDNDT.O) 195.234(a) (195.234(b);195.234(c))

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

**10. Nondestructive Testing Personnel Training** Does the process require nondestructive testing of welds (for maintenance and construction) be performed by personnel who are trained in procedures established to ensure compliance with 195.228 and in use of the testing equipment? (DC.WELDINSF.WELDNDTQUAL.P) 195.202 (195.234(b)(2))

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

**11. Nondestructive Testing of Girth Welds** Does the process require certain girth welds to be nondestructively tested in accordance with 195.234(d), (e), (f), and (g)? (DC.WELDINSF.GIRTHWELDNDT.P) 195.202 (195.234(d);195.234(e);195.234(f);195.234(g);195.266)

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

**12. Nondestructive Testing of Girth Welds** Do records demonstrate at least 10% of all welds that are made by each welder during each welding day are nondestructively tested over the entire circumference of the welds or that more welds are tested per the operator's own procedures? (DC.WELDINSF.GIRTHWELDNDT.R) 195.234(d) (195.266(a))

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

**13. Nondestructive Testing of Girth Welds - Locations** Do records demonstrate all girth welds installed each day in selected locations specified in 195.234(e) are nondestructively tested over their entire circumference? (DC.WELDINSF.GIRTHWELDNDTLOCATE.R) 195.234(e) (195.266(a))

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

**14. Nondestructive Testing of Girth Welds - Used Pipe** Do records demonstrate that when installing used pipe, 100% of the old girth welds are nondestructively tested? (DC.WELDINSF.GIRTHWELDNDTUSED.R) 195.234(f) (195.266(a))

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

**15. Nondestructive Testing of Girth Welds - Pipe Tie-Ins** Do records demonstrate 100% of the girth welds have been nondestructively tested at selected pipe tie-ins? (DC.WELDINSF.GIRTHWELDNDTTIEIN.R) 195.234(g) (195.266(a))

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



## Design and Construction - Construction Welder Qualification

**1. Qualification of Welders** *Is each welder required to be qualified in accordance with section 6 of API 1104 (21st Edition) or section IX of the ASME Boiler and Pressure Vessel Code (2007)?* (DC.WELDERQUAL.WELDERQUAL.P) 195.222(a) (195.222(b))

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

**2. Qualification of Welders** *Do records indicate that welders are qualified in accordance with API-Std-1104 (21st Edition) or the ASME Boiler & Pressure Vessel Code (2007)?* (DC.WELDERQUAL.WELDERQUAL.R) 195.222(a) (195.222(b);195.214(a);API-1104 Section 6;ASME Boiler & Pressure Vessel Code Section IX)

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

**3. Qualification of Welders - Skills and Knowledge** *Are welders performing welds according to established procedures?* (DC.WELDERQUAL.WELDERQUAL.O) 195.222(a) (195.222(b);195.214(a);195.505(b))

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

## Design and Construction - Construction Welding Procedures

**1. Welding of Supports and Braces** *Does the procedure prohibit supports or braces to be welded directly to pipe that operates at a pressure greater than 100 psi (689 kPa) gage?* (DC.WELDPROCEDURE.WELDSUPPORT.P) 195.202 (195.208)

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

**2. Welding of Supports and Braces** *Are supports or braces observed to be welded directly to pipe that operates at a pressure greater than 100 psi (689 kPa) gage?* (DC.WELDPROCEDURE.WELDSUPPORT.O) 195.208

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

**3. Welding Procedures - Qualified Welders & Procedures** *Does the process require welding to be performed by qualified welders using qualified welding procedures?* (DC.WELDPROCEDURE.WELD.P) 195.214(a)

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

**4. Welding Procedures - Qualified Welders & Procedures** *Are welding procedures being qualified in accordance with 195.214?* (DC.WELDPROCEDURE.WELD.O) 195.214(a)

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

**5. Welding Procedures - Record of Qualifying Tests** Are welding procedures and qualifying tests required to be recorded in detail? (DC.WELDPROCEDURE.WELDPROCEDURE.P) 195.214(b)

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

**6. Welding Procedures - Record of Qualifying Tests** Do records indicate welding procedures and qualifying tests recorded in detail? (DC.WELDPROCEDURE.WELDPROCEDURE.R) 195.214(b)

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

**7. Welding Procedures - Record of Qualifying Tests** Are welding procedures being retained and followed? (DC.WELDPROCEDURE.WELDPROCEDURE.O) 195.214(b)

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

**8. Miter Joints** Do welding procedures prohibit the use of miter joints? (DC.WELDPROCEDURE.MITERJOINT.P) 195.214(b) (195.216)

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

**9. Welding Weather** Is welding required to be protected from weather conditions that would impair the quality of the completed weld? (DC.WELDPROCEDURE.WELDWEATHER.P) 195.224

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

**10. Welding Weather** Is welding protected from weather conditions that would impair the quality of the completed weld? (DC.WELDPROCEDURE.WELDWEATHER.O) 195.224

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

**11. Arc Burns and Ground Wires** Does the process address arc burns and ground wires in accordance with 195.226? (DC.WELDPROCEDURE.ARCBURNRNDWIRE.P) 195.202 (195.226(a);195.226(b);195.226(c))

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

**12. Arc Burns and Ground Wires** Do records indicate arc burns and ground wires are addressed in accordance with 195.226? (DC.WELDPROCEDURE.ARCBURNRNDWIRE.R) 195.226(a) (195.226(b);195.226(c))

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

**13. Arc Burns and Ground Wires** *Are arc burns and ground wires addressed in accordance with 195.226?* (DC.WELDPROCEDURE.ARCBURNGRNDWIRE.O) 195.226(a) (195.226(b);195.226(c))

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

**14. Welding on In-Service Pipelines** *Does the process require consideration of issues related to welding on in-service pipelines?* (DC.WELDPROCEDURE.WELDINSERVICE.P) 195.402(a) (195.422(a))

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

## Design and Construction - Design

**1. Design Temperature: CO2 Facilities** *Does the process require that carbon dioxide system components subject to low temperatures are made of materials that are suitable for those low temperatures?* (DC.DN.TEMPDESIGNCO2.P) 195.102(b)

**2. Design Temperature: CO2 Facilities** *Do records indicate carbon dioxide system components subject to low temperatures are made of materials that are suitable for those low temperatures?* (DC.DN.TEMPDESIGNCO2.R) 195.102(b)

**3. Lower Pressure Components** *Do records indicate the system is designed so that the lowest pressure rated component will not be overstressed at the pipeline MOP?* (DC.DN.OVERPRESS.R) 195.104

**4. Lower Pressure Components** *Are the lowest pressure rated components operating below overstress pressures?* (DC.DN.OVERPRESS.O) 195.104

**5. Pipe Internal Design Pressure** *Does the process require the internal design pressure of the pipeline (or pipe) be determined in accordance with 195.106?* (DC.DN.DESIGNPRESS.P) 195.106(a) (195.106(b);195.106(c);195.106(d);195.106(e))

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

**6. Pipe Internal Design Pressure** *Do records demonstrate the internal design pressure of the pipeline (or pipe) is determined in accordance with 195.106?* (DC.DN.DESIGNPRESS.R) 195.106(a) (195.106(b);195.106(c);195.106(d);195.106(e))

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

**7. External Pressures** *Do records indicate the system is designed such that all external pressure that will be exerted on the pipe have been accounted for?* (DC.DN.EXTERNALPRESS.R) 195.108

**8. External Pressures** *Have all external pressures exerted on the pipe been accounted for?* (DC.DN.EXTERNALPRESS.O) 195.108

**9. Anticipated External Loads** *Does the process require pipeline designs to account for anticipated external loads?* (DC.DN.EXTLOAD.P) 195.110(a) (195.110(b))

**10. Anticipated External Loads** *Do records demonstrate pipeline designs account for anticipated external loads?* (DC.DN.EXTLOAD.R) 195.110(a) (195.110(b))

**11. Anticipated External Loads** *Do field observations verify pipeline designs account for anticipated external loads?* (DC.DN.EXTLOAD.O) 195.110(a) (195.110(b))

**12. Fracture Propagation CO2 Pipelines** *Does the process require provisions to mitigate the effects of fracture propagation in carbon dioxide pipeline systems?* (DC.DN.CO2FRACPROP.P) 195.111

**13. Fracture Propagation CO2 Pipelines** *Do records indicate provisions to mitigate the effects of fracture propagation in carbon dioxide pipeline systems?* (DC.DN.CO2FRACPROP.R) 195.111

**14. Fracture Propagation CO2 Pipelines** *Do observations on the right-of-way support that the CO2 pipeline design is being followed?* (DC.DN.CO2FRACPROP.O) 195.111

**15. New Pipe** *Does the process require that new pipe installed in a pipeline system comply with 195.112?* (DC.DN.NEWPIPE.P) 195.112(a) (195.112(b);195.112(c))

**16. New Pipe** *Do records demonstrate new pipe installed in a pipeline system complies with §195.112?* (DC.DN.NEWPIPE.R) 195.112(a) (195.112(b);195.112(c))

**17. New Pipe** *Is new pipe is marked in accordance with the requirements of 195.112(c)?* (DC.DN.NEWPIPE.O) 195.112(c)

**18. Used Pipe** *Do records demonstrate used pipe installed in a pipeline system complies with 195.114?* (DC.DN.USEDPIPE.R) 195.114(a) (195.114(b))

**19. Used Pipe** *Does used pipe installed in a pipeline system comply with 195.114?* (DC.DN.USEDPIPE.O) 195.114(b)

**20. Valve Specifications** *Does the process require pipeline system valves meet the requirements of §195.116?* (DC.DN.VALVE.P) 195.116(a) (195.116(b);195.116(c);195.116(d);195.116(e);195.116(f))

**21. Valve Specifications** *Do records indicate pipeline system valves meet the requirements of 195.116?* (DC.DN.VALVE.R) 195.116(a) (195.116(b);195.116(c);195.116(d);195.116(e);195.116(f))

**22. Valve Observations** *Do pipeline system valves meet the requirements of 195.116?* (DC.DN.VALVE.O) 195.116(f) (195.116(b);195.116(c);195.116(e))

**23. Valve Specifications - Compatibility with CO2 and Other Commodities** *Does the process require that pipeline system valves meet the compatibility requirements of 195.116(c)?* (DC.DN.VALVECOMPAT.P) 195.116(c)

**24. Valve Specifications - Compatibility with CO2 and Other Commodities** *Do records indicate pipeline system valves meet the compatibility requirements of 195.116(c)?* (DC.DN.VALVECOMPAT.R) 195.116(c)

**25. Fittings** *Does the process require that selected material specifications for pipe fittings meet the requirements of 195.118?* (DC.DN.FITTING.P) 195.118(a) (195.118(b);195.118(c))

**26. Fittings** *Do records demonstrate selected material specifications for pipe fittings meet the requirements of 195.118?* (DC.DN.FITTING.R) 195.118(a) (195.118(b);195.118(c))

**27. Fittings** *Do the material specifications for selected pipe fittings meet the requirements of 195.118?* (DC.DN.FITTING.O) 195.118(a) (195.118(b);195.118(c))

**28. Passage of Internal Inspection Devices** *Does the process require the pipeline be designed and constructed to accommodate the passage of instrumented internal inspection devices?* (DC.DN.ILIPASS.P) 195.202 (195.120(a);195.120(b);195.120(c);195.120(d))

**29. Passage of Internal Inspection Devices** *Do records demonstrate the pipeline is designed and constructed to accommodate the passage of instrumented internal inspection devices?* (DC.DN.ILIPASS.R) 195.266 (195.120(a);195.120(b);195.120(c);195.120(d))

**30. Passage of Internal Inspection Devices** *Is the pipeline system constructed to accommodate the passage of instrumented internal inspection devices?* (DC.DN.ILIPASS.O) 195.120(a) (195.120(b))

**31. Closures** *Does the process require closures comply with the ASME Boiler and Pressure Vessel Code, Section VIII, Pressure Vessels, Division 1 (2007) and have pressure and temperature ratings at least equal to those of the pipe to which the closure is attached?* (DC.DN.CLOSURE.P) 195.124

**32. Closures** *Do records indicate closures comply with the ASME Boiler and Pressure Vessel Code, Section VIII, Pressure Vessels, Division 1 (2007) and they have pressure and temperature ratings at least equal to those of the pipe to which the closure is attached?* (DC.DN.CLOSURE.R) 195.124

**33. Closures** *Do closures comply with the ASME Boiler and Pressure Vessel Code, Section VIII, Pressure Vessels, Division 1 (2007) and do they have pressure and temperature ratings at least equal to those of the pipe to which the closure is attached?* (DC.DN.CLOSURE.O) 195.124

**34. Leak Detection Design** *Are newly constructed pipeline segments required to have a leak detection system that protects the public, property, and the environment?* (DC.DN.LDDESIGN.P) 195.134(a) (195.134(b);195.134(c))

**35. Leak Detection Design** *Do records indicate evaluation of the leak detection system for its capability to protect the public, property, and the environment?* (DC.DN.LDDESIGN.R) 195.134(a) (195.134(b);195.134(c))

**36. Leak Detection Design** *Does the leak detection system perform to the system design requirements?* (DC.DN.LDDESIGN.O) 195.134(b) (195.134(c))

**37. Chemical Compatibility - Special Considerations** *Do records verify determination that the product to be transported (hazardous liquids, CO<sub>2</sub>, biofuels) is chemically compatible with the pipeline, its components, and other commodities?* (DC.DN.CHEMCOMPATIBLE.R) 195.4

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

**38. Biofuel Special Considerations - Design Requirements** *Does the process require certain Subpart C design requirements relating to biofuel transport be addressed?* (DC.DN.DESIGN.P) 195.100 (195.116(c);195.126;195.118(c))

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

**39. Biofuel Special Considerations - Design Requirements** *Do records indicate that certain Subpart C design requirements relating to biofuel transport have been addressed?* (DC.DN.DESIGN.R) 195.100 (195.116(c);195.126;195.118(c))

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

**40. Biofuel Special Considerations - Construction Requirements** *Do records indicate certain Subpart D construction requirements relating to biofuel transport have been addressed?* (DC.DN.CONSTRUCT.R) 195.200 (195.260(c);195.262(e))

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

**41. Qualifying Metallic Components Other Than Pipe** *Does the process require metallic components other than pipe to be qualified for use?* (DC.DN.METALLIC.P) 195.101(a) (195.101(b))

**42. Qualifying Metallic Components Other Than Pipe** *Do records indicate metallic components other than pipe have been qualified for use?* (DC.DN.METALLIC.R) 195.101(a) (195.101(b))

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

**43. Qualifying Metallic Components Other Than Pipe** *Do field observations verify metallic components other than pipe have been qualified for use?* (DC.DN.METALLIC.O) 195.101(a) (195.101(b))

**44. Valve Specifications - Ethanol Compatibility** *Do records indicate pipeline system valves meet the compatibility requirements of 195.116(c)?* (DC.DN.VALVEBIOFUELS.R) 195.116(c)

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

**45. Design Temperature** *Does the process require that pipeline system components subject to the design temperatures are made of materials that are suitable for those environmental temperatures?* (DC.DN.TEMPDESIGN.P) 195.102(a)

**46. Design Temperature** *Do records indicate pipeline system components subject to low temperatures are made of materials that are suitable for those low temperatures?* (DC.DN.TEMPDESIGN.R) 195.102(a)

## Design and Construction - Maintenance and Operations

**1. Safety - Maintenance Construction and Testing** *Does the process ensure that pipeline maintenance construction and testing activities are made in a safe manner and are made so as to prevent damage to persons and property?* (DC.MO.SAFETY.P) 195.402(a) (195.422(a);195.402(c)(14))

**2. Safety - Maintenance Construction and Testing** *Are pipeline maintenance construction and testing activities performed safely and in accordance with procedures to prevent damage to persons and property?* (DC.MO.SAFETY.O) 195.422(a) (195.402(c)(14))

**3. Internal Corrosion in Cutout Pipe** *Does the process direct personnel to examine removed pipe for evidence of internal corrosion?* (DC.MO.ICEXAMINE.P) 195.402(c) (195.579(c);195.579(a))

**4. Internal Corrosion in Cutout Pipe** *Do records indicate removed pipe examined for evidence of internal corrosion?* (DC.MO.ICEXAMINE.R) 195.589(c) (195.579(c);195.579(a))



**5. Internal Corrosion in Cutout Pipe** *Are examinations of removed pipe for evidence of internal corrosion being conducted?* (DC.MO.ICEXAMINE.O) 195.579(c)

**6. 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 limits prescribed by 195.406?* (DC.MO.MOPLIMIT.P) 195.402(a) (195.402(c)(7))

**7. Start-Stop Procedures** *Do records indicate that pressure limitations on the pipeline are not exceeded?* (DC.MO.MOPLIMIT.R) 195.402(c)(7)

**8. Start-Stop Procedures** *During startup or shut-in, does the operator assure that pressure limitations on the pipeline were not exceeded?* (DC.MO.MOPLIMIT.O) 195.402(c)(7)

**9. Pipe Movement** *Has a process been developed for pipeline movements in accordance with 195.424?* (DC.MO.MOVE.P) 195.402(a) (195.424(a);195.424(b);195.424(c))

**10. Pipe Movement** *Does the operator perform pipeline movements in accordance with 195.424?* (DC.MO.MOVE.O) 195.424(a) (195.424(b);195.424(c))

## Design and Construction - Pressure Testing

**1. Pressure Testing** *Does the process have adequate test procedures?* (DC.PT.PRESSTEST.P) 195.402(c) (195.302(a);195.304;195.305;195.306;195.310)

**2. Pressure Testing** *Are pressure test records available and adequate?* (DC.PT.PRESSTEST.R) 195.310 (195.305(b))

**3. Pressure Testing** *Is pressure testing being adequately conducted?* (DC.PT.PRESSTEST.O) 195.302(a) (195.304;195.305(a);195.305(b);195.306(a);195.306(b);195.306(c);195.306(d);195.307(a);195.307(b);195.307(c);195.307(d);195.307(e);195.308)

**4. Pressure Testing of Tie-Ins** *Does the process require testing of pipe associated with tie-ins, either with the section to be tied in or separately?* (DC.PT.PRESSTESTTIEIN.P) 195.402(c) (195.308)

**5. Pressure Testing of Tie-Ins** *Do records indicate pipe associated with tie-ins has been pressure tested?* (DC.PT.PRESSTESTTIEIN.R) 195.308

## Design and Construction - Regulated Rural Gathering Lines

**1. Regulated Rural Gathering Lines** *Have processes have been established for certain design and installation requirements?* (DC.RU.REGRURALGATHER.P) 195.11(d)(2) (195.11(b)(2);195.11(b)(9);195.11(b)(11))

**2. Regulated Rural Gathering Lines** *Do records demonstrate design and installation requirements for selected regulated rural gathering lines being followed?* (DC.RU.REGRURALGATHER.R) 195.11(d)(2) (195.11(b)(2);195.11(b)(9);195.11(b)(11))

## Design and Construction - Low Stress Rural Pipelines

**1. Rural Low-Stress Pipelines** *Are processes established for design and installation requirements of Part 195 for rural low-stress pipelines?* (DC.LS.RURALLOWSTRESS.P) 195.12(c)(1) (195.12(c)(2);195.12(c)(3))

**2. Rural Low-Stress Pipelines** *Do records demonstrate compliance with design and installation requirements of Part 195 for selected rural low-stress pipelines?* (DC.LS.RURALLOWSTRESS.R) 195.12(c)(1) (195.12(c)(2);195.12(c)(3))

## Design and Construction - Special Permits

**1. 80% SMYS Special Permit/Waiver: Replacement** *Do records indicate pipe replaced in accordance with the design and construction requirements of Part 195 and the conditions of the Special Permit? (DC.SP.SP.R) 190.341(d)(2) (Special Permit)*

## Design and Construction - Training and Qualification

**1. Inspector Training** *Does the process require inspectors to be trained and qualified in the phase of construction to be inspected to ensure that the installation of pipe or pipeline systems is in accordance with Subpart D? (DC.TQ.INSPECTORQUAL.P) 195.202 (195.204)*

**2. Inspector Training** *Do records demonstrate that inspectors are trained and qualified in the phase of construction to be inspected to ensure that the installation of pipe or pipeline systems is in accordance with Subpart D? (DC.TQ.INSPECTORQUAL.R) 195.204*

**3. Inspector Training** *Do observations support that inspectors are trained and qualified in the phase of construction to be inspected to ensure that the installation of pipe or pipeline systems is in accordance with Subpart D? (DC.TQ.INSPECTORQUAL.O) 195.204*

## Design and Construction - Training and Qualification (OQ)

**1. Skills and Knowledge of Personnel Performing Covered Tasks - Operator Employee** *Does the process include covered tasks relating to "construction-type" maintenance? (DC.TQOQ.OQPLAN.P) 195.505(a) (Operators OQ program manual)*

**2. Abnormal Operating Conditions - Construction Maintenance** *Do records demonstrate that identified construction-type maintenance AOCs are adequate? (DC.TQOQ.ABNORMAL.R) 195.505(a)*

**3. Skills and Knowledge of Personnel Performing Covered Tasks - Contractor Employees** *Are qualification records for contractor personnel maintained?* (DC.TQOQ.OQCONTRACTOR.R) 195.505(b) (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.TQOQ.OQCONTRACTOR.O) 195.505(b) (Operators OQ program manual)

**5. Qualification Records - Operator Employee** *Does the operator maintain qualification records for operator personnel?* (DC.TQOQ.RECORDS.R) 195.505(b) (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.TQOQ.OQPLAN.O) 195.505(b) (Operators OQ program manual)

**7. Qualification of Personnel Who Oversee Excavations and Backfilling Operations** *Do records demonstrate individuals who oversee marking, trenching and backfilling operations are qualified?* (DC.TQOQ.EXCAVATE.R) 195.505(b) (ADB-2006-01)

**8. Qualification of Personnel Who Oversee Excavations and Backfilling Operations** *Do selected individuals who oversee marking, trenching and backfilling operations demonstrate adequate skills and knowledge?* (DC.TQOQ.EXCAVATE.O) 195.505(b) (ADB-2006-01)

## Design and Construction - Conversion to Service (195.5)

**1. Conversion Notification to PHMSA** *Do records indicate operator provided required notifications to PHMSA not later than 60 days before the conversion began as required by §195.64(c)?* (DC.CONV.NOTIFICATION.R) 195.64(c)(1)(i) (195.64(c)(1)(iii);195.5(d);195.49)

**2. Required Conversion Procedure** *Did the operator prepare a comprehensive written Conversion to Service procedure that includes all of the requirements of §195.5?* (DC.CONV.CONVERSIONPROCED.P) 195.5(a)

**3. Integrity Management History** *Do the records indicate the pipeline's Integrity Management history and related activities were reviewed?* (DC.CONV.INTEGRITYMGMT.R) 195.5(a)(1)

**4. Physical Inspection for Defects** *Does the conversion procedure include the 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 §195.5(a)(2)?* (DC.CONV.PHYSICALDEFECTS.P) 195.5(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 §195.5(a)(2)?* (DC.CONV.PHYSICALDEFECTS.R) 195.5(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 §195.5(a)(3)?* (DC.CONV.UNSAFEDEFECTS.P) 195.5(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 §195.5(a)(3) and conducted in accordance with Part 195?* (DC.CONV.UNSAFEDEFECTS.R) 195.5(a)(3)

**8. 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) 195.5(a)(1) (195.452;195.454)

**9. 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) 195.5(a)(1) (195.452;195.454)

**10. Design Elements** *Do records indicate the Conversion-to-Service DESIGN elements were reviewed and applied in accordance with 195.5(a)?* (DC.CONV.DESIGN.R) 195.5(a)(1)

**11. Construction Elements** *Do the records indicate the Conversion-to-Service related CONSTRUCTION elements were reviewed in accordance with §195.5(a) and applied in accordance with Part 195?* (DC.CONV.CONSTRUCTION.R) 195.5(a)(1)

**12. Operations & Maintenance Elements** *Do the records indicate the Conversion-to-Service related Operations & Maintenance elements were reviewed in accordance with §195.5(a) and applied in accordance with Part 195?* (DC.CONV.OPSMaintenance.R) 195.5(a)(1) (195.402)

**13. 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 195 requirements as applied to this Conversion to Service?* (DC.CONV.OPSMaintMODIF.P) 195.402 (195.5(a))

**14. 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 §195.5(a)?* (DC.CONV.OPSMaintMODIF.R) 195.402 (195.5(a))

**15. Historical Records Review - Missing Records** *For the operator's review of the pipeline history (historical records) as required by §195.5(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) 195.5(a)(1)

**16. Pressure Testing (Subpart E) for MOP** *Does the conversion procedure include the requirement to pressure test the pipeline, in accordance with Part 195, Subpart E, to substantiate the MOP permitted by §195.406?* (DC.CONV.PRESSURETESTING.P) 195.5(a)(4) (195.406)

**17. Pressure Testing (Subpart E) for MOP** *Do the records indicate the pipeline was tested in accordance with Part 195, Subpart E, to substantiate the new Maximum Operating Pressure permitted by §195.406?* (DC.CONV.PRESSURETESTING.R) 195.5(a)(4) (195.406)

**18. Applying Integrity Management (Subpart F - 195.452 and 195.454)** *Does the conversion procedure require the operator to apply the Integrity Management Program requirements, including HCAs, from Part 195, Subpart F - 195.452 and 195.454?* (DC.CONV.IMPROGRAM.P) 195.452(f) (195.452(b))

**19. Applying Integrity Management (Subpart F - 195.452 and 195.454)** *Do the records indicate operator developed and implemented an Integrity Management Program for the converted pipeline as required by Part 195, Subpart F - 195.452 and 195.454?* (DC.CONV.IMPROGRAM.R) 195.452(l) (195.452(f))

**20. Conversion to Service Records** *Does the operator's conversion procedure require a record of all of the investigations, tests, repairs, replacements, and alterations made under §195.5(a) to be maintained for the life of the pipeline/facility?* (DC.CONV.RECORDS.P) 195.5(c)

**21. Conversion to Service Records** *Do the records indicate operator documented all of the investigations, tests, repairs, replacements, and alterations made under §195.5(a)?* (DC.CONV.RECORDS.R) 195.5(c) (195.5(a))

**22. Commissioning Converted Pipeline** *Does the conversion include a written Commissioning Plan which details the requirements, parameters, and procedures for a safe startup of the converted pipeline under Part 195?* (DC.CONV.COMMISSIONING.P) 195.401

**23. Commissioning Converted Pipeline** *Do records indicate operator followed its written Commissioning Plan to ensure a safe startup of the converted pipeline under Part 195?* (DC.CONV.COMMISSIONING.R) 195.404 (195.401(a);195.402)

## Tank Design and Construction - New API 650 Tanks - Part 195 Requirements

**1. New Aboveground Breakout Tank Specifications** *Does the process for new aboveground atmospheric breakout tanks require tank design and construction to meet the requirements of 195.132(b)(3)?* (TDC.650REGS.TANKSPEC.P) 195.132(b)(3) (API Std 650 (13th Edition))

**2. New Aboveground Breakout Tank Specifications** *Do the design records and drawings indicate new aboveground atmospheric breakout tanks are designed and constructed to the specifications required by 195.132(b)(3)?* (TDC.650REGS.TANKSPEC.R) 195.132(b)(3) (API Std 650 (13th Edition))

**3. New Aboveground Breakout Tank Specifications** *Do field observations confirm the new aboveground atmospheric breakout tank(s) are designed and being constructed to the specifications required by 195.132(b)(3)?* (TDC.650REGS.TANKSPEC.O) 195.132(b)(3) (API Std 650 (13th Edition))

**4. New Aboveground Breakout Tank Internal Design Pressure** *Does the process for new aboveground atmospheric breakout tanks require design and construction to withstand the internal pressure produced by the hazardous liquid to be stored therein and any anticipated external loads?* (TDC.650REGS.TANKDESPRESS.P) 195.132(a)

**5. New Aboveground Breakout Tank Internal Design Pressure** *Do the design records and drawings indicate the new aboveground breakout tank(s) are designed and constructed to withstand the internal pressure produced by the hazardous liquid to be stored therein and any anticipated external loads?* (TDC.650REGS.TANKDESPRESS.R) 195.132(a)

**6. New Aboveground Breakout Tank Internal Design Pressure** *Do field observations confirm the new aboveground breakout tank(s) are designed and constructed to withstand the internal pressure produced by the hazardous liquid to be stored therein and any anticipated external loads?* (TDC.650REGS.TANKDESPRESS.O) 195.132(a)

**7. Breakout Tank Repair, Alteration, and Reconstruction** *Are breakout tanks required to be repaired, altered, or reconstructed in compliance with the requirements of 195.205(b)(1)?* (TDC.650REGS.REPAIRSPEC.P) 195.205(b)(1) (API Std 650 (13th Edition);API Std 653 (3rd Edition))

**8. Breakout Tank Repair, Alteration, and Reconstruction** *Do records indicate breakout tanks were repaired, altered, or reconstructed in compliance with the requirements of 195.205(b)(1)?* (TDC.650REGS.REPAIRSPEC.R) 195.205(b)(1) (API Std 650 (13th Edition);API Std 653 (3rd Edition))

**9. Breakout Tank Repair, Alteration, and Reconstruction** *Do field observations confirm breakout tanks are being repaired, altered, or reconstructed in compliance with the requirements of 195.205(b)(1)?* (TDC.650REGS.REPAIRSPEC.O) 195.205(b)(1) (API Std 650 (13th Edition);API Std 653 (3rd Edition))

**10. Breakout Tank CP - System Design (API RP 651)** *Does the process for new aboveground breakout tanks require cathodic protection system design to conform with API RP 651 (4th Edition), Sections 6.2 and 6.3, as required by 195.565?* (TDC.650REGS.CPDESIGN.P) 195.565 (195.563(d);195.132(b)(3);API RP 651 (4th Edition), Section 6.3.4;API RP 651 (4th Edition), Section 6.3.5;API RP 651 (4th Edition), Section 7.2.1;API RP 651 (4th Edition), Section 11.4)

**11. Breakout Tank CP - System Design (API RP 651)** *Do records demonstrate new aboveground breakout tanks have cathodic protection installed as required by 195.565?* (TDC.650REGS.CPDESIGN.R) 195.565 (195.404(c);195.563(d);195.589(a);195.589(b);195.589(c);API RP 651 (4th Edition), Section 6.3.4;API RP 651 (4th Edition), Section 6.3.5;API RP 651 (4th Edition), Section 7.2.1;API RP 651 (4th Edition), Section 11.4)



**12. Breakout Tank CP - System Design (API RP 651)** *Do field observations confirm new breakout tanks have cathodic protection installed in accordance with 195.565? (TDC.650REGS.CPDESIGN.O) 195.565 (195.563(d);API RP 651 (4th Edition), Section 6.3.4;API RP 651 (4th Edition), Section 6.3.5;API RP 651 (4th Edition), Section 7.2.1)*

**13. Breakout Tank - Venting or Pressure/Vacuum Relief** *Does the process for new aboveground breakout tanks require normal / emergency (pressure/vacuum) relief venting to be provided for each tank in accordance with 195.264(d) and (e)? (TDC.650REGS.RELIEFVENT.P) 195.264(e) (195.264(d);API Std 650 (13th Edition);API Std 2000 (7th Edition))*

**14. Breakout Tank - Venting or Pressure/Vacuum Relief** *Do design records indicate normal / emergency (pressure/vacuum) relief venting was provided for each for new aboveground breakout tank in accordance with 195.264(d) and (e)? (TDC.650REGS.RELIEFVENT.R) 195.264(e) (195.264(d);API Std 650 (13th Edition);API Std 2000 (7th Edition))*

**15. Breakout Tank - Venting or Pressure/Vacuum Relief** *Do field observations confirm normal / emergency (pressure/vacuum) relief venting was provided for each for new aboveground breakout tank in accordance with 195.264(d) and (e)? (TDC.650REGS.RELIEFVENT.O) 195.264(e) (195.264(d);API Std 650 (13th Edition);API Std 2000 (7th Edition))*

**16. Breakout Tank Overfill Protection** *Does the new tank design require product level alarm devices to be installed to indicate a rise of the liquid in the tank to a level above the normal and overfill protection levels in accordance with 195.428(c)? (TDC.650REGS.OVERFILLPROT.P) 195.428(c) (195.402(c);195.132(b)(3);API Recommended Practice 2350 (5th Edition), Section 4.6;API Recommended Practice 2350 (5th Edition), Section 4.8)*

**17. Breakout Tank Overfill Protection** *Do records indicate product level alarm devices were installed and set to alarm at a level above the normal and overfill protection levels in accordance with 195.428(c)? (TDC.650REGS.OVERFILLPROT.R) 195.428(c) (195.404(a);195.404(b);195.404(c);195.132(b)(3);API Recommended Practice 2350 (5th Edition), Section 4.6;API Recommended Practice 2350 (5th Edition), Section 4.8)*

**18. Breakout Tank Overfill Protection** *Do field observations confirm product level alarm devices were installed and set to alarm at the design levels (level above the normal and overfill protection levels) in accordance with 195.428(c)? (TDC.650REGS.OVERFILLPROT.O) 195.428(c) (195.132(b)(3);API Recommended Practice 2350 (5th Edition), Section 4.6;API Recommended Practice 2350 (5th Edition), Section 4.8)*

**19. Breakout Tank Overfill Protection - Testing & Acceptance** *Does the design process require testing and inspection of the overfill protection system upon initial installation? (TDC.650REGS.OVERFILLTESTING.P) 195.428(c) (API Recommended Practice 2350 (5th Edition), Section 4.8.1;API Recommended Practice 2350 (5th Edition), Section 4.8.2(a);API Recommended Practice 2350 (5th Edition), Section 4.8.7;API Recommended Practice 2350 (5th Edition), Appendix H.5.3)*

**20. Breakout Tank Overfill Protection - Testing & Acceptance** *Do records indicate testing and inspection of the overfill protection system was performed upon initial installation?* (TDC.650REGS.OVERFILLTESTING.R) 195.428(c) (API Recommended Practice 2350 (5th Edition), Section 4.8.2(a); API Recommended Practice 2350 (5th Edition), Section 4.8.7; API Recommended Practice 2350 (5th Edition), Section 4.8.1; API Std 650 (13th Edition), Appendix H.5.3)

**21. Breakout Tank Overfill Protection - Testing & Acceptance** *Do field observations indicate testing and inspection of the tank overfill protection system was performed?* (TDC.650REGS.OVERFILLTESTING.O) 195.428(c) (API Recommended Practice 2350 (5th Edition), Section 4.8.2(a); API Std 650 (13th Edition), Appendix H.5.3)

**22. Breakout Tank Overfill Protection - SCADA** *Does the process require initial testing of applicable SCADA overfill protection systems for each new tank?* (TDC.650REGS.OVERFILLSCADA.P) 195.446(c)(2) (195.428(d); API Recommended Practice 2350 (5th Edition))

**23. Breakout Tank Overfill Protection - SCADA** *Do records indicate initial testing of applicable SCADA overfill protection systems for each new tank was conducted?* (TDC.650REGS.OVERFILLSCADA.R) 195.446(c)(2) (195.428(d); API Recommended Practice 2350 (5th Edition))

**24. Breakout Tank Overfill Protection - SCADA** *Do field observations confirm initial testing was conducted for applicable SCADA overfill protection systems for each new tank?* (TDC.650REGS.OVERFILLSCADA.O) 195.446(c)(2) (195.428(d); API Recommended Practice 2350 (5th Edition))

**25. Breakout Tanks - Floating Roof Access & Egress** *Do the tank and roof design specifications require review and consideration of the hazards associated with access/egress onto floating roofs and the potentially hazardous conditions, safety practices and procedures in API Publication 2026 (4th Edition)?* (TDC.650REGS.ROOFEGRESS.P) 195.405(b)

**26. Breakout Tanks - Floating Roof Access & Egress** *Do records indicate review was conducted for consideration of the hazards associated with access/egress onto floating roofs and the potentially hazardous conditions, safety practices and procedures in API Publication 2026 (4th Edition)?* (TDC.650REGS.ROOFEGRESS.R) 195.405(b) (195.404(c))

**27. Breakout Tanks - Protection Against Ignitions** *Does the aboveground atmospheric breakout tank design process require design and installation of protections against ignitions arising out of static electricity, lightning, and stray currents in accordance with API RP 2003 (8th Edition)?* (TDC.650REGS.IGNITIONPROT.P) 195.405(a) (API RP 2003 (8th Edition))

**28. Breakout Tanks - Protection Against Ignitions** *Do records for the aboveground atmospheric breakout tank(s) indicate the design and installation of protections against ignitions arising out of static electricity, lightning, and stray currents in accordance with API RP 2003 (8th Edition)?* (TDC.650REGS.IGNITIONPROT.R) 195.405(a) (API RP 2003 (8th Edition))

**29. Breakout Tanks - Protection Against Ignitions** *Do field observations confirm installation of tank protections against ignitions arising out of static electricity, lightning, and stray currents in accordance with API RP 2003 (8th Edition)?* (TDC.650REGS.IGNITIONPROT.O) 195.405(a) (API RP 2003 (8th Edition))

**30. Breakout Tanks - Impoundment** *Does the process for new aboveground breakout tanks require impoundment(s) to meet the impoundment requirements of 195.264 in the event of tank spillage or failure?* (TDC.650REGS.IMPOUNDMENT.P) 195.264(a) (195.264(b);195.264(c);195.264(d);195.264(e);NFPA 30-2021)

**31. Breakout Tanks - Impoundment** *Do records indicate that new aboveground breakout tanks include impoundment(s) meet the requirements of 195.264 in the event of tank spillage or failure?* (TDC.650REGS.IMPOUNDMENT.R) 195.264(a) (195.264(b);195.264(c);195.264(d);195.264(e);NFPA 30-2021)

**32. Breakout Tanks - Impoundment** *Do field observations confirm that impoundment(s) for new aboveground breakout tanks were installed in accordance with the requirements of 195.264?* (TDC.650REGS.IMPOUNDMENT.O) 195.264(a) (195.264(b);195.264(c);195.264(d);195.264(e);NFPA 30-2021)

**33. Breakout Tank Areas - Unauthorized Entry** *Does the process for new aboveground breakout tank areas require protection against unauthorized entry?* (TDC.650REGS.UNAUTHENTRY.P) 195.264(c) (195.436)

**34. Breakout Tank Areas - Unauthorized Entry** *Do records indicate protection against unauthorized entry was provided for new aboveground breakout tank areas?* (TDC.650REGS.UNAUTHENTRY.R) 195.264(c) (195.436)

**35. Breakout Tank Areas - Unauthorized Entry** *Do field observations confirm adequate protection against unauthorized entry was provided for new aboveground breakout tanks areas?* (TDC.650REGS.UNAUTHENTRY.O) 195.264(c) (195.436)

**36. Breakout Tank Areas - Firefighting Equipment** *Does the process define what firefighting equipment is needed to respond to emergencies at the facility and provide for procedures and training of personnel?* (TDC.650REGS.FIREEQUIP.P) 195.430(a) (195.430(b);195.430(c))

**37. Breakout Tank Areas - Firefighting Equipment** *Do records indicate determination of what firefighting equipment is needed to respond to emergencies at the facility and for procedures and training of personnel?* (TDC.650REGS.FIREEQUIP.R) 195.430(a) (195.430(b);195.430(c))

**38. Breakout Tank Areas - Firefighting Equipment** *Do field observations confirm the necessary firefighting equipment to respond to emergencies is included at the facility's breakout tank area?* (TDC.650REGS.FIREEQUIP.O) 195.430(a) (195.430(b);195.430(c))

**39. Breakout Tanks - Bottom Linings** *Does the process for new aboveground breakout tanks require bottom linings to protect against internal corrosion in accordance with 195.579(d)?* (TDC.650REGS.BOTTOMLINING.P) 195.579(d) (195.402(c);API RP 652 (3rd Edition))

**40. Breakout Tanks - Bottom Linings** *Do records indicate the installation of bottom linings for new aboveground breakout tanks meet the requirements of 195.579(d)?* (TDC.650REGS.BOTTOMLINING.R) 195.579(d) (195.404(a);API RP 652 (3rd Edition);195.404(b);195.404(c))

**41. Breakout Tanks - Bottom Linings** *Do field observations confirm the installation of bottom linings for new aboveground breakout tanks meet the requirements of 195.579(d)?* (TDC.650REGS.BOTTOMLINING.O) 195.579(d) (API RP 652 (3rd Edition))

## Tank Design and Construction - New API 650 Tanks - Foundation Design

**1. Seismic Tank Design (API 650 Appendix E)** *For tanks located in regions that may be subject to seismic ground motion (earthquakes), does the process require adherence to API Std 650 (13th Edition), Appendix E - "Seismic Design of Storage Tanks" and a site-specific seismic study (Appendix E.4.2.1)?* (TDC.650FDN.SEISMICDESIGN.P) 195.132(b)(3) (API Std 650 (13th Edition), Appendix E.1;API Std 650 (13th Edition), Appendix E.3;API Std 650 (13th Edition), Appendix E.4;API Std 650 (13th Edition), Appendix E.5;API Std 650 (13th Edition), Appendix E.6;API Std 650 (13th Edition), Appendix E.7;ASCE 7)

**2. Seismic Tank Design (API 650 Appendix E)** *For tanks located in regions that may be subject to SEISMIC ground motion (earthquakes), do records (design package) indicate a site-specific seismic study was performed (Appendix E.4.2.1) and the seismic requirements of API Std 650 (13th Edition), Appendix E, are incorporated?* (TDC.650FDN.SEISMICDESIGN.R) 195.132(b)(3) (API Std 650 (13th Edition), Appendix E.1;API Std 650 (13th Edition), Appendix E.3;API Std 650 (13th Edition), Appendix E.4;API Std 650 (13th Edition), Appendix E.5;API Std 650 (13th Edition), Appendix E.6;API Std 650 (13th Edition), Appendix E.7;ASCE 7)

**3. Seismic Tank Design (API 650 Appendix E)** *For tanks located in regions that may be subject to SEISMIC ground motion (earthquakes), do field observations indicate that the seismic design requirements from API Std 650 (13th Edition), Appendix E, were implemented and/or installed?* (TDC.650FDN.SEISMICDESIGN.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix E.1;API Std 650 (13th Edition), Appendix E.3;API Std 650 (13th Edition), Appendix E.4;API Std 650 (13th Edition), Appendix E.5;API Std 650 (13th Edition), Appendix E.6;API Std 650 (13th Edition), Appendix E.7;ASCE 7)

**4. Foundation - General Design, Subsurface Conditions, and Ringwall** *Are the tank specifications complete for the proper procedure/aspect of tank foundation and ringwall design and construction?* (TDC.650FDN.FDNDESIGN.P) 195.132(b)(3) (API Std 650 (13th Edition), Appendix B.1;API Std 650 (13th Edition), Appendix B.2;API Std 650 (13th Edition), Appendix B.3;API Std 650 (13th Edition), Appendix B.4;API Std 650 (13th Edition), Appendix E.7.6;API Std 650 (13th Edition), Section 5.3.1.2;API Std 650 (13th Edition), Section 5.11.4)

**5. Foundation - General Design, Subsurface Conditions, and Ringwall** *Do field observations confirm the tank foundation and ringwall were constructed and/or installed in accordance with the design specifications?* (TDC.650FDN.FDNDESIGN.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix B.2;API Std 650 (13th Edition), Appendix B.3;API Std 650 (13th Edition), Appendix B.4)

**6. Foundation Design - Subsurface Conditions** *Do records demonstrate all of the subsurface conditions and factors that affect foundation design were investigated?* (TDC.650FDN.SUBSURFACE.R) 195.132(b)(3) (API Std 650 (13th Edition), Appendix B.2.2;API Std 650 (13th Edition), Appendix B.2.3;API Std 650 (13th Edition), Appendix B.2.4)

**7. Foundation Design - Subsurface Conditions** *Do field observations confirm the subsurface conditions and factors match the foundation design?* (TDC.650FDN.SUBSURFACE.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix B.2.2;API Std 650 (13th Edition), Appendix B.2.3;API Std 650 (13th Edition), Appendix B.2.4)

**8. Foundation Design - Clean Sand Pad Material** *Do field observations confirm tank sand pad materials and tank pad construction conform to the design specifications?* (TDC.650FDN.SANDPAD.O) 195.565 (195.132(b)(3);API Std 650 (13th Edition);API RP 651 (4th Edition), Section 5.3.1;API RP 651 (4th Edition), Section 5.3.2)

**9. Foundation Design - Undertank Leak Detection** *Where an undertank leak detection system was included, do field observations confirm the undertank leak detection system was installed in accordance with the design specifications?* (TDC.650FDN.UNdertankLEAKDET.O) 195.132(b)(3) (API Std 650 (13th Edition) Appendix I.1.3;API Std 650 (13th Edition), Appendix I.2)

**10. Foundation Design - Grading and Drainage** *Do records indicate grade provisions for tank bottom elevation, crowning, drainage, and compensation for any settlement expectation was provided?* (TDC.650FDN.GRADING.R) 195.132(b)(3) (API Std 650 (13th Edition), Appendix B.3.1; API Std 650 (13th Edition), Appendix B.3.3; API Std 650 (13th Edition), Appendix B.3.4)

**11. Foundation Design - Concrete Ringwall** *For earthen tank foundations with a CONCRETE ringwall, do records indicate the ringwall meets the design specifications?* (TDC.650FDN.CONCRINGWALL.R) 195.132(b)(3) (API Std 650 (13th Edition), Appendix B.4.2.2; API Std 650 (13th Edition), Appendix B.4.2.3)

**12. Foundation Design - Concrete Slab Foundation** *Where the soil bearing capacity is limited and loading must be distributed over an area larger than the tank area, do records indicate the reinforced concrete slab meets the design specifications?* (TDC.650FDN.SLABDES.R) 195.132(b)(3) (API Std 650 (13th Edition), Appendix B.4.4; ACI 318)

**13. Foundation Design - Sliding Resistance from Lateral Wind Load** *For tanks subject to lateral wind loading, do records (design package) indicate sliding friction resistance was accounted for?* (TDC.650FDN.SLIDING.R) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.3.1.2; API Std 650 (13th Edition), Section 5.11.4)

## Tank Design and Construction - New API 650 Tanks - Floor Design

**1. Floor - Lap-Welded Bottom Plate Joints** *Does the tank floor design specify that lap-welded bottom plates and joint welding conform to API Std 650 (13th Edition), Section 5.1.5.4?* (TDC.650FLOOR.BOTTOMJOINTS.P) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.1.5.4)

**2. Floor - Lap-Welded Bottom Plate Joints** *Do records indicate that lap-welded bottom plates and joint welding conforms to the design specifications?* (TDC.650FLOOR.BOTTOMJOINTS.R) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.1.5.4)

**3. Floor - Lap-Welded Bottom Plate Joints** *Do field observations confirm that lap-welded bottom plates and joint welding conforms to the design specifications?* (TDC.650FLOOR.BOTTOMJOINTS.O) 195.132(b)(3) (API 650, Section 5.1.5.4)

**4. Floor - Weld Pass Restrictions** *Does the tank floor design specify weld pass restrictions as defined in API Std 650 (13th Edition), Section 5.1.3.6?* (TDC.650FLOOR.WELDPASSRES.P) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.1.3.6)

**5. Floor - Weld Pass Restrictions** *Do field observations confirm weld pass restrictions were in accordance with API Std 650 (13th Edition), Section 5.1.3.6?* (TDC.650FLOOR.WELDPASSRES.O) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.1.3.6)

**6. Floor - Annular Plate Joints** *Does the tank annular floor plate design specify that that butt-welded bottom plates and butt joint welding conforms to API Std 650 (13th Edition), Section 5.1.5.5?* (TDC.650FLOOR.ANNULARPLATES.P) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.1.5.6)

**7. Floor - Annular Plate Joints** *Do field observations confirm that lap-welded bottom plates and joint welding conforms to the design specifications?* (TDC.650FLOOR.ANNULARPLATES.O) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.1.5.6)

**8. Floor - Annular Bottom Plate Radial Width** *Do field observations confirm that annular bottom plates were installed to the design specifications?* (TDC.650FLOOR.ANNULARPLATESIZE.O) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.4.2; API Std 650 (13th Edition), Section 5.5.2)

**9. Floor - Shell-to-Bottom Fillet Welds** *Does the tank floor design specify that shell-to-bottom plates welding conform to API Std 650 (13th Edition), Section 5.1.5.7?* (TDC.650FLOOR.SHELLBOTTOMWELDS.P) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.1.5.7)

**10. Floor - Shell-to-Bottom Fillet Welds** *Do field observations confirm shell-to-bottom plates welding conforms to the design specifications?* (TDC.650FLOOR.SHELLBOTTOMWELDS.O) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.1.5.7)

**11. Floor - Bottom Plate Size** *Does the tank floor design specify that bottom plate thickness and sizing design conform to API Std 650 (13th Edition), Section 5.4?* (TDC.650FLOOR.BOTTOMPLATES.P) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.4)

**12. Floor - Bottom Plate Size** *Do field observations confirm that installed bottom plates conform to the design specifications?* (TDC.650FLOOR.BOTTOMPLATES.O) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.4)

## Tank Design and Construction - New API 650 Tanks - Shell Design

**1. Shell - Plate Design** *Does the tank design require shell plate dimensions to conform with API Std 650 (13th Edition), Section 5.6.1? (TDC.650SHELL.PLATEDESIGN.P) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.6.1.1;API Std 650 (13th Edition), Section 5.6.1.2)*

**2. Shell - Stability Against Buckling** *Do the procedures include checking for stability against buckling from the design wind speed in accordance with Section 5.9.7 (Wind Girders)? (TDC.650SHELL.BUCKLING.P) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.6.1.4;API Std 650 (13th Edition), Section 5.9.7)*

**3. Shell - Stability Against Buckling** *Where applicable, do field observations verify the presence of wind girders as required by the shell design for stability against buckling? (TDC.650SHELL.BUCKLING.O) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.6.1.4;API Std 650 (13th Edition), Section 5.9.7)*

**4. Shell - Plate Design Stress** *Does the operator's design procedures require determination of maximum allowable product design stress and maximum allowable hydrostatic test stress based on permissible plate materials in API Std 650 (13th Edition), Tables 5-2a and 5-2b? (TDC.650SHELL.PLATESTRESS.P) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.6.2.1;API Std 650 (13th Edition), Section 5.6.2.2)*

**5. Shell - Plate Design Stress** *Do records (design package) indicate the maximum allowable product design stress and maximum allowable hydrostatic test stress meet the requirements of the design specifications? (TDC.650SHELL.PLATESTRESS.R) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.6.2.1;API Std 650 (13th Edition), Section 5.6.2.2)*

**6. Shell - Course Thickness Method** *Do records (design package) indicate the selected course thickness method met the design requirements? (TDC.650SHELL.THICKNESSMETHOD.R) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.6.3;API Std 650 (13th Edition), Section 5.6.4;API Std 650 (13th Edition), Section 5.6.5)*

**7. Shell - Shell Rough Spots Damage to Rim Seal** *For IFR tanks, are there any rough spots, such as temporary welds or other sharp objects, that could damage the seal? (TDC.650SHELL.ROUGHSPOTS.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix H.4.4.5)*



## Tank Design and Construction - New API 650 Tanks - Internal Floating Roof (IFR)

**1. IFR - Electrical Bonding** *For IFR tanks, do records (design package) indicate all conductive parts of the internal floating roof are electrically interconnected and bonded to the outer tank structure?* (TDC.650IFR.ELECTRBONDING.R) 195.132(b)(3) (API Std 650 (13th Edition), Appendix H.4.1.6; API Std 650 (13th Edition), Appendix L, Line 32)

**2. IFR - Compartment Design** *For IFR tanks, do records (design package) indicate each closed flotation compartment is capable of being field inspected for the presence of combustible gas?* (TDC.650IFR.COMPARTMENT.R) 195.132(b)(3) (API Std 650 (13th Edition), Appendix H.4.1.7; API Std 650 (13th Edition), Appendix L, Line 23; API Std 650 (13th Edition), Appendix L, Line 34)

**3. IFR - Buoyancy Design** *For IFR tanks, do roof design records (or design package) indicate buoyancy calculations were based on the lower of the product specific gravity or 0.7 regardless of any higher specific gravity that might be specified by the operator?* (TDC.650IFR.BUOYANCY.R) 195.132(b)(3) (API Std 650 (13th Edition), Appendix H.4.2.1; API Std 650 (13th Edition), Appendix W.4.10.1)

**4. IFR - Load Design** *For IFR tanks, do design records (or design package) indicate the floating roof and supporting legs were constructed to safely support the load requirements in the design specifications?* (TDC.650IFR.LOADDESIGN.R) 195.132(b)(3) (API Std 650 (13th Edition), Appendix H.4.2.2; API Std 650 (13th Edition), Appendix W.4.10.3)

**5. IFR - Roof Penetrations** *For IFR tanks, do field observations confirm appurtenances (columns, ladders, and other attachments) that penetrate the deck were provided with a seal in accordance with the design specifications?* (TDC.650IFR.PENETRATIONS.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix H.4.5)

**6. IFR - Floor Landing Pads** *For IFR tanks, do field observations confirm steel floor pads were installed to distribute the loads on the bottom of the tank and provide a wear surface?* (TDC.650IFR.LANDINGPADS.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix H.4.6.6)

**7. IFR - Aluminum Isolation from Steel** *For IFR tanks where aluminum supports are used, do field observations confirm they are isolated from carbon steel by an austenitic stainless steel spacer, an elastomeric bearing pad, or equivalent protection?* (TDC.650IFR.ALUMISOLATION.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix H.4.6.7)

**8. IFR - Internal Linings** *For IFR tanks with internal linings, do field observations confirm that the contact point between the support leg and tank bottom were constructed to protect the lining and minimize corrosion?* (TDC.650IFR.LININGS.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix H.4.6.9)

**9. IFR - Floating Roof Vents** *For IFR tanks, do field observations confirm floating roof vents were provided?* (TDC.650IFR.IFRVENTS.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix H.5.2.1)

**10. IFR - Peripheral and Center Circulation Vents** *For IFR tanks, do records (design package) indicate circulation vents (on the tank shell and/or roof) and a center circulation vent were provided and meet the requirements of API Std 650 (13th Edition), Appendix H.5.2.2?* (TDC.650IFR.CIRCVENTS.R) 195.132(b)(3) (API Std 650 (13th Edition), Appendix H.5.2.2; API Std 650 (13th Edition), Appendix L, Line 29, Table 4; API Std 650 (13th Edition), Appendix W.2)

**11. IFR - Peripheral and Center Circulation Vents** *For IFR tanks, do field observations confirm circulation vents were installed and meet the design specifications?* (TDC.650IFR.CIRCVENTS.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix H.5.2.2; API Std 650 (13th Edition), Appendix L, Line 29, Table 4; API Std 650 (13th Edition), Appendix W.2)

**12. IFR - Centering and Anti-Rotation Devices** *For IFR tanks, do field observations confirm the centering and anti-rotation devices have been installed?* (TDC.650IFR.CENTERING.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix H.5.4)

**13. IFR - Manholes** *For IFR tanks, do field observations confirm at least one fixed-roof manhole and one internal floating roof deck manhole have been provided for access to and ventilation of the tank?* (TDC.650IFR.MANHOLE.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix H.5.5)

## Tank Design and Construction - New API 650 Tanks - Fixed Roof

**1. Fixed Roof - Loads Design** *Do records indicate the fixed roof and supporting structures were designed and constructed in accordance with API Std 650 (13th Edition), Appendix R?* (TDC.650FXDROOF.LOADSDES.R) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.10.2.1; API Std 650 (13th Edition), Section 5.2.2; API Std 650 (13th Edition), Appendix W.1.5)

**2. Fixed Roof - Roof Plate Thickness** *Do records (MTRs) indicate fixed roof plates have a minimum nominal thickness of 3/16-inch or 7-gauge sheet?* (TDC.650FXDROOF.PLATETHICK.R) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.10.2.2; API Std 650 (13th Edition), Appendix W.1.5)

**3. Fixed Roof - Roof Plate Thickness** *Do field observations confirm fixed roof plates have a minimum nominal thickness of 3/16-inch or 7-gauge sheet?* (TDC.650FXDROOF.PLATETHICK.O) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.10.2.2)

**4. Fixed Roof - Roof Plate Top Angle Attachment Weld** *Do field observations confirm roof plates are attached to the top angle of the tank with a continuous fillet weld on the top side?* (TDC.650FXDROOF.PLATETOPANGLE.O) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.10.2.5)

**5. Fixed Roof - Frangible Roof** *For tanks designed with a "Frangible" Fixed Roof, do records indicate frangible roof was designed to conform with API Std 650 (13th Edition), Section 5.10.2.6?* (TDC.650FXDROOF.FRANGIBLE.R) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.10.2.6; API Std 650 (13th Edition), Appendix W.1.5)

**6. Fixed Roof - Frangible Roof** *For tanks designed with a "Frangible" Fixed Roof, do field observations confirm the frangible roof was constructed to conform with API Std 650 (13th Edition), Section 5.10.2.6?* (TDC.650FXDROOF.FRANGIBLE.O) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.10.2.6; API Std 650 (13th Edition), Appendix W.1.5)

**7. Supported Cone Roofs - Roof Slope** *For supported cone roofs, do records (design specification or drawing) indicate the roof was installed with a slope of 1:16?* (TDC.650FXDROOF.SLOPE.R) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.10.4.1; API Std 650 (13th Edition), Appendix W.1.5)

**8. Supported Cone Roofs - Roof Slope** *For supported cone roofs, do field observations confirm the roof was installed with a slope of 1:16, or greater if specified?* (TDC.650FXDROOF.SLOPE.O) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.10.4.1)

**9. Supported Cone Roofs - Column Type** *For supported cone roofs, do records (design package) indicate the roof column type and column base meet the design requirements (and API Std 650 (13th Edition), Section 5.10.4)?* (TDC.650FXDROOF.COLUMNTYPE.R) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.10.4.5; API Std 650 (13th Edition), Section 5.10.4.7; API Std 650 (13th Edition), Section 5.10.4.8; API Std 650 (13th Edition), Appendix W.1.5)

**10. Supported Cone Roofs - Column Type** *For supported cone roofs, do records (design package) indicate the roof column type and column base meet the design requirements (and API Std 650 (13th Edition), Section 5.10.4)?* (TDC.650FXDROOF.COLUMNTYPE.O) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.10.4.5; API Std 650 (13th Edition), Section 5.10.4.7; API Std 650 (13th Edition), Section 5.10.4.8)

**11. Supported Cone Roofs - Center Columns** *For supported cone roofs, do records indicate the tank center column design includes both the balanced snow load and unbalanced snow load?* (TDC.650FXDROOF.CENTERCOLUMNS.R) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.10.4.10; API Std 650 (13th Edition), Appendix W.1.5)

## Tank Design and Construction - New API 650 Tanks - External Floating Roof (EFR)

**1. EFR - Deck General Design Requirements** *For EFRs, does the operator's process require the deck design to include the parameters from API Std 650 (13th Edition), Appendix C?* (TDC.650EFR.DECKGENERAL.P) 195.132(b)(3) (API Std 650 (13th Edition), Appendix C.3.3; API Std 650 (13th Edition), Appendix C.3.4; API Std 650 (13th Edition), Appendix C.3.5; API Std 650 (13th Edition), Appendix C.3.7; API Std 650 (13th Edition), Appendix C.3.8.1; API Std 650 (13th Edition), Appendix C.3.9; API Std 650 (13th Edition), Appendix C.3.10; API Std 650 (13th Edition), Appendix C.3.11; API Std 650 (13th Edition), Appendix C.3.12; API Std 650 (13th Edition), Appendix C.3.13; API Std 650 (13th Edition), Appendix C.3.14; API Std 650 (13th Edition), Appendix C.3.15; API Std 650 (13th Edition), Appendix C.4.2; API Std 650 (13th Edition), Appendix C.4.5; API Std 650 (13th Edition), Appendix C.3.8.2)

**2. EFR - Deck General Design Requirements** *For EFRs, do records (design package) indicate the deck design meets the requirements of API Std 650 (13th Edition), Appendix C?* (TDC.650EFR.DECKGENERAL.R) 195.132(b)(3) (API Std 650 (13th Edition), Appendix C.3.3; API Std 650 (13th Edition), Appendix C.3.4; API Std 650 (13th Edition), Appendix C.3.5; API Std 650 (13th Edition), Appendix C.3.7; API Std 650 (13th Edition), Appendix C.3.8.1; API Std 650 (13th Edition), Appendix C.3.9; API Std 650 (13th Edition), Appendix C.3.10; API Std 650 (13th Edition), Appendix C.3.11; API Std 650 (13th Edition), Appendix C.3.12; API Std 650 (13th Edition), Appendix C.3.13; API Std 650 (13th Edition), Appendix C.3.14; API Std 650 (13th Edition), Appendix C.3.15; API Std 650 (13th Edition), Appendix C.4.2; API Std 650 (13th Edition), Appendix C.4.5; API Std 650 (13th Edition), Appendix C.3.8.2)

**3. EFR - Top Deck Slope** *For EFRs, do field observations confirm top decks of double-deck roofs and of pontoon sections which are designed with a permanent slope, have been erected with minimum slope of 1 in 64 and lapped to minimize accumulation of standing water?* (TDC.650EFR.TOPDECKSLOPE.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix C.3.3.4)

**4. EFR - Roof Buoyancy** *For EFRs, do records indicate the floating roof was designed to have sufficient buoyancy in accordance with the design specifications?* (TDC.650EFR.BUOYANCY.R) 195.132(b)(3) (API Std 650 (13th Edition), Appendix C.3.4.1; API Std 650 (13th Edition), Appendix W.4.9.1)

**5. EFR - Pontoon Manholes** *For EFRs, do field observations confirm each tank pontoon compartment was provided with a liquid-tight pontoon manhole?* (TDC.650EFR.MANHOLE.S.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix C.3.5)

**6. EFR - Ladders** *For EFRs, do field observations verify the floating roof includes a ladder that automatically adjusts to any roof position so that access to the roof is always provided?* (TDC.650EFR.LADDERS.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix C.3.7)

**7. EFR - Roof Drains** *For EFRs, do field observations confirm installed drainpipe and hose systems of primary drains comply with the design specifications and were pressure tested with water at a pressure of 50 psig?* (TDC.650EFR.ROOFDRAINS.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix C.3.8)

**8. EFR - Deck Vacuum Breaker Vents** *For EFRs, do field observations verify vents (vacuum breakers) were properly installed per the design specifications?* (TDC.650EFR.VACBREAKERS.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix C.3.9)

**9. EFR - Floating Roof Supporting Legs** *For EFRs, do field observations confirm the support legs and attachments meet the design parameters?* (TDC.650EFR.SUPPORTLEGS.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix C.3.10)

**10. EFR - Floating Roof Supporting Legs Landing Pads** *For EFRs, do field observations confirm steel floor landing pads were installed to distribute the loads on the bottom of the tank and provide a wear surface?* (TDC.650EFR.LANDINGPADS.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix C.3.10.5)

**11. EFR - Floating Roof Access Manholes** *For EFRs, do field observations confirm the number and type of roof manholes conform to the design specifications?* (TDC.650EFR.ROOFMANHOLE.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix C.3.11)

**12. EFR - Roof Centering and Anti-Rotation Devices** *For EFRs, do field observations confirm devices have been installed to maintain the roof in a centered position and to prevent it from rotating?* (TDC.650EFR.ANTIROTATE.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix C.3.12)

**13. EFR - Deck Seams Leak Testing** *For EFRs, do field observations confirm leak testing for deck seams (and other joints that are required to be liquid or vapor tight) were leak tested by means of penetrating oil?* (TDC.650EFR.DECKLEAKTEST.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix C.4.2)

## Tank Design and Construction - New API 650 Tanks - Welding & NDT

**1. Welding - Welding Procedure Specifications** *Do the tank welding specifications require the erection/fabrication manufacturer to prepare welding procedure specifications that comply with ASME BPVC code section IX-2007 (and any additional provisions of API Std 650 (13th Edition))?* (TDC.650WELDING.PROCEDURES.P) 195.214 (195.132(b)(3);API Std 650 (13th Edition), Section 9.2.1;API Std 650 (13th Edition), Section 7.2.1.10;API Std 650 (13th Edition), Section 5.1.5.2;ASM BPVC Section IX-2007)

**2. Welding - Welding Procedure Specifications** *Do records indicate the tank erection/fabrication manufacturer prepared welding procedure specifications that comply with ASME code section IX-2007 (and any additional provisions of API Std 650 (13th Edition))?* (TDC.650WELDING.PROCEDURES.R) 195.214(b) (195.132(b)(3);API Std 650 (13th Edition), Section 9.2.1;API Std 650 (13th Edition), Section 7.2.1.10;API Std 650 (13th Edition), Section 5.1.5.2;API Std 650 (13th Edition), Appendix W.1.3;ASME BPVC Section IX-2007)

**3. Welding - Welding Procedure Specifications** *Do field observations indicate the tank erection/fabrication manufacturer followed the welding procedure specifications (WPS)?* (TDC.650WELDING.PROCEDURES.O) 195.214(a) (195.214(b);195.132(b)(3);API Std 650 (13th Edition), Section 9.2.1;API Std 650 (13th Edition), Section 7.2.1.10;API Std 650 (13th Edition), Section 5.1.5.2)

**4. Welding - Interpretation of Weld Inspections** *Do the operator's procedures require the proper interpretation of each weld inspection, under 195.234(c), to ensure the acceptability of each weld under 195.228?* (TDC.650WELDING.INTERPRETATION.P) 195.234(c) (195.228;195.132(b)(3))

**5. Welding - Qualification of Welders** *Do the tank welding specifications require each welder to be qualified for welding in accordance with ASME BPVC Section IX-2007 and the welder qualification requirements of API Std 650 (13th Edition), Section 9.3?* (TDC.650WELDING.WELDERQUAL.P) 195.132(b)(3) (195.222;API Std 650 (13th Edition), Section 9.3)

**6. Welding - Qualification of Welders** *Do records indicate each welder was qualified for welding in accordance with ASME BPVC Section IX-2007 and the welder qualification requirements of API Std 650 (13th Edition), Section 9.3?* (TDC.650WELDING.WELDERQUAL.R) 195.132(b)(3) (195.222;API Std 650 (13th Edition), Section 9.3)

**7. Welding - Qualification of Welders** *Is each welder observed in the field properly qualified for welding in accordance with ASME BPVC Section IX-2007 and the welder qualification requirements of API Std 650 (13th Edition), Section 9.3?* (TDC.650WELDING.WELDERQUAL.O) 195.234(c) (195.222;195.132(b)(3))

**8. Welding - Welding Weather Conditions** *Do field observations confirm operator took appropriate measures to accommodate welding during adverse weather condition and/or cold temperatures, and specifically prohibited welding on wetted surfaces and during high winds?* (TDC.650WELDING.WELDINGWEATHER.O) 195.224 (195.132(b)(3);API Std 650 (13th Edition), Section 7.2.1.3)

**9. Welding - Radiographic Inspection of Shell Butt Welds** *Do the operator's procedures require radiographic inspection of shell butt-welds and insertions plates (i.e., tombstones) to conform with API Std 650 (13th Edition), Sections 8.1.2 and 5.7.8.11?* (TDC.650WELDING.RADIOGRAPHIC.P) 195.234(b) (195.132(b)(3);API Std 650 (13th Edition), Section 8.1.1;API Std 650 (13th Edition), Section 8.1.2;API Std 650 (13th Edition), Section 5.7.8.11;API Std 650 (13th Edition), Section 9.4)

**10. Welding - Radiographic Inspection of Shell Butt Welds** *Do records indicate radiographic inspection was conducted on required shell butt-welds, annular-plate butt-welds, and flush-type connections with butt-welds?* (TDC.650WELDING.RADIOGRAPHIC.R) 195.234(b) (195.132(b)(3);API Std 650 (13th Edition), Section 8.1.1;API Std 650 (13th Edition), Section 8.1.2;API Std 650 (13th Edition), Section 5.7.8.11;API Std 650 (13th Edition), Section 9.4)

**11. Welding - Non-Destructive Testing Personnel Certification** *Do records indicate all Non-Destructive Testing (NDT) personnel are qualified and certified by the manufacturer as meeting the required certification and/or API Std 650 (13th Edition) requirements?* (TDC.650WELDING.NDTEXAMINER.R) 195.234(b) (195.132(b)(3);API Std 650 (13th Edition), Section 8.1.3.2;API Std 650 (13th Edition), Section 8.2.3;API Std 650 (13th Edition), Section 8.3.2.4;API Std 650 (13th Edition), Section 8.4.3;API Std 650 (13th Edition), Section 8.5.1;API Std 650 (13th Edition), Section 8.6)

**12. Welding - Non-Destructive Testing Personnel Certification** *Do field observations indicate all Non-Destructive Testing (NDT) personnel are qualified and certified by the manufacturer as meeting the required certification and/or API Std 650 (13th Edition) requirements?* (TDC.650WELDING.NDTEXAMINER.O) 195.234(b) (195.132(b)(3);API Std 650 (13th Edition), Section 8.1.3.2;API Std 650 (13th Edition), Section 8.2.3;API Std 650 (13th Edition), Section 8.3.2.4;API Std 650 (13th Edition), Section 8.4.3;API Std 650 (13th Edition), Section 8.5.1;API Std 650 (13th Edition), Section 8.6)

**13. Welding - Repair of Defective Welds** *Do the welding specifications provide criteria for weld acceptability and weld defects that must be removed and repaired?* (TDC.650WELDING.ACCEPTREPAIR.P) 195.132(b)(3) (195.230;API Std 650 (13th Edition), Section 7.4;API Std 650 (13th Edition), Section 8.1.7;API Std 650 (13th Edition), Section 8.5.2;API Std 650 (13th Edition), Section 8.5.3)

**14. Welding - Repair of Defective Welds** *Do records indicate the criteria for weld acceptability and weld defects that must be removed and repaired were followed?* (TDC.650WELDING.ACCEPTREPAIR.R) 195.132(b)(3) (195.230;API Std 650 (13th Edition), Section 7.4;API Std 650 (13th Edition), Section 8.1.7;API Std 650 (13th Edition), Section 8.5.2;API Std 650 (13th Edition), Section 8.5.3)

**15. Welding - Repair of Defective Welds** *Do field observations of welding NDE match the criteria for weld acceptability and weld defects that must be removed and repaired?* (TDC.650WELDING.ACCEPTREPAIR.O) 195.132(b)(3) (195.230;API Std 650 (13th Edition), Section 7.4;API Std 650 (13th Edition), Section 8.1.7;API Std 650 (13th Edition), Section 8.5.2;API Std 650 (13th Edition), Section 8.5.3)

**16. Welding - Removal of Tack Welds** *Do field observations of vertical shell joints welding confirm tack welds were removed from the finished joints?* (TDC.650WELDING.TACKWELDS.O) 195.132(b)(3) (API Std 650 (13th Edition), Section 7.2.1.8)

**17. Welding - Spot Radiographic Inspection** *Do records indicate tank shell spot radiographic inspection on a per tank basis was conducted in accordance with the radiographic specifications?* (TDC.650WELDING.SPOTRADIOGRAPHS.R) 195.132(b)(3) (API Std 650 (13th Edition), Section 8.1.2.2;API Std 650 (13th Edition), Section 8.1.2.3)

**18. Welding - Butt Welding Misalignment Limits** *Do field observations confirm plate misalignment for plates to be joined by butt welding was within the specified limits?* (TDC.650WELDING.MISALIGNMENT.O) 195.132(b)(3) (API Std 650 (13th Edition), Section 7.2.3)

**19. Welding - Shell Vertical Joints Alignment** *Do field observations confirm shell vertical joints conform with API 650, Section 5.1.5.2(a) and (b) and Figure 5-1?* (TDC.650WELDING.VERTICALJOINTS.O) 195.132(b)(3) (API 650, Section 5.1.5.2)

**20. Welding - Shell-to-Bottom Welds Examination** *Do field observations confirm the initial weld pass on the shell-to-bottom weld was examined for its entire circumference, both visually and using one of the approved methods in API Std 650 (13th Edition), Section 7.2.4.1?* (TDC.650WELDING.SHELL2BOTTOMEXAM.O) 195.132(b)(3) (API Std 650 (13th Edition), Section 7.2.4)

**21. Welding - Shell Reinforcing Plate** *Do field observations confirm reinforcing plates were being tested to 15 psig pneumatic pressure between the tank shell and the reinforcing plate?* (TDC.650WELDING.SHELLREINFORCEPLATE.O) 195.132(b)(3) (API Std 650 (13th Edition), Section 7.3.5)



## Tank Design and Construction - New API 650 Tanks - Appurtenances & Nozzles

**1. Appurtenances - Roof Manholes and Nozzles** *Do field observations confirm roof manholes and roof nozzles (flanged and threaded) conform to the design specifications?* (TDC.650APPURT.ROOFOPENINGS.O) 195.132(b)(3) (API 650, Section 5.8.4;API Std 650 (13th Edition), Section 5.8.5.6;API Std 650 (13th Edition), Section 5.8.5.7)

**2. Appurtenances - Shell Openings** *Do field observations confirm shell openings, manholes, and reinforcements were installed in accordance with the design specifications?* (TDC.650APPURT.SHELLOPENINGS.O) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.7.1;API Std 650 (13th Edition), Section 5.7.2;API Std 650 (13th Edition), Section 5.7.5.1)

**3. Appurtenances - Shell Nozzles** *Do field observations confirm that shell nozzles and flanges conform to the design specifications?* (TDC.650APPURT.SHELLNOZZLES.O) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.7.6)

**4. Appurtenances - Cleanout Fittings** *Do field observations confirm cleanout fittings and flush-type shell connections conform to the design specifications?* (TDC.650APPURT.CLEANOUT.O) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.7.7;API Std 650 (13th Edition), Section 5.7.8)

**5. Appurtenances - Shell Attachments** *Do records (MTRs) indicate attachments made to shell courses using material in Group IV, IVA, V, or VI, conform to the design specifications?* (TDC.650APPURT.SHELLATTACH.R) 195.132(b)(3) (API Std 650 (13th Edition), Section 5.8.1.2)

**6. Appurtenances - Tank CP Isolation Devices** *Do field observations confirm CP isolation devices were installed at the required locations identified in the CP system design?* (TDC.650APPURT.CPISOLATION.O) 195.565 (195.575;195.132(b)(3);API RP 651 (4th Edition), Section 7.3.6)

## Tank Design and Construction - New API 650 Tanks - Hydrostatic Testing

**1. Hydrotesting - New Tank Shell Hydrotesting** *Does the process for new aboveground breakout tanks require hydrostatic leak testing of tanks in accordance with 195.307(c)?* (TDC.650HYDRO.HYDROTEST.P) 195.307(c) (195.310(a);195.310(b);195.132(b)(3);API Std 650 (13th Edition), Section 7.3.6;API Std 650 (13th Edition), Section 7.3.7;API Std 650 (13th Edition), Appendix L.3, Line 14)

**2. Hydrotesting - New Tank Shell Hydrotesting** *Do testing records indicate the new atmospheric aboveground breakout tank(s) hydrostatic leak testing was successfully conducted in accordance with 195.307(c)?* (TDC.650HYDRO.HYDROTEST.R) 195.307(c) (195.310(a);195.310(b);195.132(b)(3);API Std 650 (13th Edition), Section 7.3.6;API Std 650 (13th Edition), Section 7.3.7;API Std 650 (13th Edition), Appendix L.3, Line 14;API Std 650 (13th Edition), Appendix W.1.5)

**3. Hydrotesting - New Tank Shell Hydrotesting** *Do field observations confirm atmospheric breakout tank hydrostatic leak testing was successfully conducted in accordance with 195.307 and the testing specifications?* (TDC.650HYDRO.HYDROTEST.O) 195.307(c) (195.310(a);195.310(b);195.132(b)(3);API Std 650 (13th Edition), Section 7.3.6;API Std 650 (13th Edition), Section 7.3.7;API Std 650 (13th Edition), Appendix L.3, Line 14)

**4. Hydrotesting - Floating Roof (EFR/IFR) Floatation Test** *Do field observations confirm the floating roof (internal or external) and its accessories operated without damage to the floating roof, the seal, and any tank appurtenances?* (TDC.650HYDRO.FLOATINGROOF.O) 195.132(b)(3) (API Std 650 (13th Edition), Appendix C.4.3;API Std 650 (13th Edition), Appendix H.4.1)

**5. Hydrotesting - Annular Space Measured During Hydrotest** *Do records indicate maximum and minimum annular spaces between the shell and the rim plate were measured and recorded before the initial flotation and at the maximum test fill height?* (TDC.650HYDRO.ANNULARSPACE.R) 195.132(b)(3) (API Std 650 (13th Edition), Section 7.3.7.8)

**6. Hydrotesting - Manufacturer Certification of Tank Construction IAW API 650** *Do records indicate the tank manufacturer certified the completed tank was successfully constructed in accordance with API Std 650 (13th Edition) and attached a nameplate to the tank shell?* (TDC.650HYDRO.TANKCERTIFIC.R) 195.132(b)(3) (API Std 650 (13th Edition), Section 10.1;API Std 650 (13th Edition), Section 10.3)

**7. Hydrotesting - Manufacturer Certification of Tank Construction IAW API 650** *Do observations confirm the certification nameplate was attached to the tank shell?* (TDC.650HYDRO.TANKCERTIFIC.O) 195.132(b)(3) (API Std 650 (13th Edition), Section 10.1)

## Tank Design and Construction - New Tank Piping - Construction

**1. Pipe Internal Design Pressure** *Does the process require the internal design pressure of the pipeline (or pipe) be determined in accordance with 195.106?* (DC.DN.DESIGNPRESS.P) 195.106(a) (195.106(b);195.106(c);195.106(d);195.106(e))  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**2. Pipe Internal Design Pressure** *Do records demonstrate the internal design pressure of the pipeline (or pipe) is determined in accordance with 195.106? (DC.DN.DESIGNPRESS.R) 195.106(a) (195.106(b);195.106(c);195.106(d);195.106(e))*  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**3. Breakout Tank Piping - Handling Corrosive Fluids** *Does the design process take into account fluid corrosive properties for internal corrosion of tank related piping as required by 195.579(a)? (TDC.TKPIPING.CORRFLUIDS.P) 195.579(a)*

**4. Breakout Tank Piping - Handling Corrosive Fluids** *Do records indicate breakout tank piping design accounted for fluid corrosive properties for internal corrosion as required by 195.579(a)? (TDC.TKPIPING.CORRFLUIDS.R) 195.579(a)*

**5. Breakout Tank Piping - Handling Corrosive Fluids** *Do field observations confirm breakout tank piping accounted for fluid corrosive properties for internal corrosion as required by 195.579(a)? (TDC.TKPIPING.CORRFLUIDS.O) 195.579(a)*

**6. Breakout Tank Piping - Pressure Testing** *Where tank piping and/or manifolds are installed in association with new breakout tank construction, does the process require pressure testing of all piping, fittings, and components in accordance with 195.302, 195.304, and 195.305? (TDC.TKPIPING.TANKPIPINGTEST.P) 195.302(a) (195.304;195.305(a);195.306(a);195.306(b);195.306(c);195.306(d);195.305(b))*

**7. Breakout Tank Piping - Pressure Testing** *Where tank piping and/or manifolds are installed in association with new breakout tank construction, do records indicate all piping, fittings, and components were pressure tested in accordance with 195.302, 195.304, and 195.305? (TDC.TKPIPING.TANKPIPINGTEST.R) 195.302(a) (195.304;195.305(a);195.306(a);195.306(b);195.306(c);195.306(d);195.305(b))*

**8. Breakout Tank Piping - Pressure Testing** *Do field observations of tank piping and/or manifolds pressure testing confirm that all piping, fittings, and components were pressure tested in accordance with 195.302, 195.304, and 195.305? (TDC.TKPIPING.TANKPIPINGTEST.O) 195.302(a) (195.304;195.305(a);195.306(a);195.306(b);195.306(c);195.306(d);195.305(b))*

**9. Breakout Tank Piping - Pressure Testing of Piping Tie-Ins** *Does the process require testing of pipe associated with tie-ins, either with the section to be tied in or separately? (TDC.TKPIPING.PRESSTESTTIEIN.P) 195.308 (195.402(c))*

**10. Breakout Tank Piping - Pressure Testing of Piping Tie-Ins** *Do records indicate pipe associated with tie-ins has been pressure tested?* (TDC.TKPIPING.PRESSTESTTIEIN.R) 195.308 (195.310(a);195.310(b))

**11. Breakout Tanks - Installation & Testing of Piping Protective Devices Prior to Service** *Does the process require the installation and initial testing of tank piping pressure limiting devices, relief valves, pressure regulators, or other items of pressure control prior to place the aboveground breakout tank into service?* (TDC.TKPIPING.PROTDEVICETEST.P) 195.428(a) (195.402(c)(3))

**12. Breakout Tanks - Installation & Testing of Piping Protective Devices Prior to Service** *Do records indicate tank piping pressure limiting devices, relief valves, pressure regulators, or other items of pressure control were installed and tested prior to placing the aboveground breakout tank into service?* (TDC.TKPIPING.PROTDEVICETEST.R) 195.428(a) (195.404(c)(3))

**13. Breakout Tanks - Installation & Testing of Piping Protective Devices Prior to Service** *Do field observations confirm tank piping pressure limiting devices, relief valves, pressure regulators, or other items of pressure control were installed and tested prior to placing the aboveground breakout tank into service?* (TDC.TKPIPING.PROTDEVICETEST.O) 195.428(a) (195.402(c)(3))

## Tank Design and Construction - New Tank Piping - Construction Welding Procedures (Re-Presented)

**1. Welding Procedures - Record of Qualifying Tests** *Are welding procedures and qualifying tests required to be recorded in detail?* (DC.WELDPROCEDURE.WELDPROCEDURE.P) 195.214(b)

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

**2. Welding Procedures - Record of Qualifying Tests** *Do records indicate welding procedures and qualifying tests recorded in detail?* (DC.WELDPROCEDURE.WELDPROCEDURE.R) 195.214(b)

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

**3. Welding Procedures - Record of Qualifying Tests** *Are welding procedures being retained and followed?* (DC.WELDPROCEDURE.WELDPROCEDURE.O) 195.214(b)

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

**4. Welding Procedures - Qualified Welders & Procedures** Does the process require welding to be performed by qualified welders using qualified welding procedures? (DC.WELDPROCEDURE.WELD.P) 195.214(a)

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

**5. Welding Procedures - Qualified Welders & Procedures** Are welding procedures being qualified in accordance with 195.214? (DC.WELDPROCEDURE.WELD.O) 195.214(a)

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

**6. Welding on In-Service Pipelines** Does the process require consideration of issues related to welding on in-service pipelines? (DC.WELDPROCEDURE.WELDINSERVICE.P) 195.402(a) (195.422(a))

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

**7. Welding Weather** Is welding required to be protected from weather conditions that would impair the quality of the completed weld? (DC.WELDPROCEDURE.WELDWEATHER.P) 195.224

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

**8. Welding Weather** Is welding protected from weather conditions that would impair the quality of the completed weld? (DC.WELDPROCEDURE.WELDWEATHER.O) 195.224

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

**9. Miter Joints** Do welding procedures prohibit the use of miter joints? (DC.WELDPROCEDURE.MITERJOINT.P) 195.214(b) (195.216)

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

**10. Welding of Supports and Braces** Does the procedure prohibit supports or braces to be welded directly to pipe that operates at a pressure greater than 100 psi (689 kPa) gage? (DC.WELDPROCEDURE.WELDSUPPORT.P) 195.202 (195.208)

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

**11. Welding of Supports and Braces** Are supports or braces observed to be welded directly to pipe that operates at a pressure greater than 100 psi (689 kPa) gage? (DC.WELDPROCEDURE.WELDSUPPORT.O) 195.208

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

**12. Arc Burns and Ground Wires** Does the process address arc burns and ground wires in accordance with 195.226? (DC.WELDPROCEDURE.ARCBURNGRNDWIRE.P) 195.202 (195.226(a);195.226(b);195.226(c))

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

**13. Arc Burns and Ground Wires** Do records indicate arc burns and ground wires are addressed in accordance with 195.226? (DC.WELDPROCEDURE.ARCBURNGRNDWIRE.R) 195.226(a) (195.226(b);195.226(c))

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

**14. Arc Burns and Ground Wires** Are arc burns and ground wires addressed in accordance with 195.226? (DC.WELDPROCEDURE.ARCBURNGRNDWIRE.O) 195.226(a) (195.226(b);195.226(c))

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

## Tank Design and Construction - New Tank Piping - Construction Welder Qualification (Re-Presented)

**1. Qualification of Welders** Is each welder required to be qualified in accordance with section 6 of API 1104 (21st Edition) or section IX of the ASME Boiler and Pressure Vessel Code (2007)? (DC.WELDERQUAL.WELDERQUAL.P) 195.222(a) (195.222(b))

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

**2. Qualification of Welders** Do records indicate that welders are qualified in accordance with API-Std-1104 (21st Edition) or the ASME Boiler & Pressure Vessel Code (2007)? (DC.WELDERQUAL.WELDERQUAL.R) 195.222(a) (195.222(b);195.214(a);API-1104 Section 6;ASME Boiler & Pressure Vessel Code Section IX)

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

**3. Qualification of Welders - Skills and Knowledge** Are welders performing welds according to established procedures? (DC.WELDERQUAL.WELDERQUAL.O) 195.222(a) (195.222(b);195.214(a);195.505(b))

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

## Tank Design and Construction - New Tank Piping - Construction Weld Inspection (Re-Presented)

**1. Weld Inspection Standards** Are welds required to be inspected to ensure compliance with the requirements of 195.228? (DC.WELDINSPECT.P) 195.228(a) (195.228(b))

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

**2. Weld Inspection Standards** Do records indicate welds are inspected to ensure compliance with the requirements of 195.228? (DC.WELDINSPECT.R) 195.228(a) (195.228(b);195.234)

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

**3. Weld Inspection Standards** Are welds being inspected to ensure compliance with the requirements of 195.228? (DC.WELDINSPECT.O) 195.228(a) (195.228(b);195.234)

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

**4. Repair or Removal of Weld Defects** Are welds that are unacceptable required to be removed and/or repaired as specified by 195.230 and are repair procedures in place? (DC.WELDREPAIR.P) 195.202 (195.230(a);195.230(b);195.230(c))

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

**5. Repair or Removal of Weld Defects** Do records indicate that unacceptable welds are removed and/or repaired? (DC.WELDREPAIR.R) 195.230(a) (195.230(b);195.230(c))

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

**6. Repair or Removal of Weld Defects** Are unacceptable welds being removed and/or repaired? (DC.WELDREPAIR.O) 195.230(a) (195.230(b);195.230(c))

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

**7. Nondestructive Test and Interpretation Procedures** Are there processes for nondestructive testing and for determining standards of acceptability? (DC.WELDNDT.P) 195.234(a) (195.234(b);195.234(c))

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

**8. Nondestructive Test and Interpretation Procedures** *Do records indicate adequate nondestructive testing and determination of standards of acceptability?* (DC.WELDINS.WELDNDT.R) 195.234(a) (195.234(b);195.234(c))  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**9. Nondestructive Test and Interpretation Procedures** *Are NDT activities performed in accordance with approved processes?* (DC.WELDINS.WELDNDT.O) 195.234(a) (195.234(b);195.234(c))  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**10. Nondestructive Testing Personnel Training** *Does the process require nondestructive testing of welds (for maintenance and construction) be performed by personnel who are trained in procedures established to ensure compliance with 195.228 and in use of the testing equipment?* (DC.WELDINS.WELDNDTQUAL.P) 195.202 (195.234(b)(2))  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**11. Nondestructive Testing of Girth Welds** *Does the process require certain girth welds to be nondestructively tested in accordance with 195.234(d), (e), (f), and (g)?* (DC.WELDINS.GIRTHWELDNDT.P) 195.202 (195.234(d);195.234(e);195.234(f);195.234(g);195.266)  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**12. Nondestructive Testing of Girth Welds** *Do records demonstrate at least 10% of all welds that are made by each welder during each welding day are nondestructively tested over the entire circumference of the welds or that more welds are tested per the operator's own procedures?* (DC.WELDINS.GIRTHWELDNDT.R) 195.234(d) (195.266(a))  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**13. Nondestructive Testing of Girth Welds - Locations** *Do records demonstrate all girth welds installed each day in selected locations specified in 195.234(e) are nondestructively tested over their entire circumference?* (DC.WELDINS.GIRTHWELDNDTLOCATE.R) 195.234(e) (195.266(a))  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**14. Nondestructive Testing of Girth Welds - Used Pipe** *Do records demonstrate that when installing used pipe, 100% of the old girth welds are nondestructively tested?* (DC.WELDINS.GIRTHWELDNDTUSED.R) 195.234(f) (195.266(a))  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**15. Nondestructive Testing of Girth Welds - Pipe Tie-Ins** *Do records demonstrate 100% of the girth welds have been nondestructively tested at selected pipe tie-ins?* (DC.WELDINS.GIRTHWELDNDTTIEIN.R) 195.234(g) (195.266(a))  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*



## Tank Design and Construction - Integrity Management for Facilities (Re-Presented)

**1. Identification of Facilities that Could Affect an HCA** Does the program include a written process for identification of facilities that could affect an HCA? (IM.FACIL.FACILIDENT.P) 195.452(f)(1)

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

**2. Identification of Facilities that Could Affect an HCA** Do the records indicate that locations and boundaries of HCA-affecting facilities are correctly identified and maintained up-to-date? (IM.FACIL.FACILIDENT.R) 195.452(l)(1)(i) (195.452(b)(2);195.452(d)(2))

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

**3. Facilities Releases that Could Affect an HCA** Does the process include methods to determine the facility locations/scenarios and worst case volume of potential commodity releases? (IM.FACIL.RELEASE.P) 195.452(f)(1) (195.452(l)(1)(i))

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

**4. Facilities Releases that Could Affect an HCA** Do the records indicate that identified release locations and spill volumes at facilities are consistent with the program requirements? (IM.FACIL.RELEASE.R) 195.452(l)(1)(ii)

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

**5. Facilities Releases Spread that Could Affect an HCA** Does the process include an analysis of overland spread & water transport of hazardous liquids to determine the extent of commodity spread from the facility and its effects on HCAs? (IM.FACIL.SPREAD.P) 195.452(f)(1) (195.452(l)(1)(i))

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

**6. Facilities Releases Spread that Could Affect an HCA** Do the records indicate the analysis of overland spread & water transport is consistent with the program/process requirements? (IM.FACIL.SPREAD.R) 195.452(l)(1)(ii)

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

**7. Preventive Measures Considered for Facilities that Could Affect an HCA** Does the process include requirements for identification of facility preventive measures to protect the HCAs? (IM.FACIL.PMMPREVENTIVE.P) 195.452(f)(6) (195.452(i))

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

**8. Preventive Measures Considered for Facilities that Could Affect an HCA** *Do the records indicate that facility preventive measures to protect the HCAs have been considered and implemented?* (IM.FACIL.PMMPREVENTIVE.R) 195.452(l)(1)(ii) (195.452(i)(1))

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

**9. Mitigative Measures Considered for Facilities that Could Affect an HCA** *Does the process include requirements for identification and implementation of facility mitigative measures to protect the HCAs?* (IM.FACIL.PMMMITIGATIVE.P) 195.452(f)(6) (195.452(i))

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

**10. Mitigative Measures Considered for Facilities that Could Affect an HCA** *Do the records indicate that facility mitigative measures to protect the HCAs have been considered and implemented?* (IM.FACIL.PMMMITIGATIVE.R) 195.452(l)(1)(ii) (195.452(i)(1))

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

**11. Preventive & Mitigative Measures Implemented for Facilities that Could Affect an HCA** *Does an on-site observation provide indications that facility preventive & mitigative measures to protect the HCAs were implemented as proposed?* (IM.FACIL.PMMIMPLEMENT.O) 195.452(i)(1)

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

## **Tank Design and Construction - New API 620 Tanks (Low Pressure) - Part 195 Requirements**

**1. New Breakout Tank Specs (API 620 Tanks)** *Does the design specification (or design package) require the low-pressure tank design and construction to comply with currently IBR'd edition of API Std 620 (12th Edition) as required by §195.132(b)(2)?* (TDC.620REGS.TANKSPEC.P) 195.132(b)(2) (195.3(b)(17); API Std 620 (12th Edition), Section 1.2.1)

**2. New Breakout Tank Specs (API 620 Tanks) (Q.2)** *Does the process require tank operations within the specifications and limits required by currently IBR'd edition of API Std 620 (12th Edition)?* (TDC.620REGS.TANKSPEC2.P) 195.132(b)(2) (API Std 620 (12th Edition), Section 1.2)

**3. New Breakout Tank Specs (API 620 Tanks)** *Do the design records and drawings indicate the new low-pressure breakout tank(s) is/are designed and constructed to the currently IBR'd edition of API Std 620 (12th Edition)?* (TDC.620REGS.TANKSPEC.R) 195.132(b)(2) (API Std 620 (12th Edition), Section 1.2.1)

**4. Breakout Tank Repair, Alteration, and Reconstruction (API 620)** *Are breakout tanks required to be repaired, altered, or reconstructed in compliance with the requirements of 195.205(b)(2)?* (TDC.620REGS.REPAIRSPEC.P) 195.205(b)(2) (API Std 620 (12th Edition))

**5. Breakout Tank Repair, Alteration, and Reconstruction (API 620)** *Do records indicate breakout tanks were repaired, altered, or reconstructed in compliance with the requirements of 195.205(b)(2)?* (TDC.620REGS.REPAIRSPEC.R) 195.205(b)(2) (API Std 620 (12th Edition))

**6. Breakout Tank Repair, Alteration, and Reconstruction (API 620)** *Do field observations confirm breakout tanks are being repaired, altered, or reconstructed in compliance with the requirements of 195.205(b)(2)?* (TDC.620REGS.REPAIRSPEC.O) 195.205(b)(2) (API Std 620 (12th Edition))

**7. Tank Overfill Protection - Devices** *Do records indicate that adequate overfill protection was installed and function tested prior to placing the tank in service?* (TDC.620REGS.OVERFILLPROT.R) 195.428(c) (195.132(b)(2);API Std 2350 (5th Edition), Section 4.6;API Std 2350 (5th Edition), Section 4.8)

**8. Tank Overfill Protection - Devices** *Do observations confirm overfill protective devices were installed in accordance with the design and function tested prior to placing the tank in service?* (TDC.620REGS.OVERFILLPROT.O) 195.428(c) (195.132(b)(2);API Std 2350 (5th Edition), Section 4.6;API Std 2350 (5th Edition), Section 4.8)

**9. Tank Overfill Protection - SCADA** *Do records indicate initial testing was conducted for applicable SCADA overfill protection systems for each new tank?* (TDC.620REGS.OVERFILLSCADA.R) 195.446(c)(2) (195.132(b)(2);API Std 2350 (5th Edition))

**10. Pressure and Vacuum Relieving Devices** *Does the design specification (or design package) require that adequate pressure reliefs and vacuum relief devices and liquid relief valves (if required) are installed and tested?* (TDC.620REGS.PRESSUREDEVICES.P) 195.264(e)(3) (API Std 620 (12th Edition), Section 9.2;API Std 620 (12th Edition), Section 9.5;API Std 620 (12th Edition), Appendix K;API Std 620 (12th Edition), Appendix N;API Std 2000 (7th Edition), Section 5.4;API Std 2000 (7th Edition), Section 6)

**11. Pressure and Vacuum Relieving Devices** *Do records indicate adequate pressure reliefs and vacuum relief devices and liquid relief valves (if required) were installed and tested?* (TDC.620REGS.PRESSUREDEVICES.R) 195.264(e)(3) (API Std 620 (12th Edition), Section 9.2;API Std 620 (12th Edition), Section 9.5;API Std 620 (12th Edition), Appendix K;API Std 620 (12th Edition), Appendix N;API Std 2000 (7th Edition), Section 5.4;API Std 2000 (7th Edition), Section 6)

**12. Pressure and Vacuum Relieving Devices** *Do observations confirm pressure reliefs and vacuum relief devices and liquid relief valves (if required) were installed and tested in accordance with the design?* (TDC.620REGS.PRESSUREDEVICES.O) 195.264(e)(3) (API Std 620 (12th Edition), Section 9.2; API Std 620 (12th Edition), Section 9.5; API Std 620 (12th Edition), Appendix K; API Std 620 (12th Edition), Appendix N; API Std 2000 (7th Edition), Section 5.4; API Std 2000 (7th Edition), Section 6)

**13. Impoundment, Grading, and Drainage for Tank Areas** *Do records (e.g., as-built drawings) verify that proper impoundment, grading, and drainage was provided around the tank?* (TDC.620REGS.IMPOUNDMENT.R) 195.264(b)(1) (NFPA-30-2012, Section 22.11.1; NFPA-30-2012, Section 22.11.2; API Std 620 (12th Edition), Appendix C.2; API Std 620 (12th Edition), Appendix C.3; API Std 620 (12th Edition), Appendix C.10)

**14. Impoundment, Grading, and Drainage for Tank Areas** *Do field observations verify that proper impoundment, grading, and drainage was provided around the tank?* (TDC.620REGS.IMPOUNDMENT.O) 195.264(b)(1) (NFPA-30-2012, Section 22.11.1; NFPA-30-2012, Section 22.11.2; API Std 620 (12th Edition), Appendix C.2; API Std 620 (12th Edition), Appendix C.3; API Std 620 (12th Edition), Appendix C.10)

**15. Unauthorized Entry Protection for Tank Areas** *Do field observations confirm adequate protection against unauthorized entry was provided for new breakout tanks areas?* (TDC.620REGS.UNAUTHENTRY.O) 195.264(c) (195.436)

**16. Firefighting Equipment for Tank Areas** *Do field observations confirm the necessary firefighting equipment to respond to emergencies is included at the facility's breakout tank area??* (TDC.620REGS.FIREEQUIP.O) 195.430 (195.430(a); 195.430(b); 195.430(c))

**17. Tank CP - System Design (API RP 651)** *For new API 620 tanks that have cathodic protection (CP), do records demonstrate the breakout tank(s) have cathodic protection installed as required by §195.565?* (TDC.620REGS.CPDESIGN.R) 195.565 (195.404(c); 195.563(d); 195.589(a); 195.589(b); 195.589(c); API RP651 (4th Edition), Section 6.3.4; API RP651 (4th Edition), Section 6.3.5; API RP651 (4th Edition), Section 7.2.1; API RP651 (4th Edition), Section 11.4; 195.563(a))

**18. Tank Bottom Linings** *Where tank bottom linings are applied, do records indicate the installation of bottom linings meet the requirements of §195.579(d) and API RP 652 (3rd Edition)?* (TDC.620REGS.BOTTOMLINING.R) 195.579(d) (195.404(a); API RP 652 (3rd Edition); 195.404(b); 195.404(c))

**19. Tank Bottom Linings** *Where tank bottom linings are applied, do field observations confirm the installation of bottom linings meet the requirements of §195.579(d) and API RP 652 (3rd Edition)?* (TDC.620REGS.BOTTOMLINING.O) 195.579(d) (API RP 652 (3rd Edition))

## Tank Design and Construction - New API 620 Tanks (Low Pressure) - Design

**1. Plates Design Metal Temperature** *Do records indicate operator selected the appropriate design metal temperature for the ambient temperature conditions (for non-refrigerated tanks) or for the product temperature (for refrigerated tanks)?* (TDC.620DESIGN.PLATEDESTEMP.R) 195.132(b)(2) (195.102(a);API Std 620 (12th Edition), Section 4.2)

**2. Materials Specifications for Pipe, Flanges, Forgings** *Do the records indicate the tank-associated pipe, flanges, and fittings conform to API Std 620 (12th Edition), Section 4?* (TDC.620DESIGN.MATLSSPECS.R) 195.132(b)(2) (API Std 620 (12th Edition), Section 4.1.3;API Std 620 (12th Edition), Section 4.1.4;API Std 620 (12th Edition), Section 4.3;API Std 620 (12th Edition), Appendix B)

**3. Materials Specifications for Pipe, Flanges, Forgings** *Do field observations verify the tank-associated pipe, flanges, and fittings conform to API Std 620 (12th Edition), Section 4?* (TDC.620DESIGN.MATLSSPECS.O) 195.132(b)(2) (API Std 620 (12th Edition), Section 4.3;API Std 620 (12th Edition), Section 7.6;API Std 620 (12th Edition), Appendix B)

**4. Foundation Design - Soil Bearing Capacity** *Do records (core samples and bearing calculations) indicate the soil load bearing conditions are adequate to support the tank and maintain the levelness of the foundation?* (TDC.620DESIGN.FDNBEARINGCAP.R) 195.132(b)(2) (API Std 620 (12th Edition), Section 6.5.6.1;API Std 620 (12th Edition), Appendix C.2;API Std 620 (12th Edition), Appendix C.3)

**5. Foundation Design** *Do the records indicate the tank foundation design met the requirements of API Std 620 (12th Edition), Section 6.5.6?* (TDC.620DESIGN.FOUNDATION.R) 195.132(b)(2) (API Std 620 (12th Edition), Section 6.5.6;API Std 620 (12th Edition), Appendix C)

**6. Volume of Vapor Space** *Do records indicate the volume of vapor space above the high liquid design level upon which the nominal capacity is based is not less than 2% of the total liquid capacity?* (TDC.620DESIGN.VAPORSPACE.R) 195.132(b)(2) (API 620, Section 5.1.4)

**7. Tank Course Thickness Design** *Do the design records verify operator selected the shell course thicknesses for each course based on the maximum product head pressure plus the design pressure of the tank?* (TDC.620DESIGN.COURSETHICKNESS.R) 195.132(b)(2) (API Std 620 (12th Edition), Section 5.3;API Std 620 (12th Edition), Section 5.4;API Std 620 (12th Edition), Section 3.1.1)

**8. Tank Design Requirements (API 620, Section 5)** *Does the design package include the applicable requirements for design stresses and strength, design forces, loading, reinforcement, components, and appurtenances from API Std 620 (12th Edition), Sections 5.5 to 5.27? (TDC.620DESIGN.DESIGNLIST.R) 195.132(b)(2) (API Std 620 (12th Edition), Section 5)*

**9. Tank Anchorage and Wind Girders** *For a tank foundation that rests on a concrete slab or ringwall, do the records demonstrate proper design for anchorage, uplift, wind, and counterbalance? (TDC.620DESIGN.ANCHORAGE.R) 195.132(b)(2) (API Std 620 (12th Edition), Section 5.10.6; API Std 620 (12th Edition), Section 5.11; API Std 620 (12th Edition), Section 5.27.9; API Std 620 (12th Edition), Appendix R.8)*

**10. Seismic Tank Design (API 620 Appendix L)** *For tanks located in regions that may be subject to seismic ground motion (earthquakes), does the process require adherence to API Std 620 (12th Edition), Appendix L, for seismic design? (TDC.620DESIGN.SEISMICDESIGN.P) 195.132(b)(2) (API Std 620 (12th Edition), Appendix L; API Std 650 (13th Edition), Appendix E; ASCE 7)*

**11. Seismic Tank Design (API 620 Appendix L)** *For tanks located in regions that may be subject to SEISMIC ground motion (earthquakes), do records (design package) indicate a site-specific seismic study was performed and the seismic requirements of API Std 620 (12th Edition), Appendix L, are incorporated? (TDC.620DESIGN.SEISMICDESIGN.R) 195.132(b)(2) (API Std 620 (12th Edition), Appendix L; API Std 650 (13th Edition), Appendix E; ASCE 7)*

**12. Seismic Tank Design (API 620 Appendix L)** *For tanks located in regions that may be subject to SEISMIC ground motion (earthquakes), do field observations indicate that the seismic design requirements were implemented and/or installed? (TDC.620DESIGN.SEISMICDESIGN.O) 195.132(b)(2) (API Std 620 (12th Edition), Appendix L; API Std 650 (13th Edition), Appendix E)*

## **Tank Design and Construction - New API 620 Tanks (Low Pressure) - Fabrication**

**1. Workmanship in Fabrication** *Do field observations show fabrication workmanship is being conducted in a manner that demonstrates proper fit and finish? (TDC.620FAB.WORKMANSHIP.O) 195.132(b)(2) (API Std 620 (12th Edition), Section 6.2; API Std 620 (12th Edition), Section 6.3; API Std 620 (12th Edition), Section 6.13; API Std 620 (12th Edition), Section 6.16)*

**2. Forming Curved Sidewall Sections** *Do field observations confirm that shaping of sidewall plates to fit the curvature of the tank, where required, meets the requirements of API Std 620 (12th Edition), section 6.4? (TDC.620FAB.SIDEWALL.O) 195.132(b)(2) (API Std 620 (12th Edition), Section 6.4)*

**3. Dimensional Tolerances - Plumbness** *Do field observations confirm that dimensional tolerances for tank sidewall plumbness meet the specific requirements of API Std 620 (12th Edition), section 6.5.2? (TDC.620FAB.PLUMBNESS.O) 195.132(b)(2) (API Std 620 (12th Edition), Section 6.5.2)*

**4. Dimensional Tolerances - Roundness** *Do field observations confirm that dimensional tolerances for roundness meet the specific requirements of API Std 620 (12th Edition), section 6.5.3? (TDC.620FAB.ROUNDNESS.O) 195.132(b)(2) (API Std 620 (12th Edition), Section 6.5.3)*

**5. Dimensional Tolerances - Local Deviations** *Do field observations confirm that dimensional tolerances for local deviation meet the specific requirements of API Std 620 (12th Edition), section 6.5.4? (TDC.620FAB.LOCALDEVIATION.O) 195.132(b)(2) (API Std 620 (12th Edition), Section 6.5.4)*

**6. Dimensional Tolerances - Fitting Attachments** *Do field observations confirm that dimensional tolerances for fittings attachments meet the specific requirements of API Std 620 (12th Edition), section 6.5.5? (TDC.620FAB.FITTINGATTACH.O) 195.132(b)(2) (API Std 620 (12th Edition), Section 6.5.5)*

## **Tank Design and Construction - New API 620 Tanks (Low Pressure) - Welding**

**1. Welding Procedure Specifications (WPS)** *Do the tank welding specifications require the erection/fabrication manufacturer to prepare welding procedure specifications (WPS) that comply with ASME BPVC code section IX-2007 (and any additional provisions of API Std 620 (12th Edition), Sections 6.6 – 6.14 and 6.19)? (TDC.620WELDING.PROCEDURES.P) 195.214 (195.132(b)(2);API Std 620 (12th Edition))*

**2. Welding Procedure Specifications (WPS)** *Do records indicate the tank erection/fabrication manufacturer prepared welding procedure specifications (WPS) that comply with ASME code section IX-2007 (and any additional provisions of API Std 620 (12th Edition))? (TDC.620WELDING.PROCEDURES.R) 195.214(b) (195.132(b)(3);API Std 620 (12th Edition))*

**3. Welding Procedure Specifications (WPS)** *Do field observations indicate the tank erection/fabrication manufacturer followed the welding procedure specifications (WPS)? (TDC.620WELDING.PROCEDURES.O) 195.214 (195.132(b)(2);API Std 620 (12th Edition), Section 6.7;API Std 620 (12th Edition), Section 6)*

**4. Qualification of Welders** *Do the tank welding specifications (or design package) require all welders assigned to manual or semi-automatic arc welding, and welding operators assigned to machine welding, to have successfully passed the tests conducted by the fabricator, or manufacturer, as prescribed for welder qualification in Section IX of the ASME BPVC-2007?* (TDC.620WELDING.WELDERQUAL.P) 195.222 (195.132(b)(2);API Std 620 (12th Edition), Section 6.8)

**5. Qualification of Welders** *Do records indicate the welders and welder operators were qualified in accordance with the Section IX-2007 of the ASME BPVC?* (TDC.620WELDING.WELDERQUAL.R) 195.222 (195.132(b)(2);API Std 620 (12th Edition), Section 6.8)

**6. Qualification of Welders** *Do field observations confirm the welders and welder operators being observed have been qualified in accordance with Section IX of the ASME BPVC-2007?* (TDC.620WELDING.WELDERQUAL.O) 195.222 (195.132(b)(2);API Std 620 (12th Edition), Section 6.8)

**7. Repair of Weld Defects** *Do records indicate weld defects were removed until sound metal was reached on all sides and the repaired welds retested?* (TDC.620WELDING.REPAIRDEFECTS.R) 195.132(b)(2) (API Std 620 (12th Edition), Section 6.15)  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**8. Repair of Weld Defects** *Do field observations verify weld defects were removed (chipped, melted out, or machined out) until sound metal is reached on all sides and repaired welds retested?* (TDC.620WELDING.REPAIRDEFECTS.O) 195.132(b)(2) (API Std 620 (12th Edition), Section 6.15)  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

## Tank Design and Construction - New API 620 Tanks (Low Pressure) - Inspection

**1. Inspection of Materials** *Do records indicate that all tank materials were properly inspected and tested?* (TDC.620INSP.INSPECTMATLS.R) 195.132(b)(2) (API Std 620 (12th Edition), Section 7.1)

**2. Inspection of Materials** *Do field observations confirm that tank materials are being properly inspected and tested?* (TDC.620INSP.INSPECTMATLS.O) 195.132(b)(2) (API Std 620 (12th Edition), Section 7.1.1)



**3. Tank Construction Inspector Qualifications** *Do records indicate that tank construction inspectors were properly qualified?* (TDC.620INSP.INSPECTORQUAL.R) 195.204 (195.132(b)(2);API Std 620 (12th Edition), Section 7.2)

**4. Plate Stamping and Marking Identification** *Do field observations confirm stamps or other identifying marks on plates are visible and traceable?* (TDC.620INSP.PLATESTAMPINGID.O) 195.132(b)(2) (API Std 620 (12th Edition), Section 7.7)

**5. Weld Inspection Standards** *Do records indicate welds are inspected to ensure compliance with the requirements of §195.228 and API Std 620 (12th Edition), Section 7.15?* (TDC.620INSP.WELDINSPECT.R) 195.228(a) (195.228(b);195.234;API Std 620 (12th Edition), Section 7.15)

**6. Weld Inspection Standards** *Do field observations indicate welds are inspected to ensure compliance with the requirements of §195.228 and API Std 620 (12th Edition), Section 7.15?* (TDC.620INSP.WELDINSPECT.O) 195.228(a) (195.228(b);195.234;API Std 620 (12th Edition), Section 7.15)

**7. Repair of Weld Defects** *Do records indicate weld defects were removed until sound metal was reached on all sides and the repaired welds retested?* (TDC.620WELDING.REPAIRDEFECTS.R) 195.132(b)(2) (API Std 620 (12th Edition), Section 6.15)  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**8. Repair of Weld Defects** *Do field observations verify weld defects were removed (chipped, melted out, or machined out) until sound metal is reached on all sides and repaired welds retested?* (TDC.620WELDING.REPAIRDEFECTS.O) 195.132(b)(2) (API Std 620 (12th Edition), Section 6.15)  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

## Tank Design and Construction - New API 620 Tanks (Low Pressure) - Hydrostatic Testing

**1. Hydrostatic and Pneumatic Tests** *Does the hydrostatic and hydrostatic-pneumatic test plan meet all requirements of API Std 620 (12th Edition), Sections 7.18 and 7.20?* (TDC.620HYDRO.HYDROTEST.P) 195.307(b) (195.132(b)(2);API Std 620 (12th Edition), Section 7.18;API Std 620 (12th Edition), Section 7.20)

**2. Hydrostatic and Pneumatic Tests** *Do records indicate the tank hydrostatic and hydrostatic-pneumatic test were completed properly in accordance with the test plan and API Std 620 (12th Edition), Sections 7.18 and 7.20?* (TDC.620HYDRO.HYDROTEST.R) 195.310 (195.307(b);195.132(b)(2);API Std 620 (12th Edition), Section 7.18;API Std 620 (12th Edition), Section 7.20)

**3. Hydrostatic and Pneumatic Tests** *Do field observations indicate the tank hydrostatic and hydrostatic-pneumatic testing is being conducted according to the plan and is meeting all requirements?* (TDC.620HYDRO.HYDROTEST.O) 195.307(b) (195.310;195.132(b)(2);API Std 620 (12th Edition), Section 7.18;API Std 620 (12th Edition), Section 7.20)

**4. Foundation Inspection during the Hydrostatic Test** *Do records indicate the tank foundation was inspected during the hydrostatic test in accordance with API Std 620 (12th Edition), Section 8.3.2?* (TDC.620HYDRO.INSPECTFDN.R) 195.132(b)(2) (API Std 620 (12th Edition), Section 8.3.2;API Std 620 (12th Edition), Appendix R.6.3)

## Tank Design and Construction - New API 620 Tanks (Low Pressure) - Marking

**1. Tank Nameplate Data** *Do field observations confirm that the tank nameplate was properly attached and includes the information listed in API Std 620 (12th Edition), Section 8.1?* (TDC.620MARKING.NAMEPLATE.O) 195.132(b)(2) (API Std 620 (12th Edition), Section 8.1)

**2. Tank Manufacturer's Report** *Upon completion of the tank, do records indicate manufacturer provided a tank report summarizing all the data on the tank, including all drawings and charts as required by API Std 620 (12th Edition), Section 8.3?* (TDC.620MARKING.MANUFREPORT.R) 195.132(b)(2) (API Std 620 (12th Edition), Section 8.3;API Std 620 (12th Edition), Section 7.13;API Std 620 (12th Edition), Appendix M)

## Tank Design and Construction - New API 2510 Tanks (High Pressure) - Part 195 Requirements

**1. New High Pressure Breakout Tank Specs** *Does the process for new aboveground high pressure breakout tanks (API 2510) require tank design and construction to meet the requirements of 195.132(b)(4)?* (TDC.2510REGS.TANKSPEC.P) 195.132(b)(4) (API Std 2510 (9th Edition))

**2. Breakout Tank Overfill Protection** *Does the design specification (or design package) require adequate overfill protection?* (TDC.2510REGS.OVERFILLPROT.P) 195.428(c) (195.132(b)(4);API Std 2510 (9th Edition), Section 7.1.2;API Std 2510 (9th Edition), Section 7.1.3)

**3. Breakout Tank Overfill Protection** *Do records indicate that adequate overfill protection was installed?* (TDC.2510REGS.OVERFILLPROT.R) 195.428(c) (195.132(b)(4);API Std 2510 (9th Edition), Section 7.1.2;API Std 2510 (9th Edition), Section 7.1.3)

**4. Breakout Tank Overfill Protection** *Do observations confirm overfill protective devices were installed in accordance with the design?* (TDC.2510REGS.OVERFILLPROT.O) 195.428(c) (195.132(b)(4);API Std 2510 (9th Edition), Section 7.1.2;API Std 2510 (9th Edition), Section 7.1.3)

**5. Breakout Tank Overfill Protection - SCADA** *Do records indicate initial testing of applicable SCADA overfill protection systems for each new tank was conducted?* (TDC.2510REGS.OVERFILLSCADA.R) 195.446(c)(2) (195.132(b)(4))

**6. Pressure Relief Devices** *Does the design specification (or design package) require that adequate pressure relief devices are installed and tested?* (TDC.2510REGS.PRESSURERELIEFS.P) 195.264(e)(4) (195.132(b)(4);API 2510 (9th Edition), Section 7.1.6;API RP 520;API RP 521)

**7. Pressure Relief Devices** *Do records indicate adequate pressure relief devices were installed and tested?* (TDC.2510REGS.PRESSURERELIEFS.R) 195.264(e)(4) (195.132(b)(4);API 2510 (9th Edition), Section 7.1.6;API RP 520;API RP 521)

**8. Pressure Relief Devices** *Do observations confirm pressure relief devices were installed and/or tested in accordance with the design?* (TDC.2510REGS.PRESSURERELIEFS.O) 195.264(e)(4) (195.132(b)(4);API 2510 (9th Edition), Section 7.1.6;API RP 520;API RP 521)

**9. Unauthorized Entry Protection for Tank Areas** *Do field observations confirm adequate protection against unauthorized entry and vandalism was provided for new breakout tank areas?* (TDC.2510REGS.UNAUTHENTRY.O) 195.264(c) (195.436;195.132(b)(4);API 2510 (9th Edition), Sections 10.12 through 10.14)

## Tank Design and Construction - New API 2510 Tanks (High Pressure) - Design

**1. Tank Design Specifications** *Does the design specification (or design package) require the high pressure tank design and construction to comply with currently IBR'd edition of API 2510 (9th Edition) as required by §195.132(b)(4)?* (TDC.2510DESIGN.TANKDESIGN.P) 195.132(b)(4) (API Std 2510 (9th Edition), Section 4.1.1; ASME BPVC, Section VIII)

**2. Tank Design Specifications** *Do the design records and drawings indicate the tank meets the requirements of the ASME Boiler and Pressure Vessel Code, Section VIII, Division 1 or 2, as required by API 2510 (9th Edition), Section 4.1.1?* (TDC.2510DESIGN.TANKDESIGN.R) 195.132(b)(4) (API Std 2510 (9th Edition), Section 4.1.1; ASME BPVC, Section VIII)

**3. Tank Design Pressure & Temperature** *Does the design specification (or design package) require the tank to be designed to safely hold the product?* (TDC.2510DESIGN.DESIGNLIMITS.P) 195.132(b)(4) (195.132(a); API Std 2510 (9th Edition), Section 4.2.1; API Std 2510 (9th Edition), Section 4.2.2; API Std 2510 (9th Edition), Section 4.3; API Std 2510 (9th Edition), Section 4.4)

**4. Foundations, Supports, and Related Piping** *Does the design of tank foundations, supports, and related piping meet the requirements of API 2510 (9th Edition), Section 6?* (TDC.2510DESIGN.FDNSUPPORTS.P) 195.132(b)(4) (API Std 2510 (9th Edition), Section 6)

**5. Foundations, Supports, and Related Piping** *Do field observations confirm tank foundations, supports, and related piping meet the requirements of API 2510 (9th Edition), Section 6?* (TDC.2510DESIGN.FDNSUPPORTS.O) 195.132(b)(4) (API Std 2510 (9th Edition), Section 6)

**6. Shutoff Valves** *Does the design specification (or design package) require shutoff valves to be provided for all tank connections?* (TDC.2510DESIGN.SHUTOFFVALVES.P) 195.132(b)(4) (API Std 2510 (9th Edition), Section 7.1.7; API Std 2510 (9th Edition), Section 8.6)

**7. Shutoff Valves** *Do field observations verify shutoff valves were provided for all tank connections?* (TDC.2510DESIGN.SHUTOFFVALVES.O) 195.132(b)(4) (API Std 2510 (9th Edition), Section 7.1.7; API Std 2510 (9th Edition), Section 8.6)

**8. Fire Protection System** *Does the design specification (or design package) require the fire control equipment to meet the requirements of API 2510 (9th Edition), Section 10?* (TDC.2510DESIGN.FIREPROT.P) 195.132(b)(4) (195.434; API Std 2510 (9th Edition), Section 10; API Publ 2510A)

**9. Fire Protection System** *Do field observations verify fire control equipment was installed and meets the requirements of API 2510 (9th Edition), Section 10?* (TDC.2510DESIGN.FIREPROT.O) 195.132(b)(4) (195.434;API Std 2510 (9th Edition), Section 10;API Publ 2510A)

**10. Tank Design Observations** *Do field observations confirm the observed tank design parameters were correctly applied to the tank construction?* (TDC.2510DESIGN.DESIGNOBS.O) 195.132(b)(4) (API Std 2510 (9th Edition);ASME BPVC, Section VIII)

## Tank Design and Construction - New API 2510 Tanks (High Pressure) - Siting

**1. Siting Factors for Safety** *Does the design specification (or design package) require siting of the tank to minimize fire or explosion risk to adjacent property, as required by API 2510 (9th Edition), Section 5.1?* (TDC.2510SITING.SITINGSAFETY.P) 195.132(b)(4) (API Std 2510 (9th Edition), Section 5.1;API Std 2510 (9th Edition), Section 10.4)

**2. Siting Factors for Safety** *Do field observations confirm placement (or planned siting) of the tank conforms to the requirements of API 2510 (9th Edition), Section 5.1?* (TDC.2510SITING.SITINGSAFETY.O) 195.132(b)(4) (API Std 2510 (9th Edition), Section 5.1;API Std 2510 (9th Edition), Section 10.4)

**3. Impoundment, Grading, and Drainage** *Do the records (e.g., as-built drawings) indicate proper impoundment and drainage was provided around the tank?* (TDC.2510SITING.IMPOUNDMENT .R) 195.132(b)(4) (API Std 2510 (9th Edition), Section 5.2;API Std 2510 (9th Edition), Section 5.3;API Std 2510 (9th Edition), Section 5.4;API Std 2510 (9th Edition), Section 5.5)

**4. Impoundment, Grading, and Drainage** *Do field observations confirm adequate impoundment and drainage was provided around the tank?* (TDC.2510SITING.IMPOUNDMENT.O) 195.132(b)(4) (API Std 2510 (9th Edition), Section 5.2;API Std 2510 (9th Edition), Section 5.3;API Std 2510 (9th Edition), Section 5.4;API Std 2510 (9th Edition), Section 5.5)

## Tank Design and Construction - New Shop Fabricated (12F or 650 App. J)

**1. Shop-Fabricated Breakout Tank Specifications** *Do field observations indicate new aboveground shop-fabricated breakout tanks are built to 195.132(b)(1) for API 12F (13th Edition), or 195.132(b)(3) for API 650, Appendix J? (TDC.SHOP.BOSPEC.O) 195.132(b)(1) (API Spec 12F (13th Edition))*

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

## Emergency Preparedness and Response - Emergency Planning OPA

**1. Response Plan Coverage** *If the operator is required to have a Facility Response Plan, does the current plan submitted and approved by PHMSA cover all the required pipeline assets? (EP.EPO.OPASUBMITTAL.R) 194.101(a) (194.101(b);194.119(e);194.121(b))*

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

**2. Response Plan Retention Location** *Is the response plan maintained at required locations? (EP.EPO.OPALOCATION.O) 194.111(a) (194.111(b))*

**3. Training Records for Emergency Response Personnel** *Do records indicate that the appropriate training was conducted? (EP.EPO.OPATRaining.R) 194.117(b)*

**4. Response Plan Review and Update** *Do records indicate the response plan has been adequately reviewed, updated, and submitted on the required frequency? (EP.EPO.OPAREVIEW.R) 194.121(a) (194.121(b);194.5)*

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

**5. Drill Program Requirements** *Has the oil spill response drill/exercise program been documented? (EP.EPO.OPADRILL.R) 194.7(b) (National Preparedness for Response Exercise Program (PREP) Guidelines, Section 5 (August 2002);194.107(c)(1)(ix))*

**6. Worst Case Discharge** *Do records demonstrate that the worst case discharge for each response zone was adequately determined? (EP.EPO.OPAWRSTDISCHRG.R) 194.105(a) (194.105(b))*

**7. Worst Case Discharge - Response** *Do records indicate adequate response capabilities are in place for the worst case discharge of each response zone?* (EP.EPO.OPAWRSTDISCHRGSRP.R) 194.107(a) (194.115(a);194.115(b);194.121(b);194.5)

**8. Response Plan Qualified Individuals (QIs)** *Are the Qualified Individuals listed in Facility Response Plan current and are their phone numbers accurate?* (EP.EPO.OPAQUALINDIV.O) 194.113(b)(2) (194.5;194.121(b)(6))

**9. Response Plan Type of Oil Transported** *Are the types of oil transported described in the plan accurate?* (EP.EPO.OPAOILTYPE.R) 194.113(b)(6) (194.121(b)(3))

**10. Response Plan Equipment Testing** *Do records indicate response equipment is properly tested?* (EP.EPO.OPAEQUIPTTEST.R) 194.107(c)(1)(viii)

## Emergency Preparedness and Response - Emergency Response Biofuels

**1. Biofuels - O&M** *Do records indicate the manual of written procedures for operations and maintenance has been reviewed and revised, as needed, to incorporate changes necessary to transport ethanol or other biofuels?* (EP.ERB.BIOOM.R) 195.402(a)

**2. Biofuels - Emergency Response (Personnel)** *Do records indicate training for emergency response personnel has been revised, as needed, to reflect the different conditions and response activities appropriate for ethanol emergencies and modified training implemented?* (EP.ERB.BIOTRAINING.R) 195.403(a)

**3. Biofuels - Emergency Response (Supervisors)** *Do records indicate verification that supervisors have a thorough knowledge of any changes to the emergency response procedures for which they are responsible?* (EP.ERB.BIOSUPERVISE.R) 195.403(c)

## Emergency Preparedness and Response - Emergency Response Liquids

**1. Emergency Plan and Procedures** *Does the O&M plan include a requirement to review the emergency manual at intervals not exceeding 15 months, but at least once each calendar year, and make appropriate changes as necessary to ensure it is effective? (EP.ERL.REVIEW.P) 195.402(a)*

**2. Emergency Plan and Procedures** *Has the operator conducted annual reviews of the emergency plans and procedures as required and made appropriate changes? (EP.ERL.REVIEW.R) 195.402(a)*

**3. Emergency Plan and Procedures Locations** *Are appropriate parts of the manual kept at locations where operations and maintenance activities are conducted? (EP.ERL.LOCATION.O) 195.402(a)*

**4. Accident Investigation Data** *Does the O&M plan include processes for the gathering of data needed for reporting accidents under subpart B of this part in a timely and effective manner? (EP.ERL.ACCIDENTDATA.P) 195.402(a) (195.402(c)(2))*

**5. Accident Investigation Data** *Do the records demonstrate that the data needed for reporting accidents under subpart B of this part was done in a timely and effective manner? (EP.ERL.ACCIDENTDATA.R) 195.402(a) (195.402(c)(2))*

**6. Liaison with Public Officials** *Does the O&M plan include processes for establishing and maintaining liaison with appropriate fire, police and other public officials and utility owners? (EP.ERL.LIAISON.P) 195.402(a) (195.402(c)(12);195.440(c);API RP 1162 Section 4.4 (1st Edition))*

**7. Liaison with Public Officials** *Do records indicate that liaison has been established and maintained with appropriate fire, police, public officials, and utility owners? (EP.ERL.LIAISON.R) 195.402(a) (195.402(c)(12);195.440(c);API RP 1162 Section 4.4 (1st Edition))*

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

**8. Receiving Notices** *Does the emergency plan include processes for receiving, identifying, and classifying notices of events which need immediate response and providing notice to operator personnel or to fire, police or other appropriate officials, as appropriate, for corrective action? (EP.ERL.NOTICES.P) 195.402(a) (195.402(e)(1))*



**9. Notification of Potential Rupture** *Does the operator have procedures to identify and notify operator personnel of a potential rupture?* (EP.ERL.NOTIFYPOTRUPTURE.P) 195.417

**10. Valve Shut-off Capabilities** *Does the operator have procedures to shut-off RMVs or AETs following identification of a release?* (EP.ERL.VALVESHUTOFF.P) 195.402 (195.419(b))

**11. Valve Shut-off Capabilities** *Do the records demonstrate shut-off RMVs or AETs were closed within 30 minutes following identification of a release?* (EP.ERL.VALVESHUTOFF.R) 195.402 (195.419(b))

**12. Notification of Potential Rupture** *Do the records indicate the operator properly identified and notified operator personnel of a potential rupture?* (EP.ERL.NOTIFYPOTRUPTURE.R) 195.417

**13. Receiving Notices** *Do records indicate receiving, identifying, classifying and communicating notices of events requiring immediate response in accordance with procedures?* (EP.ERL.NOTICES.R) 195.402(a) (195.402(e)(1))

**14. Emergency Response** *Does the emergency plan include processes for making a prompt and effective response to a notice of each type of emergency, fire, explosion, accidental release of a hazardous liquid, operational failure (including cyber-attacks), or natural disaster affecting the pipeline?* (EP.ERL.RESPONSE.P) 195.402(a) (195.402(c)(4);195.402(c)(6);195.402(e)(2);195.402(e)(10))

**15. Emergency Response** *Does the emergency plan include processes to ensure the availability of personnel, equipment, instruments, tools, and materials as needed at the scene of an emergency?* (EP.ERL.READINESS.P) 195.402(a) (195.402(e)(3))

**16. Emergency Response** *Does the operator ensure the availability of personnel, equipment, instruments, tools, and materials as required by its procedures?* (EP.ERL.READINESS.O) 195.402(a) (195.402(e)(3))

**17. Emergency Response Release Reduction** *Does the emergency plan include processes for taking necessary action; such as an emergency shutdown, valve shut-off, or pressure reduction, to minimize the hazards from any section of a pipeline system in the event of a release?* (EP.ERL.RELEASEREDUCE.P) 195.402(a) (195.402(e)(4))

**18. Emergency Response Hazard Reduction** *Does the emergency plan include processes for controlling the release of liquid at an accident scene to minimize the hazards, including possible ignition in the cases of flammable HVLs?* (EP.ERL.HAZREDUCE.P) 195.402(a) (195.402(c)(11);195.402(e)(5))

**19. Emergency Response** *Does the emergency plan include procedures for minimizing public exposure to injury and probability of accidental ignition by assisting with evacuation, assisting with halting traffic on roads and railroads, or taking other appropriate action?* (EP.ERL.PUBLICHAZ.P) 195.402(a) (195.402(e)(6))

**20. Authority Notification** *Does the emergency plan include processes for notifying fire, police, and other appropriate public officials of hazardous liquid emergencies and coordinating with them preplanned and actual responses during an emergency, including additional precautions necessary for an emergency involving HVLs?* (EP.ERL.AUTHORITIES.P) 195.402(a) (195.402(e)(7))

**21. Authority Notification** *Do records indicate that notifications were made to fire, police, and other appropriate public officials of hazardous liquid emergencies and were coordinated with preplanned and actual responses (including additional precautions necessary for an emergency involving HVLs)?* (EP.ERL.AUTHORITIES.R) 195.402(a) (195.402(e)(7))

**22. 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.ERL.NOTIFY911.P) 195.402(a) (195.402(e)(7);NTSB P-11-9)

**23. 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.ERL.NOTIFY911.R) 195.402(a) (195.402(e)(7);NTSB P-11-9)

**24. Emergency Response - HVL Instruments** *Does the emergency plan include processes for determining the extent and coverage of vapor cloud and hazardous areas of HVLs by using appropriate instruments?* (EP.ERL.HVLMEASURE.P) 195.402(a) (195.402(e)(8))

**25. Emergency Response - HVL Instruments** *In the case of an HVL release, do records indicate the operator utilized appropriate instruments to address vapor clouds in accordance with its procedures?* (EP.ERL.HVLMEASURE.R) 195.402(a) (195.402(e)(8))

**26. Emergency Response - Post-Accident Review** *Does the emergency plan include processes for providing for a post-accident review of employee activities to determine whether the procedures were effective in each emergency and taking corrective action where deficiencies are found?* (EP.ERL.POSTEVNTREVIEW.P) 195.402(a) (195.402(e)(9))

**27. Emergency Response - Post-Accident Review** *Do records indicate post-accident reviews of employee activities were performed to determine whether the procedures were effective in each emergency and take corrective action where deficiencies are found?* (EP.ERL.POSTEVNTREVIEW.R) 195.402(a) (195.402(e)(7);195.402(e)(9))

**28. Communication System Requirements** *Does the process address emergency communication system(s)?* (EP.ERL.COMMSYS.P) 195.408(a) (195.408(b))

**29. Communication System Requirements** *Do records indicate emergency communication system(s) use was as required?* (EP.ERL.COMMSYS.R) 195.408(b)

**30. Communication System Requirements** *Is an emergency communication system provided?* (EP.ERL.COMMSYS.O) 195.408(b)

## Emergency Preparedness and Response - Emergency Training of Personnel

**1. Emergency Response Training** *Has a continuing training program to instruct emergency response personnel been established and conducted?* (EP.ETR.TRAINING.P) 195.403(a)

**2. Emergency Response Training** *Do records indicate the operator provided training to its emergency response personnel as required?* (EP.ETR.TRAINING.R) 195.403(a)

**3. Emergency Response Training** *Do emergency response personnel demonstrate adequate skills and knowledge?* (EP.ETR.TRAINING.O) 195.403(a)

**4. Emergency Response Training Performance** *Does the training program contain a provision requiring an annual review of the program and the making of changes as necessary to ensure it is effective?* (EP.ETR.TRAININGREVIEW.P) 195.403(b)

**5. Emergency Response Training Performance** *Have annual reviews of the emergency response training program been conducted and appropriate changes made as necessary to ensure it is effective?* (EP.ETR.TRAININGREVIEW.R) 195.403(b)

**6. Emergency Response Supervisor Training** *Does the process require and verify that supervisors be knowledgeable of emergency response procedures for which they are responsible?* (EP.ETR.TRAININGSUPERVISE.P) 195.403(c)

**7. Emergency Response Supervisor Training** *Do records indicate verification that supervisors are knowledgeable of emergency response procedures for which they are responsible?* (EP.ETR.TRAININGSUPERVISE.R) 195.403(c)

**8. Emergency Response Supervisor Training** *Do emergency response supervisors demonstrate adequate skills and knowledge?* (EP.ETR.TRAININGSUPERVISE.O) 195.403(c)

## Emergency Preparedness and Response - Failure & Accident Investigation

**1. Accident Investigation** *Does the operator's O&M plan include processes for analyzing pipeline accidents to determine their causes?* (EP.FAI.ACCIDENTANALYSIS.P) 195.402(a) (195.402(c)(5);195.402(c)(6))

**2. Accident RMV Analysis** *For accidents that involve an RMV, does the operator's procedures require a post-accident 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 accidents?* (EP.FAI.ACCIDENTRMVANALYSIS.P) 195.402(a) (195.402(c)(5);195.402(c)(6))

**3. Accident Summary** *For accidents that involve an RMV, do the operator's procedures require an accident summary?* (EP.FAI.ACCIDENTSUMMARY.P) 195.402(a) (195.402(c)(5);195.402(c)(6))

**4. Accident Investigation Data** *Do records indicate pipeline accidents were analyzed to determine their causes?*  
(EP.FAI.ACCIDENTANALYSIS.R) 195.402(a) (195.402(c)(5))

**5. Failure Analysis** *Does the operator's O&M plan include processes for analyzing pipeline failures to determine their causes?* (EP.FAI.FAILUREANALYSIS.P) 195.402(a) (195.402(c)(5);195.402(c)(6))

**6. Failure RMV Analysis** *For failures that involve an RMV, does the operator's procedures require a post-failure analysis of all the factors and identify and implement operators and maintenance measures to minimize future failures?*  
(EP.FAI.FAILURERMVANALYSIS.P) 195.402(a) (195.402(c)(5);195.402(c)(6))

**7. Failure Summary** *For failures that involve an RMV, does the operator's procedures require a failure summary?*  
(EP.FAI.FAILURESUMMARY.P) 195.402(a) (195.402(c)(5);195.402(c)(6))

**8. Failure Analysis Records** *Do records indicate pipeline failures were analyzed to determine their causes?*  
(EP.FAI.FAILUREANALYSIS.R) 195.402(a) (195.402(c)(5))

## Facilities and Storage - Tanks and Storage - Inspection

**1. Breakout Tank Inspection - Non-Standard Tanks In-Service** *For breakout tanks not being inspected to API Std-653 (3rd Edition) or API Std-510 (10th Edition), does the process describe the interval and method for performing tank inspections?* (FS.TANKS.NONSTDINSP.P) 195.402(c)(3) (195.432(a))

**2. Breakout Tank Inspection - Non-Standard Tanks In-Service** *For breakout tanks not being inspected to API Std-653 (3rd Edition) or API Std-510 (10th Edition), do the records verify the interval and method used for performing tank inspections?* (FS.TANKS.NONSTDINSP.R) 195.404(c)(3) (195.432(a))

**3. Breakout Tank Inspection - Monthly** *Does the process describe the interval and method for performing routine in-service inspections (monthly) of steel atmospheric or low pressure breakout tanks?* (FS.TANKS.INSRVCINSP.P) 195.402(c)(3) (195.432(b);API Std-653 (3rd Edition), Section 6.3.1)

**4. Breakout Tank Inspection - Monthly** *Do records document that steel atmospheric or low pressure breakout tanks have received monthly in-service inspections and that deficiencies found during inspections have been documented?* (FS.TANKS.INSRVCINSP.R) 195.432(b) (195.404(c)(3);API Std-653 (3rd Edition), Section 6.3.1)

**5. Breakout Tank Inspection - External In-Service** *Does the process describe the interval and method for performing external in-service inspections of breakout tanks that are steel (atmospheric or low pressure) tanks?* (FS.TANKS.EXTRNLINSP.P) 195.402(c)(3) (195.432(b))

**6. Breakout Tank Inspection - External In-Service** *Do records document that steel atmospheric or low pressure breakout tanks have received API Std-653 (3rd Edition) external inspections at the required intervals and that deficiencies documented during inspections have been corrected within a reasonable time frame?* (FS.TANKS.EXTRNLINSP.R) 195.432(b) (195.404(c)(3);API Std-653 (3rd Edition) section 6.3.2)

**7. Breakout Tank Inspection - External UT** *Does the process describe the interval and method for performing external, ultrasonic shell thickness inspections of breakout tanks that are steel (atmospheric or low pressure) tanks in accordance with API Std-653 (3rd Edition), Section 6.3.3?* (FS.TANKS.EXTRNLINSPUT.P) 195.402(c)(3) (195.432(b);API Std-653 (3rd Edition) Section 6.3.3)

**8. Breakout Tank Inspection - External UT** *Do records document that steel atmospheric or low pressure breakout tanks have received ultrasonic shell thickness inspections, in accordance with API Std-653 (3rd Edition), at the required intervals and that deficiencies found during inspections have been documented?* (FS.TANKS.EXTRNLINSPUT.R) 195.432(b) (195.404(c)(3);API Std-653 (3rd Edition), Section 6.3.3)

**9. Breakout Tank Inspection - Internal (Out of Service)** *Does the process describe the interval and method for performing internal (out of service) inspections of breakout tanks that are steel (atmospheric or low pressure) tanks in accordance with API Std-653 (3rd Edition), Section 6.4?* (FS.TANKS.INTINSPOOS.P) 195.402(c)(3) (195.432(b))

**10. Breakout Tank Inspection - Internal (Out of Service)** *Do records document that steel atmospheric or low pressure breakout tanks have received formal internal inspections, in accordance with API 653, at the required intervals and that deficiencies found during inspections have been documented?* (FS.TANKS.INTINSPOOS.R) 195.404(c)(3) (195.432(b))

**11. Breakout Tank Inspection - Records (Sect. 6.8)** *Does the operator's process require that all tank construction records, inspection history and repair/alteration history is maintained for the life of the tank?* (FS.TANKS.INSPRECORDS.P) 195.402(c)(3) (195.432(b);API Std-653 (3rd Edition) Section 6.8)

**12. Breakout Tank Inspection - Records (Sect. 6.8)** *Does the operator have all of the construction records, inspection history, and repair/alteration history associated with each breakout tank?* (FS.TANKS.INSPRECORDS.R) 195.432(b) (195.404(c)(3);API Std-653 (3rd Edition), Section 6.8)

**13. Breakout Tank Inspection - Reports (Sect. 6.9)** *Does the operator's process require that all Reports required by API 653 certified inspectors, the repair recommendations, and the disposition of the recommendations are to be maintained for the life of the tank?* (FS.TANKS.INSPREPORTS.P) 195.402(c)(3) (195.432(b);API Std-653 (3rd Edition) Section 6.9)

**14. Breakout Tank Inspection - Reports (Sect. 6.9)** *Does the operator have all of the inspection reports, repair recommendations, and repair/alteration history associated with each breakout tank?* (FS.TANKS.INSPREPORTS.R) 195.432(b) (195.404(c)(3);API Std-653 (3rd Edition), Section 6.9)

**15. Breakout Tank Inspection - API 2510 External** *For API 2510 pressure tanks, does the process describe the interval and method for performing external inspections of in-service pressure tanks built to API Standard 2510?* (FS.TANKS.EXTINSP2510.P) 195.402(c)(3) (195.432(c);API 2510 (9th Edition);API Std-510 (10th Edition))

**16. Breakout Tank Inspection - API 2510 External** *For API 2510 pressure tanks, do records document that in-service pressure tanks built to API Standard 2510 have received external inspections at the required intervals and that deficiencies found have been corrected?* (FS.TANKS.EXTINSP2510.R) 195.404(c)(3) (195.432(c);API 2510 (9th Edition);API Std-510 (10th Edition))

**17. Breakout Tank Inspection - API 2510 Internal In-service** *For API 2510 pressure tanks, does the process describe the interval and method for performing internal inspections in accordance with API Std-510 (10th Edition)?* (FS.TANKS.INTINSP2510.P) 195.402(c)(3) (195.432(c);API Std-510 (10th Edition))

**18. Breakout Tank Inspection - API 2510 Internal In-service** *For API 2510 pressure tanks, do records document that internal inspections were performed at the required intervals and that deficiencies found have been corrected in accordance with API Std-510 (10th Edition)?* (FS.TANKS.INTINSP2510.R) 195.404(c)(3) (195.432(c);API Std-510 (10th Edition))

**19. Shop-Fabricated Breakout Tank Specifications** *Do field observations indicate new aboveground shop-fabricated breakout tanks are built to 195.132(b)(1) for API 12F (13th Edition), or 195.132(b)(3) for API 650, Appendix J?* (TDC.SHOP.BOSPEC.O) 195.132(b)(1) (API Spec 12F (13th Edition))

*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. Facility Protection** Does the process require facilities to be protected from vandalism and unauthorized entry? (FS.FG.PROTECTION.P) 195.402(c)(3) (195.436)

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

**2. Facility Protection** Are facilities adequately protected from vandalism and unauthorized entry? (FS.FG.FACPROTECT.O) 195.436

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

**3. Smoking/Open Flames** Does the process prohibit smoking and open flames in each pump station and breakout tank area, or where there is the possibility of the leakage of a flammable hazardous liquid or the presence of flammable vapors? (FS.FG.IGNITION.P) 195.402(c)(3) (195.438)

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

**4. Smoking/Open Flames** Do records show precautions taken to prevent ignition sources in areas with a potential for accumulating flammable vapors or leaking hazardous liquids? (FS.FG.IGNITION.R) 195.404(c) (195.438)

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

**5. Smoking/Open flames** Is there signage that prohibits smoking and open flames around pump stations, launchers and receivers, breakout tank areas, or other applicable facilities? (FS.FG.IGNITION.O) 195.438

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

**6. Signage** Does the process require operator signs to be posted around each pump station and breakout tank area? (FS.FG.SIGNAGE.P) 195.402(c)(3) (195.434)

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

**7. Signage** Are there operator signs around each pumping station, breakout tank area, and other applicable facilities? (FS.FG.SIGNAGE.O) 195.434

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

**8. Firefighting Equipment** Does the process require firefighting equipment at pump station/breakout tank areas? (FS.FG.FIREPROT.P) 195.402(c)(3) (195.430(a);195.430(b);195.430(c))



**9. Firefighting Equipment** *Are records of inspections of firefighting equipment adequate?* (FS.FG.FIREPROT.R) 195.404(c)(3) (195.430(a);195.430(b);195.430(c))

**10. Pump Station Fire Protection** *Has adequate fire protection equipment been installed at pump station/breakout tank areas and is it maintained properly?* (FS.FG.FIREPROT.O) 195.430(a) (195.430(b);195.430(c);195.262(e))

**11. Pump Station Fire Protection** *Has motive power, separate from pump station power, been provided for that fire protection equipment that incorporates pumps?* (FS.FG.PSFIREPROTPWR.O) 195.262(e)

## Facilities and Storage - Pump Stations

**1. Over Pressure Protection - HVL** *Does the process contain procedures for inspecting and testing each pressure limiting device, relief valve, pressure regulator, or other items of pressure control equipment on HVL pipelines?* (MO.LMOPP.PRESSREGTESTHVL.P) 195.402(c)(3) (195.428(a))

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

**2. Over Pressure Protection** *Do records indicate inspection and testing of each overpressure safety device on its non-HVL pipelines at intervals not to exceed 15 months, but at least once each calendar year?* (MO.LMOPP.PRESSREGTEST.R) 195.404(c) (195.428(a))

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

**3. Over Pressure Protection - HVL** *Do records indicate inspection and testing of each overpressure safety device on HVL pipelines at intervals not to exceed 7.5 months, but at least twice each calendar year?* (MO.LMOPP.PRESSREGTESTHVL.R) 195.404(c) (195.428(a))

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

**4. Pump Station Ventilation** *Has adequate ventilation been provided at pump station buildings?* (FS.PS.VENTILATION.O) 195.262(a)

**5. Over Pressure Protection - Non HVL** *Does the process adequately detail the inspecting and testing of each pressure limiting device, relief valve, pressure regulator, or other items of pressure control equipment?*  
(MO.LMOPP.PRESSREGTEST.P) 195.402(c)(3) (195.428(a))

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

**6. Pump Station Vapors** *Have warning devices that warn of the presence of hazardous vapors been installed at pump station buildings?* (FS.PS.VAPORALARM.O) 195.262(a)

**7. Over Pressure Protection** *Are inspections of overpressure safety devices adequate (including HVL lines)?*  
(MO.LMOPP.PRESSREGTEST.O) 195.428(a)

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

**8. Pump Station Emergency Shutdown Devices** *Has a device for activating emergency shutdown of the pump station been installed?* (FS.PS.PSESD.O) 195.262(b)

**9. Pump Station Auxiliary Power** *If power is needed to actuate safety devices, has an auxiliary power supply been provided?* (FS.PS.PSAUXPWR.O) 195.262(b)

**10. Pump Station Location** *Has on-shore pumping equipment been installed on property under the control of the operator and is that equipment at least 50 feet from the boundary of that property?* (FS.PS.PSLOCATION.O) 195.262(d)

**11. Pump Station Above Ground Piping** *Have above ground components within the pump station been protected from anticipated loads?* (FS.PS.ABVGRNDPIPING.O) 195.254(b)

**12. Launcher and Receiver Pressure Relief** *Does the process include requirements for relief devices and their proper use for launchers and receivers?* (MO.LMOPP.LAUNCHRECVRELIEF.P) 195.402(c)(3) (195.426)

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

**13. Launcher and Receiver Pressure Relief** *Are launchers and receivers equipped with relief devices?*  
(MO.LMOPP.LAUNCHRECVRELIEF.O) 195.426

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

## Facilities and Storage - Tanks and Storage

### 1. Pressure Control Equipment and Overpressure Protection on Atmospheric or Low Pressure Tanks

*Does the process require inspection and testing of pressure control equipment and overpressure protection on atmospheric or low pressure breakout tanks at intervals not exceeding 15 months, but at least once each calendar?* (FS.TS.PRESSREGTEST.P) 195.402(c)(3) (195.428(a);API 2000)

### 2. Pressure Control Equipment and Overpressure Protection on Atmospheric or Low Pressure Tanks

*Do the records verify the inspection and testing of pressure control equipment and overpressure protection on atmospheric or low pressure breakout tanks is performed at intervals not exceeding 15 months, but at least once each calendar?* (FS.TS.PRESSREGTEST.R) 195.404(c)(3) (195.428(a);API 2000)

**3. Testing HVL Breakout Tank Relief Valves** *Does the process require inspection and testing of pressure relief valves on HVL pressure breakout tanks at intervals not exceeding five (5) years?* (FS.TS.PRVTTESTHVL.P) 195.402(c)(3) (195.428(b))

**4. Testing HVL Breakout Tank Relief Valves** *Do records document testing and inspection of relief valves on HVL pressure breakout tanks at intervals not exceeding five (5) years?* (FS.TS.PRVTTESTHVL.R) 195.404(c)(3) (195.428(b))

**5. Testing HVL Breakout Tank Relief Valves** *Do field observations of pressure relief valves on HVL pressure breakout tanks appear to be in satisfactory mechanical condition and to be functioning properly?* (FS.TS.PRVTTESTHVL.O) 195.428(b)

**6. Tank Overfill Protection - Non-HVL Tanks** *Does the process require adequate testing and inspection of overfill devices on aboveground breakout tanks at intervals not exceeding 15 months, but at least once each calendar year?* (FS.TS.OVERFILL.P) 195.402(c)(3) (195.428(a);195.428(c);195.428(d);API 2350 (5th Edition))

**7. Tank Overfill Protection - Non-HVL Tanks** *Do records confirm testing and inspection of overfill devices on non-HVL breakout tanks was performed at intervals not exceeding 15 months, but at least once each calendar year?* (FS.TS.OVERFILL.R) 195.404(c)(3) (195.428(a);195.428(c);195.428(d);API 2350 (5th Edition))

**8. Tank Overfill Protection - HVL Tanks** *Does the process require adequate testing and inspection of overfill devices on HVL pressure breakout tanks at intervals not to exceed 7-1/2 months, but at least twice each calendar year?* (FS.TS.OVERFILLHVL.P) 195.402(c)(3) (195.428(a);195.428(c);195.428(d))

**9. Tank Overfill Protection - HVL Tanks** *Do the records confirm adequate testing and inspection of overfill devices on HVL pressure breakout tanks was performed at intervals not to exceed 7-1/2 months, but at least twice each calendar year?* (FS.TS.OVERFILLHVL.R) 195.402(c)(3) (195.428(a);195.428(c);195.428(d);API 510 (9th Edition))

**10. Tank Overfill Protection - HVL and Non-HVL Tanks** *Do selected overfill protection systems on breakout tanks function properly and are they in good mechanical condition?* (FS.TS.OVERFILL.O) 195.428(d) (195.428(c);API 2510)

**11. Tank Condition Inspection - Observations** *Do field observations indicate the condition of the breakout tank(s) is acceptable?* (FS.TS.INSPECTIONS.O) 195.432 (195.401(b);API Std-653 (3rd Edition))

**12. Protection Against Ignitions During O&M of Breakout Tanks** *Does the process describe how the operator protects against ignitions arising out of static electricity, lightning, and stray currents during operation and maintenance activities of aboveground breakout tanks?* (FS.TS.IGNITION.P) 195.402(c)(3) (195.405(a);API RP-2003 (8th Edition))

**13. Protection against Ignitions during O&M of Breakout Tanks** *Is there protection provided against ignitions arising out of static electricity, lightning, and stray currents during operation and maintenance activities of aboveground breakout tanks?* (FS.TS.IGNITION.O) 195.405(a) (195.401(a))

**14. Floating Roof Access/Egress Hazards** *Does the access/egress process for floating roofs of in-service aboveground breakout tanks to perform inspection, service, maintenance or repair activities of in-service tanks indicate that the operator has reviewed and considered the potentially hazardous conditions, safety practices and procedures in API RP 2026 (4th Edition)?* (FS.TS.FLOATINGROOF.P) 195.402(c)(3) (195.405(b);API RP 2026 (4th Edition))

**15. Floating Roof Access/Egress Hazards** *Do records indicate access/egress onto floating roofs of in-service aboveground breakout tanks to perform inspection, service, maintenance, or repair activities of in-service tanks was performed consistent with API RP 2026 (4th Edition)?* (FS.TS.FLOATINGROOF.R) 195.404(c) (195.405(b);API RP 2026 (4th Edition))

**16. Breakout Tank Impoundments** *If a breakout tank first went into service after October 2, 2000 do records indicate operator has maintained adequate impoundment for each breakout tank?* (FS.TS.IMPOUND.R) 195.404(c) (195.264(b);NFPA 30 (2021))

**17. Breakout Tank Impoundments** *If a breakout tank first went into service after October 2, 2000, does it have an adequate impoundment?* (FS.TS.IMPOUND.O) 195.264(b) (NFPA 30 (2021))

**18. Breakout Tank Pressure Testing After Repair, Alteration** *For all breakout tanks that have been repaired, altered, or reconstructed, have written test procedures been developed for testing?* (FS.TS.REPAIRLEAKTEST.P) 195.402(c) (195.307;195.310(a);195.310(b);API Std-653 (3rd Edition))

**19. Breakout Tank Pressure Testing After Repair, Alteration** *For all breakout tanks that have been repaired, altered, or reconstructed, do the records indicate the work was performed in accordance with the applicable standard for the tank type?* (FS.TS.REPAIRLEAKTEST.R) 195.310(a) (195.310(b);195.307)

## Facilities and Storage - Valves

**1. Valve Maintenance - All** *Does the process adequately address the maintenance program for each valve that is necessary for safe operation of the pipeline system?* (MO.LM.VALVEMAIN.P) 195.402(c)(3) (195.420(a))

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

**2. Valve Inspection - Valves** *Does the process address inspecting each valve?* (MO.LM.VALVEMAINSEMIANN.P) 195.402(c)(3) (195.420(b))

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

**3. Valve Inspection - Mainline Valves** *Do records indicate each mainline valve was inspected as required?* (MO.LM.VALVEMAIN.R) 195.404(c) (195.420(a);195.420(b))

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

**4. Valve Maintenance** *Do the pipeline system valves appear to be in good working order and are they protected from unauthorized operation?* (MO.LM.VALVEMAJNT.O) 195.420(a) (195.420(c))

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

**5. Valve Protection** *Does the process contain criteria for providing protection for each valve from unauthorized operation and from vandalism?* (MO.LM.VALVEPROTECT.P) 195.402(c)(3) (195.420(c))

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

**6. Pump Station Valves** *Have valves been installed at locations that allow the pump station equipment to be isolated in the event of an emergency?* (FS.VA.PSISOVALVES.O) 195.260(a)

## Integrity Management - High Consequence Areas

**1. IMP High Consequence Areas HCA Identification** *Does the process require the identification of HCA-affecting pipe segments include steps to identify, document, and maintain up-to-date geographic locations and boundaries of HCAs using the NPMS and other information sources as necessary?* (IM.HC.HCALOCATION.P) 195.452(f)(1) (195.452(a);195.452(d)(2);195.452(b)(2))

**2. IMP High Consequence Areas HCA Identification** *Do records indicate that locations and boundaries of HCA-affecting pipe segments are correctly identified and maintained up-to-date?* (IM.HC.HCALOCATION.R) 195.452(l)(1)(ii) (195.452(f)(1);195.452(a);195.452(b)(2);195.452(d)(2);195.452(j)(1))

**3. IMP High Consequence Areas HCA Identification** *Are locations and boundaries of pipe segments that can affect HCAs correctly identified, maintained up-to-date, and verified in accordance with the program?* (IM.HC.HCALOCATION.O) 195.452(b)(5) (195.452(a);195.452(b)(2);195.452(f)(1);195.452(j)(2))

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

**4. IMP High Consequence Areas Direct Intersect Method and Direct Intersect Exceptions** *Does the process include all locations where pipeline segments directly intersect a high consequence area?* (IM.HC.HCAIDENT.P) 195.452(f)(1) (195.452(a))

**5. IMP High Consequence Areas Direct Intersect Method and Direct Intersect Exceptions** *Do records indicate that all locations where a pipeline segment is located in an HCA are determined and, if any exceptions for segments that directly intersect an HCA are taken, an adequate technical justification is provided?* (IM.HC.HCAIDENT.R) 195.452(l)(1)(ii) (195.452(f)(1);195.452(a))

**6. IMP High Consequence Areas Release Locations and Spill Volumes** *Does the process include methods to determine the locations and volume of potential commodity releases?* (IM.HC.HCARELEASE.P) 195.452(f)(1) (195.452(a))

**7. IMP High Consequence Areas Release Locations and Spill Volumes** *Do records indicate that identified release locations and spill volumes are consistent with the documented process?* (IM.HC.HCARELEASE.R) 195.452(l)(1)(ii) (195.452(f)(1);195.452(a))

**8. IMP High Consequence Areas Overland Spread of Liquid Pool** *Does the process include an analysis of overland spread of hazardous liquids to determine the extent of commodity spread and its effects on HCAs?* (IM.HC.HCAOVERLAND.P) 195.452(f)(1) (195.452(a))

**9. IMP High Consequence Areas Overland Spread of Liquid Pool** *Do records indicate that the analysis of overland spread is consistent with the documented process?* (IM.HC.HCAOVERLAND.R) 195.452(l)(1)(ii) (195.452(f)(1);195.452(a))

**10. IMP High Consequence Areas Water Transport Analysis** *Does the process include the analysis of water transport of hazardous liquids to determine the extent of commodity spread and its effects on HCAs?* (IM.HC.HCAH2OTRANSP.P) 195.452(f)(1) (195.452(a))

**11. IMP High Consequence Areas Water Transport Analysis** *Do records indicate that water transport analysis is consistent with the documented process?* (IM.HC.HCAH2OTRANSP.R) 195.452(l)(1)(ii) (195.452(f)(1);195.452(a))

**12. IMP High Consequence Areas Air Dispersion Analysis** *Does the process include the analysis of the dispersion of vapors from the release of highly volatile liquids and volatile liquids to determine effects on HCAs?* (IM.HC.HCAAIRDISP.P) 195.452(f)(1) (195.452(a))

**13. IMP High Consequence Areas Air Dispersion Analysis** *Do the records indicate that the analysis of air dispersion of vapors is consistent with the documented process?* (IM.HC.HCAAIRDISP.R) 195.452(l)(1)(ii) (195.452(f)(1);195.452(a))

**14. IMP High Consequence Areas Identification of Segments that Could Indirectly Affect an HCA (Buffer Zone)** *Does the process include all locations of pipeline segments that do not intersect, but could indirectly affect, an HCA (buffer zone)?* (IM.HC.HCAINDIRECT.P) 195.452(f)(1) (195.452(a))

**15. IMP High Consequence Areas Identification of Segments that Could Indirectly Affect an HCA (Buffer Zone)** *Do the records indicate that endpoints of pipeline segments that could affect an HCA have been correctly identified where a buffer zone approach is utilized?* (IM.HC.HCAINDIRECT.R) 195.452(l)(1)(ii) (195.452(f)(1);195.452(a))

**16. IMP High Consequence Areas Timely Completion of Segment Identification** *Does the process require completion of segment identification for Category 3 pipelines prior to beginning of operation?* (IM.HC.HCACAT3.P) 195.452(f)(1) (195.452(b)(2);195.452(a)(3))

**17. IMP High Consequence Areas Timely Completion of Segment Identification** *Do records indicate completion of segment identification for Category 3 pipelines prior to beginning of operation?* (IM.HC.HCACAT3.R) 195.452(l)(1)(ii) (195.452(f)(1);195.452(b)(2);195.452(a)(3))

**18. IMP High Consequence Areas Timely Development of IM Program** *Was a written IM program in place for Category 3 pipelines?* (IM.HC.IMPCAT3.P) 195.452(b)(1) (195.12;195.452(a)(3))

**19. IMP High Consequence Areas Timely Development of IM Program** *Was a written IM program in place for Category 3 pipelines?* (IM.HC.IMPCAT3.R) 195.452(l)(1)(ii) (195.12;195.452(a)(3))



## Integrity Management - Information Analysis

**1. Performing Information Analysis per the Updated Requirements Promulgated October 1, 2019** *Beginning July 1, 2020 does the information analysis process include the updated requirements of 195.452(g) (IM.INFOAN.DATA.P) 195.452(f)(3) (195.452(g))*

**2. Performing Analysis that Identifies Spatial Relationships among Anomalous Information** *Does the information analysis identify spatial relationships among anomalous information? (IM.INFOAN.SPATIAL.P) 195.452(f)(3) (195.452(g))*

**3. Information Analysis Records using Pipeline Attributes for Identifying Spatial Relationships** *Do records indicate that all data elements are used to perform information analysis to identify spatial relationships between anomalous information? (IM.INFOAN.INFOANRECORD.R) 195.452(l)(1)(ii) (195.452(g))*

## Integrity Management - Risk Analysis

**1. Risk Analysis Input Information** *Are field conditions on the pipeline segments accurately reflected in the appropriate risk assessment data and information? (IM.RA.RADATA.O) 195.452(b)(5) (195.452(f)(3))*

**2. Risk Analysis Input Information** *Does the process include an analysis and integration of all available information about the integrity of the entire pipeline and the consequences of a failure? (IM.RA.RADATA.P) 195.452(f)(3) (195.452(g);195.452(j))*

**3. Risk Analysis Input Information** *Do the records indicate that all available information has been integrated into the risk analysis? (IM.RA.RADATA.R) 195.452(l)(1)(ii) (195.452(f)(3);195.452(g);195.452(j))*

**4. Risk Analysis Comprehensiveness of Approach** *Does the process include requirements for a risk analysis and the integration of all relevant risk factors, including the need to address potential risk of a compromised operations control system (e.g., cyber-attack), and all available information, when evaluating pipeline segments? (IM.RA.RAMETHOD.P) 195.452(f)(3) (195.452(g);195.452(j))*

**5. Risk Analysis Results** *Do the records indicate that the results of the risk analysis process are useful for drawing conclusions and insights for decision making?* (IM.RA.RARERESULTS.R) 195.452(l)(1)(ii) (195.452(f)(3);195.452(g);195.452(j))

**6. Subdivision of Pipeline Segments for Risk Analysis Purposes** *Does the risk analysis process consider and incorporate the variation in risk factors along the pipeline such that segment-specific risk results and insights are obtained?* (IM.RA.RASEGMENT.P) 195.452(f)(3) (195.452(g);195.452(j))

**7. Risk Analysis Comprehensiveness of Approach** *Do the records indicate the evaluation of the methodology(ies) used for evaluating risks to HCAs and the integration of all relevant risk factors and all available information when evaluating pipeline segments?* (IM.RA.RAMETHOD.R) 195.452(l)(1)(ii) (195.452(f)(3);195.452(g);195.452(e))

## Integrity Management - Continual Evaluation and Assessment

**1. IMP Periodic Evaluation** *Does the process include requirements for performing periodic evaluations of pipeline integrity?* (IM.CA.PERIODICEVAL.P) 195.452(f)(5) (195.452(j)(1);195.452(j)(2);195.452(g);195.452(a))

**2. IMP Periodic Evaluation** *Do records indicate that evaluations of pipeline integrity are being performed periodically?* (IM.CA.PERIODICEVAL.R) 195.452(l)(1)(ii) (195.452(f)(5);195.452(j)(1);195.452(j)(2);195.452(g);195.452(a))

**3. Reviewing Risk Factors during the Annual Verification of Existing IM-Covered Segments** *Does the segment verification process describe how risk factors used in segment identification are verified annually?* (IM.CA.SEGMENTVERIFY.P) 195.452(f)(5) (195.452(j)(2))

**4. Identification of Risk Factors when Annually Verifying Existing IM-Covered Segments** *For the annual verification of risk factors, does the process include all risk factors that were used in determining pipeline segments that could-affect an HCA?* (IM.CA.SEGMENTIDFACTORS.P) 195.452(f)(5) (195.452(j)(2))

**5. Re-Analyzing Existing IM-Covered Segments Based on Changes to Risk Factors Discovered During the Annual Segment Verification** *Does the verification process include re-analyzing segments to validate or re-establish endpoints of HCA segments when risk factors change?* (IM.CA.REANALYZEHCASEGMENTS.P) 195.452(f)(5) (195.452(j)(2))

**6. Verifying IM Covered Segments** *Was annual verification of risk factors used in segment identification completed?* (IM.CA.SEGMENTVERIFY.R) 195.452(l)(1)(ii) (195.452(j)(2))

**7. IMP High Consequence Areas HCA Identification** *Are locations and boundaries of pipe segments that can affect HCAs correctly identified, maintained up-to-date, and verified in accordance with the program?* (IM.HC.HCALLOCATION.O) 195.452(b)(5) (195.452(a);195.452(b)(2);195.452(f)(1);195.452(j)(2))  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**8. IMP Continual Evaluation and Assessment Intervals** *Does the process include all of the risk factors that reflect the conditions on the pipe segment to establish an assessment interval?* (IM.CA.ASSESSINTERVAL.P) 195.452(f)(5) (195.452(e);195.452(g);195.452(j)(3))

**9. IMP Continual Evaluation and Assessment Intervals** *Do the records indicate that the assessment intervals are consistent with the risks identified for the pipe segment and the results of previous assessments?* (IM.CA.ASSESSINTERVAL.R) 195.452(l)(1)(ii) (195.452(f)(5);195.452(e);195.452(j)(1);195.452(j)(3);195.452(g))

**10. IMP Continual Evaluation and Assessment Methods** *Does the process specify assessment methods that are appropriate for the specific integrity threats to the pipe segment?* (IM.CA.ASSESSMETHOD.P) 195.452(f)(5) (195.452(j)(5);195.452(g);195.452(c)(1)(i)(A);195.591)

**11. IMP Continual Evaluation and Assessment Methods** *Do the records indicate that selected assessment methods are appropriate for the specific integrity threats to the pipe segment?* (IM.CA.ASSESSMETHOD.R) 195.452(l)(1)(ii) (195.452(f)(5);195.452(j)(5);195.452(g);195.452(c)(1)(i)(A);195.591)

**12. IMP Continual Evaluation and Assessment Interval Variance Notification** *Does the process include methodology for submitting variance notifications to PHMSA for integrity assessment intervals longer than the 5-year maximum assessment interval?* (IM.CA.ASSESSNOTIFY.P) 195.452(f)(5) (195.452(j)(4);195.452(m))

**13. IMP Continual Evaluation and Assessment Interval Variance Notification** *Do the records indicate that variance notifications been submitted to PHMSA for integrity assessment intervals longer than the 5-year maximum assessment interval?* (IM.CA.ASSESSNOTIFY.R) 195.452(l)(1)(ii) (195.452(f)(5);195.452(m);195.452(j)(4))

## Integrity Management - Preventive and Mitigative Measures

**1. P&M Measures - Identification & Evaluation** *Does the Integrity Management Program include a process for the identification and evaluation of preventive & mitigative measures (P&M measures), resulting from the risk analysis, to prevent and mitigate the consequences of a pipeline failure that could affect a high consequence area (HCA)?* (IM.PM.PMMMEASURES.P) 195.452(f)(6) (195.452(i)(1);195.452(i)(2);195 Appendix C, Section III;API Standard 1160)

**2. P&M Measures - Identification & Evaluation** *Do records demonstrate that the process of identification and evaluation for Preventive & Mitigative Measures (P&M Measures) has been applied in accordance with the documented process?* (IM.PM.PMMMEASURES.R) 195.452(l)(1)(ii) (195.452(f)(6);195.452(i)(1);195.452(i)(2);195 Appendix C, Section VI;API Standard 1160)

**3. P&M Measures Actions Implemented** *Have preventive and mitigative actions been implemented as described in the records?* (IM.PM.PMMIMPLEMENT.O) 195.452(b)(5) (195.452(i)(1);195.452(i)(2);195.452(i)(3);195.452(i)(4))

**4. Mitigative Measure Actions Considered** *Do the records indicate that mitigative actions have been considered and implemented?* (IM.PM.PMMMITIGATIVE.R) 195.452(l)(1)(ii) (195.452(f)(6);195.452(i)(1);195.452(i)(2))

**5. Preventive Measure Actions Considered** *Do the records indicate that preventive actions have been considered and implemented?* (IM.PM.PMMPREVENTIVE.R) 195.452(l)(1)(ii) (195.452(f)(6);195.452(i)(1);195.452(i)(2))

**6. P&M Measures - Risk Analysis** *Does the Integrity Management Program include conducting a risk analysis of the pipeline segment(s) to identify additional preventive & mitigative actions to enhance public safety or environmental protection?* (IM.PM.PMMRISKANALYSIS.P) 195.452(f)(6) (195.452(i)(1);195.452(i)(2);195 Appendix C, Section II;API Standard 1160)

**7. P&M Measures - Risk Analysis** *Do records demonstrate that an adequate risk analysis of the pipeline segment(s) to identify additional preventive & mitigative actions to enhance public safety or environmental protection was performed?* (IM.PM.PMMRISKANALYSIS.R) 195.452(l)(1)(ii) (195.452(f)(6);195.452(i)(1);195.452(i)(2);195 Appendix C, Section VI;API Standard 1160)

**8. P&M Measures - Leak Detection Capability Evaluation** *Does the Integrity Management Program include a process for the evaluation of leak detection capabilities and modifying, as necessary, to protect the high consequence areas?* (IM.PM.IMLEAKDETEVAL.P) 195.452(f)(6) (195.452(i)(3);195 Appendix C, Section III;API Standard 1160;API RP-1130(3rd Edition))

**9. P&M Measures - Leak Detection Capability Evaluation** *Do records indicate that all required and other relevant leak detection evaluation factors have been evaluated to ensure the protection of HCAs?* (IM.PM.IMLEAKDETEVAL.R) 195.452(l)(1)(ii) (195.452(f)(6);195.452(i)(3);195 Appendix C, Section VI;API Standard 1160;API RP-1130(3rd Edition))

**10. P&M Measures - Evaluation for EFRDs (Required)** *Does the Integrity Management Program include a preventive & mitigative (P&M) measures process that specifically addresses the identification, evaluation, and application of EFRDs to protect high consequence areas in the event of a hazardous liquid pipeline release?* (IM.PM.PMMEFRDREQUIRED.P) 195.452(f)(6) (195.452(i)(4);195.452(i)(1);195.452(i)(2);API Standard 1160)

**11. P&M Measures - Evaluation for EFRDs (Required)** *Do the records demonstrate that all required relevant EFRD evaluation factors were evaluated and any actions that have been taken are appropriate?* (IM.PM.PMMEFRDREQUIRED.R) 195.452(f)(6) (195.452(i)(4);195.452(i)(1);195.452(i)(2);API Standard 1160)

**12. P&M Measures - Evaluation for EFRDs (Other Factors)** *Does the process consider the inclusion of OTHER factors in the evaluation of EFRDs?* (IM.PM.PMMEFRDOTHER.P) 195.452(f)(6) (195.452(i)(4);195.452(i)(1);195.452(i)(2);API Standard 1160)

**13. P&M Measures - Evaluation for EFRDs (Other Factors)** *Do the records demonstrate that OTHER relevant EFRD evaluation factors were evaluated and any actions that have been taken are appropriate?* (IM.PM.PMMEFRDOTHER.R) 195.452(l)(1)(ii) (195.452(f)(6);195.452(i)(4);API Standard 1160;195 Appendix C, Section VI;API Standard 1160)

## Integrity Management - Facilities

**1. Identification of Facilities that Could Affect an HCA** *Does the program include a written process for identification of facilities that could affect an HCA?* (IM.FACIL.FACILIDENT.P) 195.452(f)(1)

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

**2. Identification of Facilities that Could Affect an HCA** *Do the records indicate that locations and boundaries of HCA-affecting facilities are correctly identified and maintained up-to-date?* (IM.FACIL.FACILIDENT.R) 195.452(l)(1)(i) (195.452(b)(2);195.452(d)(2))

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

**3. Facilities Risk Analysis** *Does the process include approaches to identify and evaluate the risks of facilities that can affect HCAs?* (IM.FACIL.RISKANAL.P) 195.452(f)(3) (195.452(g);195.452(j))

**4. Facilities Risk Analysis** *Do the records indicate that the analysis of risk of facilities has been performed as required?* (IM.FACIL.RISKANAL.R) 195.452(l)(1)(ii) (195.452(f)(3);195.452(g);195.452(j))

**5. Facilities Releases that Could Affect an HCA** *Does the process include methods to determine the facility locations/scenarios and worst case volume of potential commodity releases?* (IM.FACIL.RELEASE.P) 195.452(f)(1) (195.452(l)(1)(i))

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

**6. Facilities Releases that Could Affect an HCA** *Do the records indicate that identified release locations and spill volumes at facilities are consistent with the program requirements?* (IM.FACIL.RELEASE.R) 195.452(l)(1)(ii)

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

**7. Facilities Releases Spread that Could Affect an HCA** *Does the process include an analysis of overland spread & water transport of hazardous liquids to determine the extent of commodity spread from the facility and its effects on HCAs?* (IM.FACIL.SPREAD.P) 195.452(f)(1) (195.452(l)(1)(i))

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

**8. Facilities Releases Spread that Could Affect an HCA** *Do the records indicate the analysis of overland spread & water transport is consistent with the program/process requirements?* (IM.FACIL.SPREAD.R) 195.452(l)(1)(ii)

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

**9. Facilities Releases that Could Affect an HCA - Air Dispersion** *Where the facility handles HVLs or Volatile Liquids, does the process include an analysis of the air dispersion of vapors released from the facility to determine effects on HCAs?* (IM.FACIL.AIRDISP.P) 195.452(f)(1) (195.452(l)(1)(i))

**10. Facilities Releases that Could Affect an HCA - Air Dispersion** *Where the facility handles HVLs or Volatile Liquids, do the records indicate that the analysis of air dispersion of vapors from the facility is consistent with the process requirements?* (IM.FACIL.AIRDISP.R) 195.452(l)(1)(ii)

**11. Periodic Evaluation of Facilities that Could Affect an HCA** *Does the process include requirements for performing continual evaluations of facility integrity?* (IM.FACIL.PERIODEVAL.P) 195.452(f)(5) (195.452(g);195.452(j)(1);195.452(j)(2))

**12. Periodic Evaluation of Facilities that Could Affect an HCA** *Do the records indicate that periodic evaluations of integrity at facilities affecting HCAs have been performed?* (IM.FACIL.PERIODEVAL.R) 195.452(l)(1)(ii) (195.452(j)(2))

**13. Preventive Measures Considered for Facilities that Could Affect an HCA** *Does the process include requirements for identification of facility preventive measures to protect the HCAs?* (IM.FACIL.PMMPREVENTIVE.P) 195.452(f)(6) (195.452(i))

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

**14. Preventive Measures Considered for Facilities that Could Affect an HCA** *Do the records indicate that facility preventive measures to protect the HCAs have been considered and implemented?* (IM.FACIL.PMMPREVENTIVE.R) 195.452(l)(1)(ii) (195.452(i)(1))

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

**15. Mitigative Measures Considered for Facilities that Could Affect an HCA** *Does the process include requirements for identification and implementation of facility mitigative measures to protect the HCAs?* (IM.FACIL.PMMMIGATIVE.P) 195.452(f)(6) (195.452(i))

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

**16. Mitigative Measures Considered for Facilities that Could Affect an HCA** *Do the records indicate that facility mitigative measures to protect the HCAs have been considered and implemented?* (IM.FACIL.PMMMIGATIVE.R) 195.452(l)(1)(ii) (195.452(i)(1))

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

**17. Preventive & Mitigative Measures Implemented for Facilities that Could Affect an HCA** *Does an on-site observation provide indications that facility preventive & mitigative measures to protect the HCAs were implemented as proposed?* (IM.FACIL.PMMIMPLEMENT.O) 195.452(i)(1)

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

## Integrity Management - Quality Assurance

**1. Measuring Program Effectiveness** *Does the process for evaluating IM program effectiveness include the elements necessary to conduct a meaningful evaluation?* (IM.QA.IMPERFEFFECTIVE.P) 195.452(f)(7) (195.452(k))

**2. Measuring Program Effectiveness** *Do the records indicate the methods to measure program effectiveness provide effective evaluation of program performance and result in program improvements where necessary?* (IM.QA.IMPERFEFFECTIVE.R) 195.452(l)(1)(ii) (195.452(f)(7);195.452(k))

**3. Record Keeping** *Does the process ensure that the records required for the integrity management program are maintained?* (IM.QA.RECORDS.P) 195.402(c)(3) (195.452(l)(1))

**4. 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) 195.452(f)(7) (195.452(k))

**5. Performance Metrics** *Do the records indicate that performance metrics are providing meaningful insight into integrity management program performance?* (IM.QA.IMPERFMETRIC.R) 195.452(l)(1)(ii) (195.452(f)(7);195.452(k))

**6. Record Keeping** *Do the records indicate that the operator documented decisions, analysis, and actions taken to implement and evaluate each key integrity management program activity?* (IM.QA.RECORDS.R) 195.452(l)(1)(ii)

## Maintenance and Operations - Liquid Pipeline Operations

**1. O&M Manual** *Does the operator have an O&M manual, and has a procedure to properly maintain all portions of the manual?* (MO.LO.OMMANUAL.P) 195.402(a) (195.402(c))

**2. O&M Manual Review** *Do records indicate annual reviews of the written procedures in the manual were conducted as required?* (MO.LO.OMMANUALREVIEW.R) 195.402(a)



**3. Normal Maintenance and Operations - History** *Does the process address making construction records, maps, and operating history available as necessary for safe operation and maintenance?* (MO.LO.OMHISTORY.P) 195.402(a) (195.402(c)(1);195.404(a);195.404(a)(1);195.404(a)(2);195.404(a)(3);195.404(a)(4);195.404(c)(1);195.404(c)(2);195.404(c)(3))

**4. O&M Manual Locations** *Are appropriate parts of the manual kept at locations where operations and maintenance activities are conducted?* (MO.LO.OMLOCATION.O) 195.402(a)

**5. Normal Maintenance and Operations - History** *Do records indicate current maps and records of the pipeline system are maintained and made available as necessary?* (MO.LO.OMHISTORY.R) 195.404(a) (195.404(c);195.9;195.402(c)(1))

**6. Normal Maintenance and Operations - History** *Are current maps and records of its pipeline systems available to appropriate operating personnel?* (MO.LO.OMHISTORY.O) 195.404(a) (195.404(c);195.9;195.402(c)(1))

**7. Normal Maintenance and Operations - Abandoning** *Does the process include adequate requirements for abandoning pipelines and facilities, including safe disconnection from an operating pipeline system, purging of combustibles, and sealing abandoned facilities to minimize safety and environmental hazards?* (MO.LO.ABANDON.P) 195.402(a) (195.402(c)(10);195.59)

**8. Normal Maintenance and Operations - Abandoning** *Do records indicate that pipeline segments and facilities were abandoned in accordance with requirements?* (MO.LO.ABANDON.R) 195.402(a) (195.402(c)(10);195.59)

**9. Normal Maintenance and Operations - Abandoning** *Were pipeline segments and facilities abandoned in accordance with requirements?* (MO.LO.ABANDON.O) 195.402(c)(10)

**10. Normal Maintenance and Operations - Effectiveness Review** *Does the process address periodically reviewing the work done by the operator's personnel to determine the effectiveness of the procedures used in normal operation and maintenance and taking corrective action where deficiencies are found?* (MO.LO.OMEFFECTREVIEW.P) 195.402(a) (195.402(c)(13))

**11. Normal Maintenance and Operations - Effectiveness Review** *Do records indicate periodic review of the work done by operator personnel to determine the effectiveness of the procedures used in normal operation and maintenance and corrective action taken where deficiencies are found?* (MO.LO.OMEFFECTREVIEW.R) 195.402(a) (195.402(c)(13);195.404(a))

**12. Safety Related Conditions Reports** *Does the procedure include instructions that allow personnel to recognize safety related conditions?* (MO.LO.SRCR.P) 195.402(a) (195.402(f);195.55(a))

**13. Pipeline Pressure Testing** *Does the procedure require pressure testing for all lines except as allowed by 195.302(b)?* (MO.LO.PRESSTESTREQ.P) 195.402(c)(3) (195.302(b);195.302(c))

**14. Pipeline Pressure Testing** *Do records indicate pressure testing for all lines except as allowed by 195.302(b)?* (MO.LO.PRESSTESTREQ.R) 195.402(c)(3) (195.302(b);195.302(c))

**15. Communications** *Is a communication system in place that provides for the safe operation of the pipeline system?* (MO.LO.COMMSYS.O) 195.408(a) (195.408(b))

**16. Regulated Rural Gathering Lines** *Does the process for regulated rural gathering lines include all the requirements of 195.11?* (MO.LO.REGRURALGATHER.P) 195.11(a) (195.11(b);195.11(c);195.11(d))

**17. Operating Records** *Does the process include requirements that operating records that relate to 195.402 activities be maintained?* (MO.LO.OPRECORDS.P) 195.402(a) (195.402(c)(3);195.404(b))

**18. Operating Records** *Does the operator maintain operating records as required?* (MO.LO.OPRECORDS.R) 195.404(b) (195.402(c)(3))

## Maintenance and Operations - Liquid Pipeline Startup and Shutdown Operations

**1. Normal Maintenance and Operations - Startup & Shutdown** *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 limits prescribed by 195.406?* (MO.LOOPER.PRESSURELIMIT.P) 195.402(a) (195.402(c)(7))

**2. Normal Maintenance and Operations - Startup & Shutdown** *Do records indicate the operator assured that pressure limitations on the pipeline were not exceeded during startups or shut-ins?* (MO.LOOPER.PRESSURELIMIT.R) 195.404(b) (195.402(c)(7))

**3. Normal Maintenance and Operations - Non-Fail Safe** *In the case of a pipeline that is not equipped to fail safe, does the process include procedures for monitoring from an attended location pipeline pressure during startup until steady state pressure and flow conditions are reached and during shut-in to assure operation within the limits of 195.406?* (MO.LOOPER.FAILSAFE.P) 195.402(a) (195.402(c)(8))

**4. Normal Maintenance and Operations - Non-Fail Safe** *Do records indicate pressures and flow conditions were monitored as required on pipelines that are not equipped to fail safe?* (MO.LOOPER.FAILSAFE.R) 195.402(a) (195.402(c)(8))

**5. Normal Maintenance and Operations - Non-Fail Safe** *Does the operator have the ability to monitor the pipeline pressure and flow conditions from an attended location on a pipeline that is not designed to fail safe?* (MO.LOOPER.FAILSAFE.O) 195.402(a) (195.402(c)(8))

## Maintenance and Operations - Liquid Pipeline MOP

**1. Establishing Maximum Operating Pressure** *Does the process include procedures for establishing the maximum operating pressure allowed in accordance with 195.406(a)?* (MO.LOMOP.MOPDETERMINE.P) 195.402(c)(3) (195.302(c);195.406(a))

**2. Establishing Maximum Operating Pressure** *Do records indicate the maximum operating pressure was established in accordance with 195.406?* (MO.LOMOP.MOPDETERMINE.R) 195.402(c)(3) (195.406(a);195.406(b);195.302(b);195.302(c);ASME B31.8-2008)

## Maintenance and Operations - Liquid Pipeline Overpressure Protection

**1. Over Pressure Protection - Non HVL** Does the process adequately detail the inspecting and testing of each pressure limiting device, relief valve, pressure regulator, or other items of pressure control equipment? (MO.LMOPP.PRESSREGTEST.P) 195.402(c)(3) (195.428(a))

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

**2. Over Pressure Protection** Do records indicate inspection and testing of each overpressure safety device on its non-HVL pipelines at intervals not to exceed 15 months, but at least once each calendar year? (MO.LMOPP.PRESSREGTEST.R) 195.404(c) (195.428(a))

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

**3. Over Pressure Protection - HVL** Does the process contain procedures for inspecting and testing each pressure limiting device, relief valve, pressure regulator, or other items of pressure control equipment on HVL pipelines? (MO.LMOPP.PRESSREGTESTHVL.P) 195.402(c)(3) (195.428(a))

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

**4. Over Pressure Protection - HVL** Do records indicate inspection and testing of each overpressure safety device on HVL pipelines at intervals not to exceed 7.5 months, but at least twice each calendar year? (MO.LMOPP.PRESSREGTESTHVL.R) 195.404(c) (195.428(a))

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

**5. Over Pressure Protection** Are inspections of overpressure safety devices adequate (including HVL lines)? (MO.LMOPP.PRESSREGTEST.O) 195.428(a)

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

**6. Launcher and Receiver Pressure Relief** Does the process include requirements for relief devices and their proper use for launchers and receivers? (MO.LMOPP.LAUNCHRECVRELIEF.P) 195.402(c)(3) (195.426)

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

**7. Launcher and Receiver Pressure Relief** Are launchers and receivers equipped with relief devices? (MO.LMOPP.LAUNCHRECVRELIEF.O) 195.426

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

## Maintenance and Operations - Liquid Pipeline Abnormal Operations

**1. Abnormal Operating Procedures** *Does the process include procedures for responding to, investigating, and correcting the cause of the listed abnormal operating conditions?* (MO.ABNORMAL.ABNORMAL.P) 195.402(a) (195.402(d)(1))

**2. Abnormal Operating Procedures** *Do records indicate operator's personnel responded to indications of abnormal operations as required by the written procedures?* (MO.ABNORMAL.ABNORMAL.R) 195.404(b) (195.402(d)(1))

**3. Abnormal Operating Procedures - Variations** *Does the process include procedures for checking variations from normal operation after abnormal operations have ended at sufficient locations in the system to determine continued integrity and safe operations?* (MO.ABNORMAL.ABNORMALCHECK.P) 195.402(a) (195.402(d)(2))

**4. Abnormal Operating Procedures - Correction** *Does the process include procedures for correcting variations from normal operation of pressure and flow equipment and controls?* (MO.ABNORMAL.ABNORMALCORRECT.P) 195.402(a) (195.402(d)(3))

**5. Abnormal Operating Procedures - Notify** *Does the process include procedures for ensuring operating personnel notify responsible operator personnel where notice of an abnormal operation is received?* (MO.ABNORMAL.ABNORMALNOTIFY.P) 195.402(a) (195.402(d)(4))

**6. Abnormal Operating Procedures - Effectiveness Review** *Does the process include procedures for periodically reviewing the response of operating personnel to determine the effectiveness of the procedures for controlling abnormal operation and taking corrective action where deficiencies are found?* (MO.ABNORMAL.ABNORMALREVIEW.P) 195.402(a) (195.402(d)(5))

**7. Abnormal Operating Procedures - Effectiveness Review** *Do records indicate post-event reviews of actions taken by operator personnel to determine the effectiveness of the abnormal operation procedures and whether corrective actions were taken where deficiencies were found?* (MO.ABNORMAL.ABNORMALREVIEW.R) 195.404(b) (195.402(d)(5))

## Maintenance and Operations - ROW Markers, Patrols, Monitoring and Analysis

**1. ROW Inspection Requirements** Does the process require inspection of ROW surface conditions and crossings under navigable waterways, as well as reporting and mitigation of findings from said inspections? (MO.RW.PATROL.P) 195.402(a) (195.412(a);195.412(b))

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

**2. ROW Inspection Requirements** Do records indicate ROW surface conditions and crossings under navigable waterways were inspected, and reporting and appropriate mitigation performed? (MO.RW.PATROL.R) 195.412(a) (195.412(b))

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

**3. ROW Marker Requirements** Does the process address how line markers are to be placed and maintained? (MO.RW.ROWMARKER.P) 195.402(a) (195.410(a);195.410(c);API RP 1162 (1st Edition), Section 2.7;API RP 1162 (1st Edition), Section 8)

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

**4. Placement of ROW Markers** Are line markers placed and maintained as required? (MO.RW.ROWMARKER.O) 195.410(a) (195.410(b);195.410(c))

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

**5. ROW Conditions** Are the ROW conditions acceptable for the type of patrolling used? (MO.RW.ROWCONDITION.O) 195.412(a)

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

**6. Identification of GOA Pipeline Hazards** Does the process require identification of pipelines in the Gulf of America at risk of being exposed underwater or hazards to navigation? (MO.RW.GOAHAZARD.P) 195.413(a) (195.413(b);195.413(c))

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

**7. Identification of GOA Pipeline Hazards** Do records indicate steps taken to identify pipelines in the Gulf of America at risk of being exposed underwater pipelines or hazards to navigation? (MO.RW.GOAHAZARD.R) 195.413(b) (195.413(c))

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

## Maintenance and Operations - Liquid Pipeline Maintenance

**1. Valve Maintenance - All** Does the process adequately address the maintenance program for each valve that is necessary for safe operation of the pipeline system? (MO.LM.VALVEMAIN.P) 195.402(c)(3) (195.420(a))

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

**2. Valve Inspection - Valves** Does the process address inspecting each valve? (MO.LM.VALVEMAINSEMIANN.P) 195.402(c)(3) (195.420(b))

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

**3. Valve Inspection - Mainline Valves** Do records indicate each mainline valve was inspected as required? (MO.LM.VALVEMAIN.R) 195.404(c) (195.420(a);195.420(b))

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

**4. Valve Protection** Does the process contain criteria for providing protection for each valve from unauthorized operation and from vandalism? (MO.LM.VALVEPROTECT.P) 195.402(c)(3) (195.420(c))

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

**5. Alternative Equivalent Technology (AET) Requirements** Does the procedures specify the requirements necessary to be achieved when they install an AET? (MO.LM.AETREQUIREMENT.P) 195.420(e)

**6. Alternative Equivalent Technology (AET) Requirements** Do the records demonstrate that the operator complied with the requirements for AET response drills? (MO.LM.AETREQUIREMENT.R) 195.404(c)

**7. 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.LM.RMVREMEDIAL.P) 195.420(f)

**8. RMV Remedial Actions** Do the records demonstrate the remedial measure requirements for RMVs or AETs were met? (MO.LM.RMVREMEDIAL.R) 195.420(f)

**9. ASV Shut-in Pressure Confirmation** *Do the procedures adequately describe the process for confirming ASV shut-in pressures?* (MO.LM.ASVSHUTINPRESS.P) 195.402(a) (195.419(f);195.420(g))

**10. ASV Shut-in Pressure Confirmation** *Do the records demonstrate the process for confirming ASV shut-in pressures?* (MO.LM.ASVSHUTINPRESS.R) 195.404(c) (195.419(f);195.420(g))

**11. Valve Maintenance** *Do the pipeline system valves appear to be in good working order and are they protected from unauthorized operation?* (MO.LM.VALVEMAIN.O) 195.420(a) (195.420(c))  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**12. 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.LM.DYNAMICRISER.R) 195.402(c)(3) (195 Subpart H)

## Maintenance and Operations - Biofuels

**1. Biofuels - Compatibility** *Does the process require determination that ethanol or other biofuels are compatible with the pipeline and components?* (MO.BIO.BIOCOMPATIBLE.P) 195.402(c)(3)

**2. Biofuels - Operations and Maintenance Procedures** *Has the manual of written procedures for operations and maintenance been reviewed and revised, as needed, to incorporate changes necessary to transport ethanol or other biofuels?* (MO.BIO.BIOOM.P) 195.402(a)

**3. Biofuels - Safety Related Conditions** *Does the process require review of procedures for identifying safety-related conditions to determine if changes are needed to reflect potentially different situations that could result in an imminent hazard?* (MO.BIO.BIOSRCR.P) 195.402(a) (195.402(f))



## Maintenance and Operations - Low-Stress Rural Pipelines

**1. Categorizing Rural Low Stress Pipelines** *Does the process require that rural low stress pipelines be properly categorized?* (MO.LS.CATEGORIZATION.P) 195.12(b) (195.12(b)(1);195.12(b)(2);195.12(b)(3);195.452(a))

**2. Categorizing Rural Low Stress Pipelines** *Do the records indicate that rural low stress pipelines were properly categorized?* (MO.LS.CATEGORIZATION.R) 195.12(f) (195.12(b)(1);195.12(b)(2);195.12(b)(3);195.452(a))

**3. Categorizing Rural Low Stress Pipelines** *Are locations and boundaries of segments that can affect a USA correctly identified?* (MO.LS.CATEGORIZATION.O) 195.12(b) (195.12(b)(1);195.12(b)(2);195.12(b)(3);195.452(a))

**4. Rural Low Stress Pipelines with Economic Compliance Burden** *Where applicable, does the process include reporting of 195.12(d) "economic compliance burden" in accordance with 195.452(m)?* (MO.LS.ECONBURDEN.P) 195.12(d) (195.12(b);195.452(m))

**5. Rural Low Stress Pipelines with Economic Compliance Burden** *Where applicable, do the records indicate reporting of 195.12(d) "economic compliance burden" in accordance with 195.452(m)?* (MO.LS.ECONBURDEN.R) 195.12(f)(2) (195.12(b);195.12(d);195.452(m))

**6. Developing an IM Plan (Low Stress)** *Do the records indicate that an IM Plan was developed by the applicable deadline for Low Stress Category 1 and 2 pipeline segments?* (MO.LS.IMPLAN.R) 195.452(l)(1)(ii) (195.12(c);195.452(a))

**7. Completing Baseline Assessments (Low Stress)** *Does the process require that baseline assessments be completed within the timeframe for the applicable pipeline segment category and within the prioritized schedule based on risk?* (MO.LS.BASELINEASSESS.P) 195.452(f) (195.12(c);195.452(c))

**8. Completing Baseline Assessments (Low Stress)** *Do the records indicate that baseline assessments have been completed within the time frame for the applicable pipeline segment category and within the prioritized schedule based on risk?* (MO.LS.BASELINEASSESS.R) 195.452(l)(1)(ii) (195.12(c);195.452(a))

**9. Compliance with Part 195 (Low Stress)** *Do the records indicate compliance with all applicable subparts of Part 195 by the required time frames?* (MO.LS.COMPLIANCE.R) 195.12(f) (195.12(c)(1);195.12(c)(2);195.12(c)(3))

**10. IM Program Applicability to Low Stress Pipelines** *Does the Operator have 195.12 Category 1 or Category 2 Low Stress pipelines in rural areas for which the operator must have an integrity management program in compliance with 195.452? (MO.LS.IMPROGAPPLIC.P) 195.452(a) (195.12(c))*

**11. IM Program Applicability to Low Stress Pipelines** *Do the records indicate that the process to continually carry out the requirements of 195.452 was met? (MO.LS.IMPROGAPPLIC.R) 195.452(l)(1)(ii) (195.12(c);195.452(a)(4))*

**12. Changes in USAs (Low Stress)** *Does the process require that changes in USAs be handled in accordance with 195.12(e)? (MO.LS.CHANGEINUSA.P) 195.12(e) (195.12(e)(1);195.12(e)(2);195.452(d)(3))*

**13. Changes in USAs (Low Stress)** *Do the records indicate that changes in USAs were handled in accordance with 195.12(e)? (MO.LS.CHANGEINUSA.R) 195.12(f) (195.12(e)(1);195.12(e)(2);195.452(l)(1)(ii))*

**14. Records Retention (Low Stress)** *Does the process require that records be kept in accordance with 195.12(f)? (MO.LS.RECORDSRETENTION.P) 195.12(f) (195.12(f)(1);195.12(f)(2))*

**15. Records Retention (Low Stress)** *Do the records indicate that the requirements of 195.12(f) for records retention have been met? (MO.LS.RECORDSRETENTION.R) 195.12(f) (195.12(f)(1);195.12(f)(2))*

## Maintenance and Operations - Extreme Weather

**1. Extreme Weather Inspection Criteria** *Does the process adequately detail the specific weather or natural disaster conditions that would require an inspection? (MO.EW.EXTWEATHERCRIT.P) 195.402(a) (195.414(a))*

**2. Extreme Weather Inspection Requirements** *Does the process adequately detail initial inspection requirements? (MO.EW.EXTWEATHERINSPREQT.P) 195.402(a) (195.414(b);195.414(c))*

**3. Extreme Weather Inspection Remedial Actions** *Does the process adequately detail remedial action requirements?* (MO.EW.EXTWEATHERREMEDIAL.P) 195.402(a) (195.414(d))

**4. Extreme Weather Inspection Implementation** *Do records indicate the operator conducted the required inspection following an extreme weather or natural disaster event?* (MO.EW.EXTWEATHERINSPIML.R) 195.404(c) (195.414(a);195.414(b);195.414(c);195.414(d))

**5. Extreme Weather Inspection Safe Operation** *Are the pipeline facilities that were affected by an extreme weather or natural disaster event back to a safe operating condition?* (MO.EW.EXTWEATHERINSPSAFE.O) 195.414(d)

## Public Awareness and Damage Prevention - Damage Prevention

**1. Participation in Qualified One-Call Systems** *Does the process require participation in qualified one-call systems?* (PD.DP.ONECALL.P) 195.442(a) (195.442(b))

**2. Documented Damage Prevention Program** *Does the operator have a damage prevention program approved and in place?* (PD.DP.PROGRAM.P) 195.442(a)

**3. Documented Damage Prevention Program** *Does the process include public notification requirements?* (PD.DP.PUBLICNOTIFY.P) 195.442(a) (195.442(c)(2))

**4. Construction Marking** *Does the process require marking proposed excavation sites?* (PD.DP.EXCAVATEMARK.P) 195.442(a) (195.442(b);195.442(c)(4);195.442(c)(5))

**5. Documented Damage Prevention Program** *Does the process include inspection of pipelines that could be damaged by excavation activities?* (PD.DP.EXCAVATE.P) 195.442(a) (195.442(c)(6))

**6. 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) 195.442(a) (195.442(b);195.442(c)(1))

**7. Documented Damage Prevention Program - TPD/One-Call** *Does the process specify how reports of third party damage (TPD) are checked against One-Call tickets?* (PD.DP.TPDONECALL.P) 195.442(a) (195.442(b);195.442(c)(3);195.402(c)(5);195.452(g)(2))

**8. One Call Systems** *Observe operator's process for a "One Call" Ticket.* (PD.DP.ONECALL.O) 195.442(c)(3)

**9. Program Requirements** *Do records indicate the damage prevention program is being carried out as written?* (PD.DP.PROGRAM.R) 195.442(a)

## 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) 195.440(b) (API RP 1162 (1st Edition), 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) 195.440(d) (195.440(e);195.440(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) 195.440(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) 195.440(a) (195.440(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.AUDIENCID.R) 195.440(d) (195.440(e);195.440(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 hazardous liquid or carbon dioxide is transported?* (PD.PA.MESSAGES.P) 195.440(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 along all pipeline systems, as described in API RP 1162 (1st Edition)?* (PD.PA.SUPPLEMENTAL.P) 195.440(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 §195.440(d)?* (PD.PA.EDUCATE.R) 195.440(d) (195.440(f))

**9. Messages on Pipeline Facility Locations** *Were messages developed and delivered to advise affected municipalities, school districts, businesses, and residents of pipeline facility location?* (PD.PA.LOCATIONMESSAGE.R) 195.440(e) (195.440(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?* (PD.PA.MESSAGEFREQUENCY.R) 195.440(c) (API RP 1162 (1st Edition)Table 2-1)

**11. Liaison with Public Officials** *Do records indicate that liaison has been established and maintained with appropriate fire, police, public officials, and utility owners?* (EP.ERL.LIAISON.R) 195.402(a) (195.402(c)(12);195.440(c);API RP 1162 Section 4.4 (1st Edition))

*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) 195.440(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) 195.440(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) 195.440(i) (195.440(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 public awareness program implementation been performed annually since the program was developed?* (PD.PA.EVALIMPL.R) 195.440(c) (195.440(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 the public awareness program implementation?* (PD.PA.AUDITMETHODS.R) 195.440(c) (195.440(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) 195.440(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) 195.440(c) (API RP 1162 (1st Edition) Sections 8.4)

**19. Measure Program Outreach** *In evaluating effectiveness, was actual program outreach for each stakeholder audience tracked?* (PD.PA.MEASUREOUTREACH.R) 195.440(c) (2025.01 - Edited considerations or references for 2024 IBR rule. (9/4/24; TJD). 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) 195.440(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) 195.440(c) (API RP 1162 (1st Edition) Section 8.4.3)

**22. Measure Bottom-Line Results** *Did the operator attempt to measure bottom-line results of the program 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) 195.440(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) 195.440(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. ROW Inspection Requirements** *Does the process require inspection of ROW surface conditions and crossings under navigable waterways, as well as reporting and mitigation of findings from said inspections?* (MO.RW.PATROL.P) 195.402(a) (195.412(a); 195.412(b))

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

**2. ROW Inspection Requirements** *Do records indicate ROW surface conditions and crossings under navigable waterways were inspected, and reporting and appropriate mitigation performed?* (MO.RW.PATROL.R) 195.412(a) (195.412(b))

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

**3. ROW Conditions** *Are the ROW conditions acceptable for the type of patrolling used?* (MO.RW.ROWCONDITION.O) 195.412(a)

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

**4. Placement of ROW Markers** *Are line markers placed and maintained as required?* (MO.RW.ROWMARKER.O) 195.410(a) (195.410(b); 195.410(c))

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

**5. ROW Marker Requirements** *Does the process address how line markers are to be placed and maintained?* (MO.RW.ROWMARKER.P) 195.402(a) (195.410(a);195.410(c);API RP 1162 (1st Edition), Section 2.7;API RP 1162 (1st Edition), Section 8)

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

**6. DP Information Gathering Requirements** *Does the process require damage prevention information to be gathered and recorded during pipeline patrols and surveillance and then analyzed?* (PD.RW.INFORMATION.P) 195.402(c)(3) (195.452(f)(3);195.452(g))

**7. DP Information Gathering Requirements** *Do records show damage prevention information being gathered and recorded during pipeline patrols and surveillance and then analyzed is available for review?* (PD.RW.INFORMATION.R) 195.404(c) (195.402(c)(3);195.452(f)(3);195.452(g))

**8. Identification of GOA Pipeline Hazards** *Does the process require identification of pipelines in the Gulf of America at risk of being exposed underwater or hazards to navigation?* (MO.RW.GOAHAZARD.P) 195.413(a) (195.413(b);195.413(c))

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

**9. Identification of GOA Pipeline Hazards** *Do records indicate steps taken to identify pipelines in the Gulf of America at risk of being exposed underwater pipelines or hazards to navigation?* (MO.RW.GOAHAZARD.R) 195.413(b) (195.413(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 - Facilities Signage and Security

**1. Facility Protection** *Are facilities adequately protected from vandalism and unauthorized entry?* (FS.FG.FACPROTECT.O) 195.436

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

**2. Smoking/Open flames** *Is there signage that prohibits smoking and open flames around pump stations, launchers and receivers, breakout tank areas, or other applicable facilities?* (FS.FG.IGNITION.O) 195.438

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



**3. Smoking/Open Flames** *Do records show precautions taken to prevent ignition sources in areas with a potential for accumulating flammable vapors or leaking hazardous liquids?* (FS.FG.IGNITION.R) 195.404(c) (195.438)  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**4. Signage** *Are there operator signs around each pumping station, breakout tank area, and other applicable facilities?* (FS.FG.SIGNAGE.O) 195.434  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**5. Smoking/Open Flames** *Does the process prohibit smoking and open flames in each pump station and breakout tank area, or where there is the possibility of the leakage of a flammable hazardous liquid or the presence of flammable vapors?* (FS.FG.IGNITION.P) 195.402(c)(3) (195.438)  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**6. Facility Protection** *Does the process require facilities to be protected from vandalism and unauthorized entry?* (FS.FG.PROTECTION.P) 195.402(c)(3) (195.436)  
*Note: this question is presented in multiple places so you will see multiple instances of it on this report.*

**7. Signage** *Does the process require operator signs to be posted around each pump station and breakout tank area?* (FS.FG.SIGNAGE.P) 195.402(c)(3) (195.434)  
*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. Special Permits - Repairs** *If a pipeline is operated under a special permit have processes been modified to incorporate the requirements of the permit for required repairs?* (PD.SP.REPAIR.P) 190.341(d)(2)

**2. Special Permits - Repairs** *If a pipeline is operated under a special permit, do records indicate that required repairs were performed?* (PD.SP.REPAIR.R) 190.341(d)(2)

**3. Special Permits** *If a pipeline is operated under a special permit, verify that the requirements have been implemented.* (PD.SP.REQUIREMENT.O) 190.341(d)(2)

## Reporting - Notices and Reporting

**1. OQ Notifications- 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) 195.505(i)

**2. OQ Notifications- Program Modifications** *Do records indicate the Administrator or state agency was notified when the OQ Program was significantly modified?* (RPT.NR.NOTIFYOQ.R) 195.505(i)

**3. IMP Notifications** *Does the process include a requirement for submitting an IMP notification for each of the following circumstances: A) Unable to Meet Remediation Deadlines, B) Pressure Reductions, C) Use of Other Technology, D) Variance from Five-Year Assessment Intervals (Unavailable Technology), E) Variance from Five-Year Assessment Intervals (Engineering Basis)?* (RPT.NR.NOTIFYIMP.P) 195.452(f)(5) (195.452(j)(4);195.452(h)(1);195.452(m))

**4. IMP Notifications** *Do the records indicate that the operator submitted IMP notification(s) for any of the following circumstances, when it was necessary to do so: A) Unable to Meet Remediation Deadlines, B) Pressure Reductions, C) Use of Other Technology, D) Variance from Five-Year Assessment Intervals (Unavailable Technology), E) Variance from Five-Year Assessment Intervals (Engineering Basis)?* (RPT.NR.NOTIFYIMP.R) 195.452(l)(1)(ii) (195.452(m);195.452(j)(4);195.452(h)(1);195.452(c)(1))

**5. Response Plan Coverage** *If the operator is required to have a Facility Response Plan, does the current plan submitted and approved by PHMSA cover all the required pipeline assets?* (EP.EPO.OPASUBMITTAL.R) 194.101(a) (194.101(b);194.119(e);194.121(b))

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

**6. Response Plan Review and Update** *Do records indicate the response plan has been adequately reviewed, updated, and submitted on the required frequency?* (EP.EPO.OPAREVIEW.R) 194.121(a) (194.121(b);194.5)

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

## Reporting - Regulatory Reporting (Traditional)

**1. Annual Report Records** *Do the records indicate that complete and accurate Annual Reports have been submitted?*  
(RPT.RR.ANNUALREPORT.R) 195.49 (195.13(b);195.15(b))

**2. Annual Report IM Inspection Data** *Do the records indicate that the Annual Report Part F Data is complete and accurate?* (RPT.RR.ANNUALREPORTIMINSPECT.R) 195.49

**3. Annual Report IM Assessment Completion Data** *Is Annual Report Part G data complete and accurate?*  
(RPT.RR.ANNUALREPORTIMASSESS.R) 195.49

**4. Rural Low-Stress Pipelines** *Does the process comply with the reporting requirements of Subpart B relating to ALL rural low stress pipelines?* (RPT.RR.RURALLOWSTRESS.P) 195.48 (195.12)

**5. Rural Low-Stress Pipelines** *Do Annual Reports include applicable information for rural low-stress hazardous liquid pipelines?* (RPT.RR.RURALLOWSTRESS.R) 195.49

**6. Regulated Rural Gathering Lines** *Does the process comply with the reporting requirements in subpart B relating to regulated rural gathering lines?* (RPT.RR.REGRURALGATHER.P) 195.11(b)(4)

**7. Regulated Rural Gathering Lines** *Do Annual Reports include applicable information for regulated rural gathering lines?* (RPT.RR.REGRURALGATHER.R) 195.49

**8. Gravity Lines** *Does the process comply with the reporting requirements in Subpart B relating to gravity lines?*  
(RPT.RR.GRAVITY.P) 195.13(a) (195.13(b);195.13(c))

**9. Gravity Lines** *Do Annual Reports include applicable information for gravity lines?* (RPT.RR.GRAVITY.R) 195.49 (195.13(b))

**10. Reporting - Regulated-Only Gathering Lines** *Does the process comply with the reporting requirements in Subpart B relating to reporting-regulated gathering lines?* (RPT.RR.REGONLYGATHER.P) 195.15(a) (195.15(b);195.15(c))

**11. Reporting - Regulated-Only Gathering Lines** *Do Annual Reports include applicable information for reporting-regulated gathering lines?* (RPT.RR.REGONLYGATHER.R) 195.49 (195.15(b))

**12. Accident Reports** *Does the process require preparation and filing of an accident report as soon as practicable but no later than 30 days after discovery of a reportable accident?* (RPT.RR.ACCIDENTREPORT.P) 195.54(a) (195.50(a);195.50(b);195.50(c);195.50(d);195.50(e);195.13(b);195.15(b))

**13. Accident Reports** *Do records indicate the original accident reports were filed as required?* (RPT.RR.ACCIDENTREPORT.R) 195.54(a) (195.50(a);195.50(b);195.50(c);195.50(d);195.50(e);195.13(b);195.15(b))

**14. Supplemental Accident Reports** *Does the process require preparation and filing of supplemental accident reports?* (RPT.RR.ACCIDENTREPORTSUPP.P) 195.402(a) (195.402(c)(2);195.54(b);195.13(b);195.15(b))

**15. Supplemental Accident Reports** *Do records indicate accurate supplemental accident reports were filed and within the required timeframe?* (RPT.RR.ACCIDENTREPORTSUPP.R) 195.54(b) (195.13(b);195.15(b))

**16. Immediate Reporting: Accidents** *Are procedures in place to immediately report accidents to the National Response Center?* (RPT.RR.IMMEDREPORT.P) 195.402(a) (195.402(c)(2);195.52(b);195.52(c);195.52(d))

**17. Immediate Reporting: Accidents** *Do records indicate immediate notifications of accidents were made in accordance with 195.52?* (RPT.RR.IMMEDREPORT.R) 195.52(a) (195.52(b);195.52(c);195.52(d))

**18. Telephonic Reporting: Exposed Pipe GOA and Inlets** *Are processes in place to telephonically notify the National Response Center of exposed pipe in the Gulf of America and its inlets?* (RPT.RR.TELREPORTGOA.P) 195.402(a) (195.402(c)(3);195.413(c)(1))

**19. Telephonic Reporting: Exposed Pipe GOA and Inlets** *Do records indicate telephonic notification of exposed pipes in the Gulf of America and its inlets were made?* (RPT.RR.TELREPORTGOA.R) 195.413(c)(1)

**20. Safety Related Condition Reports** *Are processes in place to file safety-related condition reports if the conditions of 195.55 are met?* (RPT.RR.SRCR.P) 195.402(f) (195.55(a);195.55(b);195.56(a);195.56(b);195.13(b);195.15(b))

**21. Safety Related Condition Reports** *Do records indicate Safety-Related Condition Reports were filed as required?* (RPT.RR.SRCR.R) 195.58 (195.55(a);195.55(b);195.56(b);195.13(b);195.15(b);195.402(a))

**22. Offshore Hazard to Navigation: Permit Delay** *Does the process require the operator to notify PHMSA when federal or state permits cannot be obtained in time?* (RPT.RR.NOTIFYPERMITGOA.P) 195.402(a) (195.413(c)(3)(ii))

**23. Offshore Hazard to Navigation: Permit Delay** *Do records indicate required notification provided when permitting delayed reburial of pipe in Gulf of America waters found to be a hazard to navigation?* (RPT.RR.NOTIFYPERMITGOA.R) 195.413(c)(3)(ii)

**24. NPMS: 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.NPMSABANDONWATER.P) 195.402(c)(10) (195.59(a))

**25. NPMS: 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.NPMSABANDONWATER.R) 195.59(a)

**26. NPMS: Annual Updates** *Do records indicate: NPMS submissions are completed each year, on or before June 15, representing all in service, idle and retired assets as of December 31 of the previous year, and if no modifications occurred an email to that effect was submitted?* (RPT.RR.NPMSANNUAL.R) 195.61(a) (195.61(b))

**27. National Registry of Pipeline 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) 195.402(a) (195.64)

**28. National Registry of Pipeline 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) 195.64(a) (195.64(c);195.64(d))

## Reporting - Special Permits

**1. Special Permit or Waiver** *Do the records indicate that the operator has 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 (pump stations, breakout tank areas, 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 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 Accident Reports** *Discussion of Accident Reports.* (SRN.GENERAL.ACCIDENTREPORT.S)

**9. Safety Related Condition Reports (SRCRs)** *Have there been any Safety Related Conditions (SRCs) for this pipeline in the last 5 years? (Provide details)* (SRN.GENERAL.SRCR.S)

**10. Implementing Advisory Bulletins (ADBs)** *Has the operator implemented the guidance of ADBs (Advisory Bulletins) in relevant program areas?* (SRN.GENERAL.ADB.S)

**11. Exclusion Groups** *Confirmation of asset "Exclusions" (See Considerations)* (SRN.GENERAL.EXCLUSIONS.S)

**12. Tribal Lands** *Does the pipeline cross tribal lands?* (SRN.GENERAL.TRIBALLANDS.S)

## Screening - AR - ECDA

**1. ECDA (External Corrosion Direct Assessment)** *If ECDA is used on an onshore pipeline to evaluate the effects of external corrosion, what were the results of the last assessment?* (SRN.AR-EC.ECDA.S)

## Screening - AR - SCC (Stress Corrosion Cracking)

**1. SCC (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.AR-SCC.SCC.S)*

## Screening - AR - Integrity Assessments

**1. Integrity Assessments** *Describe integrity issues or new threats discovered by integrity assessments in the last 5 years. (SRN.AR-IA.INTEGASSMNTS.S)*

## Screening - AR - In-Line Inspection (Smart Pigs)

**1. Integrity Assessment Method - ILI** *What process was used to select the ILI assessment tool(s)? (SRN.AR-IL.ILIUSE.S)*

**2. Making IM-Covered Pipe Capable of Inline Inspection** *If applicable, describe what IM-covered portions of line pipe cannot accommodate inline inspection (ILI), and any projects (planned, completed, or underway) to modify the line(s) to make them capable of ILI. (SRN.AR-IL.IMPIG.S)*

## Screening - AR - Pipeline Assessments for non-IM Onshore

**1. Pipeline Assessments of Non-IM Onshore Pipelines** *Describe plans and schedules developed for pipeline assessments of onshore line pipe that can accommodate inspection by means of in-line inspection tools and is not subject to the integrity management requirements in 195.452. (SRN.AR-PA.PIPEASSMNTS.S)*



## Screening - AR - Integrity Assessment Via Pressure Test

**1. Integrity Assessment Method - Pressure Testing** *Where pressure testing was utilized to assess the integrity of the pipeline, what was the nature and extent of any failures? (provide details)* (SRN.AR-PTI.PRESSTEST.S)

## Screening - AR - Integrity Assessment Via Pressure Test - Risk Based Alternative

**1. Integrity Assessment Via Pressure Test - Risk Based Alternative** *Was a Risk-Based Alternative to pressure testing used to assess the integrity of the pipeline, and if so, what was the alternative used and the results? (provide details)* (SRN.AR-PTIRB.RISKBASEDALT.S)

## Screening - AR - Other Technology

**1. Integrity Assessment Method - Other Technology (OT)** *What, if any, Other Technology (OT) has been used to assess the integrity of the pipeline in the last 5 years? (provide details)* (SRN.AR-OT.OT.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-RCHCA.REPAIR.S)

## Screening - AR - Repair Criteria (O and M)

**1. Repair Criteria (O&M)** *How do the repair criteria and prioritization in non-HCA affecting pipeline segments differ from those in HCA affecting segments? (provide details)* (SRN.AR-RCOM.REPAIROM.S)

## 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 IM assessments?* (SRN.AR-RMP.METHODS.S)

## Screening - AR - Special Permits

**1. Special Permits** *Is the pipeline currently, or in the last 5 years, operating under a Special Permit related to integrity assessment and repairs? (If Yes, provide details)* (SRN.AR-SP.SP.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. CRM Roles and Responsibilities** *Have there been any revisions or changes to the CRM roles and responsibilities or staffing levels as a result of any AOCs or emergencies in the last 5 years? (Provide details)* (SRN.CR-CRMRR.RR.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 5 years? (Provide details)* (SRN.CR-CRMFM.FATIGMGMT.S)

## Screening - CR - Alarm Management

**1. Control Room Alarms & Logging Process** *Have changes 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.LOGGING.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.CHGGMGMT.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 as 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 (Non-CPM)

**1. Leak Detection System - Method (Non-CPM)** *What non-CPM leak detection methods/systems are in place?* (SRN.CR-LD.LEAKDETMETHOD.S)

**2. Leak Detection - Replaced Components (Non-CPM)** *Where non-CPM pipeline leak detection systems components or devices have been replaced or added in the last 5 years, has the potential impact been evaluated and documented? (If Yes, provide details)* (SRN.CR-LD.LDREPLACE.S)

## Screening - CR - Leak Detection (CPM)

**1. Leak Detection System - Method (CPM)** *What CPM methods/systems are in place?* (SRN.CR-CPM.LEAKDETMETHOD.S)

**2. Leak Detection - Replaced Components (CPM)** *Where CPM leak detection systems components or devices have been replaced or added in the last 5 years, has the potential impact been evaluated and documented? (If Yes, provide details)* (SRN.CR-CPM.LDREPLACE.S)

## Screening - DC - Biofuels

**1. Biofuels** *What biofuels specific standards apply to the design and construction of this biofuels pipeline?* (SRN.DC-BIO.BIO.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)

## Screening - DC - Construction - Pump Stations

**1. Construction - Pump Stations** *What pump station construction activities are planned to occur within the next six months? (provide details)* (SRN.DC-COCMP.PUMPSTA.S)

## Screening - DC - Construction Weld Inspection

**1. Construction - Weld Inspection** *For any recent construction activities, what was the nominal weld failure rate and how was it addressed?* (SRN.DC-WELDINSP.WELDINSP.S)

## Screening - DC - Construction Welder Qualification

**1. Construction - Welder Qualification** *For recent construction projects, what was the approximate weld rejection rate (related to welder qualification)?* (SRN.DC-WELDERQUAL.WELDERQUAL.S)

## Screening - DC - Construction Welding Procedures

**1. Construction - Welding Procedures** *For any recent/upcoming construction activities, what was/is the process for approving welding procedures?* (SRN.DC-WELDPROCEDURE.WELDPROCED.S)

## Screening - DC - Design

**1. Design** *Have there been any pipeline design process changes in the last 5 years to ensure that all appropriate design requirements from Part 195 and Industry Standards (for line pipe, facilities, equipment, components, etc.) are followed? (provide details)* (SRN.DC-DN.DESIGN.S)

**2. Leak Detection Design** *Will the operations of the new pipeline utilize a SCADA system from a control room, and is a CPM (computational monitoring system) leak detection system planned?* (SRN.DC-DN.LDDESIGN.S)

## Screening - DC - Maintenance and Operations

**1. Maintenance and Operations** *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 Tests** *What pressure tests related to O&M construction projects are planned to occur within the next six months on the pipeline or pipeline components? (provide details)* (SRN.DC-PT.PRESSURETEST.S)

**2. Pressure Test Failures** *Have there been any O&M construction (pre-commissioning, including replacement projects) hydrostatic pressure test failures or other pressure test failures within the last 5 years? (provide details)* (SRN.DC-PT.CONSTHYDROFAIL.S)

## Screening - DC - Regulated Rural Gathering Lines

**1. Regulated Rural Gathering Lines** *What processes have been established for the design and construction of regulated rural gathering lines?* (SRN.DC-RU.REGRURALGATHER.S)

## Screening - DC - Low Stress Rural Pipelines

**1. Low Stress Pipelines in Rural Areas** *What processes have been established for the design and construction of low stress pipelines in rural areas?* (SRN.DC-LS.RURALLOWSTRESS.S)

## Screening - DC - Training and Qualification

**1. Training and Qualification** *What processes are in place to ensure that persons conducting O&M construction related inspections have been trained and are qualified (non-covered tasks)?* (SRN.DC-TQ.TQ.S)

## Screening - DC - Training and Qualification (OQ)

**1. Training and Qualification (OQ)** *What OQ program covered tasks are identified for O&M construction projects?* (SRN.DC-TQOQ.TQOQ.S)

## Screening - DC - Conversion to Service

**1. Conversion to Service Screening** *Has there been any Conversion-to-Service to Part 195 in the past 5 years or is planned to occur with the next six months, or within the next two years?* (SRN.DC-CONV.CONVERSION.S)

## Screening - TDC - New Breakout Tanks (API 650) - Regulatory Requirements

**1. New Breakout Tanks (API 650 Atmospheric)** *Are any new aboveground atmospheric (API 650) breakout tank(s) being planned/constructed?* (SRN.TDC-650REGS.TK650REGS.S)

## Screening - TDC - New Breakout Tanks (API 620 Low Pressure) - Regulatory Requirements

**1. New Breakout Tanks (API 620 Low Pressure)** *Are any new low pressure (API 620) breakout tank(s) being planned/constructed?* (SRN.TDC-620.TK620.S)

## Screening - TDC - New Breakout Tanks (API 2510 High Pressure)

**1. New Breakout Tanks (API 2510 High Pressure)** *Are any new high pressure (API 2510) breakout tank(s) being planned/constructed?* (SRN.TDC-2510.TK2510.S)

## Screening - TDC - New Shop Fabricated (12F or 650 App. J)

**1. New Shop Fabricated (12F or 650 App. J)** *Are any new shop-fabricated (API 650 Appendix J; API 12F) breakout tank(s) being planned/constructed?* (SRN.TDC-SHOP.TK12F.S)

## Screening - TDC - New Tank Piping - Construction

**1. New Tank Piping - Construction** *What new tank piping, manifolds, and other related piping are being planned in conjunction with any new breakout tank(s) construction?* (SRN.TDC-TKPIPING.TKPIPING.S)



## Screening - EP - Emergency Planning OPA

**1. Emergency Planning OPA** *What emergency events (or drills if not actual events) have occurred in the last 5 years that required activation of a facility response plan? (provide details) (SRN.EP-EPO.EPACTIVATE.S)*

## Screening - EP - Emergency Response Biofuels

**1. Emergency Response - Biofuels** *If this is a biofuels pipeline, is emergency response for the pipeline and facilities, including any biofuels elements, incorporated into the facility response plan? (provide details) (SRN.EP-ERB.BIOFUELS.S)*

## Screening - EP - Emergency Response Liquids

**1. Manual Revisions** *What revisions to the Emergency Response procedures have been made in the last 5 years? (SRN.EP-ERL.MANUALMOC.S)*

**2. Release Volumes - Liquids** *Have any releases exceeded the worst case scenario volumes contained in the Facility Response Plan (OPA 90 plan)? (SRN.EP-ERL.RELEASEVOL.S)*

## Screening - EP - Failure & Accident Investigation

**1. Failure Investigations** *Discuss with the operator their program to track and investigate failures. (SRN.EP-FAI.FAILUREINVEST.S)*

## Screening - EP - Emergency Training of Personnel

**1. Emergency Response Training Revisions** *What revisions to emergency response training have been made in the last 5 years due to deficiencies identified during a drill, simulated emergency, or an actual incident?* (SRN.EP-ETR.EPTRAIN.S)

## Screening - FS - Tanks and Storage - Inspection

**1. Tanks and Storage - Inspection** *What are the types of breakout tank deficiencies that have been found as a result of inspections over the last 5 years?* (SRN.FS-TSAPIINSPECT.TANKINSP.S)

## Screening - FS - Facilities General

**1. Facilities General** *Have any deficiencies been found regarding facilities protection (including signage, unauthorized entry, ignition source control, and fire protection) in the last 5 years?* (SRN.FS-FG.FACILGENERAL.S)

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

## Screening - FS - Pump Stations

**1. Pump Station - Safety Devices** *What is the process for ensuring that pump station protective and safety devices and emergency shutdowns are installed where needed and inspected?* (SRN.FS-PS.PUMPSTA.S)

## Screening - FS - Tanks and Storage

**1. Tank Construction - Past** *Have any deficiencies been found regarding tank operations in the last 5 years?* (SRN.FS-TS.CONSTBOPAST.S)

**2. Tank Overfill Protection** *What is the process for ensuring that breakout tank overfill protection, safety devices, and emergency shutdowns are installed where needed and inspected?* (SRN.FS-TS.OVERFILL.S)

**3. Pressurized Breakout Tanks** *Where there are pressurized breakout tanks containing highly volatile liquids (HVLs), how are these treated differently?* (SRN.FS-TS.BOHVL.S)

## Screening - FS - Valves (Facilities & Storage)

**1. Facility Valves - Configuration** *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.VALVESCONFIG.S)

**2. Facility Valves - O&M** *Have any deficiencies been found regarding facility valves in the last 5 years?* (SRN.FS-VA.VALVESOM.S)

## Screening - IM - High Consequence Areas

**1. IMP - Process and Procedure Changes** *Describe the most significant changes to the IMP processes and procedures since the last IMP-focused PHMSA inspection.* (SRN.IM-HC.IMPLANMOD.S)

**2. IMP - Newly Identified HCAs** *Describe the method or process that identifies any new segments that "could affect" an HCA and incorporate them into the Integrity Management Program.* (SRN.IM-HC.HCANEW.S)

**3. Idle 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 - Information Analysis

**1. Spatial Relationships within Information Analysis** *On a spatial basis, what interrelationships between datasets have been analyzed and what insights have been gained? (SRN.IM-INFOAN.INFOAN.S)*

## Screening - IM - Risk Analysis

**1. IM Risk Analysis Methodologies** *Describe the modifications that have been made to the information / risk analysis processes to identify and evaluate all potential threats to each covered pipeline segment in the last 5 years. (SRN.IM-RA.RAMOD.S)*

**2. Identification of Specific Threats** *What, if any, specific threats have been identified through Risk Analysis that require specific ILI tools other than MFL and deformation/dent tools to be used or other assessment methods to be used on the pipeline in the last 5 years? (SRN.IM-RA.ILINONMFLDEF.S)*

**3. Risk Analysis - ROW Information Management** *How is the information gathered (related to potential excavation damage) during pipeline patrols, surveillance, and monitoring analyzed and used by the integrity management information / risk analysis? (SRN.IM-RA.INFOGMT.S)*

**4. Tracking of "Near Misses"** *Are "near misses" tracked, and if so, how are they defined, reviewed and potentially incorporated into revised procedures or revised programs? (SRN.IM-RA.NEARMISS.S)*

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

## Screening - IM - Continual Evaluation and Assessment

**1. IMP Reassessment Intervals** *What is the current reassessment method and interval for this pipeline, and how is it justified? (SRN.IM-CA.REASSESSINTRVL.S)*

**2. IMP Covered Segment Verification - Actions** *Describe the actions implemented in the last 5 years as a result of verification of pipeline segments that could affect HCAs. (SRN.IM-CA.SEGMENTEVAL.S)*

## Screening - IM - Preventive and Mitigative Measures

**1. Preventive & Mitigative Measures Implementation** *Describe the most significant Preventive measures and 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.PREVMITIGIMPL.S)*

## Screening - IM - Facilities

**1. IM - New Facilities** *What is the process to ensure that new or expanded facilities are incorporated into the IM Program and its processes? (SRN.IM-FACIL.NEWFACIL.S)*

## Screening - IM - Quality Assurance

**1. IM Performance Metrics** *What are the methods employed to measure the Integrity Management Program's effectiveness? (SRN.IM-QA.PERFMETRICS.S)*

## Screening - MO - Biofuels

**1. Biofuels Pipelines - O&M Procedures** *[FOR BIOFUELS PIPELINES ONLY] What biofuels specific procedures apply to this pipeline? (SRN.MO-BIO.BIOOMPROC.S)*

## Screening - MO - Liquid Conversion

**1. Liquid Conversion to Part 195 Service** *What pipelines or pipeline segments have undergone a conversion to Part 195 service in the last 5 years? (provide details)* (SRN.MO-LC.195CONV.S)

## Screening - MO - Liquid Pipeline Abnormal Operations

**1. Liquid Pipeline - Abnormal Operations** *What abnormal operations has the pipeline experienced in the last 5 years and how were lessons learned incorporated?* (SRN.MO-ABNORMAL.ABPROCESS.S)

## Screening - MO - Liquid Pipeline MOP

**1. Liquid Pipeline - MOP Changes** *If there have been any changes in the pipeline MOP in the last 5 years, what was the nature of the changes?* (SRN.MO-LOMOP.MOPCHGS.S)

**2. Liquid Pipeline - MOP Validation** *Are records available that fully validate the current pipeline MOP, and if not, what is the process for addressing this issue?* (SRN.MO-LOMOP.MOPVALID.S)

## Screening - MO - Liquid Pipeline Maintenance

**1. O&M - Maintenance Manual Modifications** *What changes have been made to the pipeline maintenance program in the last 5 years?* (SRN.MO-LM.OMPLANMOD.S)

## Screening - MO - Liquid Pipeline Operations

**1. Tracking of "Near Misses"** Are "near misses" tracked, and if so, how are they defined, reviewed and potentially incorporated into revised procedures or revised programs? (SRN.IM-RA.NEARMISS.S)

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

**2. O&M Operations 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-LO.OMPLANMOD.S)

**3. Abandoned Pipelines or Segments** Describe any portion(s) of the pipeline that are currently considered "abandoned." (SRN.MO-LO.ABANDONEDPIPE.S)

**4. Grandfathered Pipelines and Facilities** Are there any pipelines or pipeline facilities that are grandfathered under various code requirements? (SRN.MO-LO.GRANDFATHER.S)

**5. Regulated Rural Gathering Pipelines** What, if any, Regulated Rural Gathering pipelines are included in this inspection? (Provide description) (SRN.MO-LO.REGRURALGATHER.S)

**6. Idle 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 - MO - Liquid Pipeline Overpressure Protection

**1. Liquid Pipeline - Overpressure Protective Devices** Have any pressure limiting device settings or overpressure safety device settings been changed for the pipeline system in the last 5 years? (please describe) (SRN.MO-LMOPP.OVERPRESSURE.S)

**2. Operational Restrictions** *Is the pipeline system or any system components currently, or in the last 5 years, operated under any operational restrictions (for example, reduced operational pressure)? (please describe)* (SRN.MO-LMOPP.OPRNLRESTRICT.S)

**3. MOP Exceedances** *Have there been any MOP exceedances, excluding during startups and shutdowns, in the last 5 years? (please describe)* (SRN.MO-LMOPP.MOPEXCEED.S)

## Screening - MO - Liquid Pipeline Startup and Shutdown Operations

**1. MOP Exceedances During Startup/Shutdown** *Have there been any MOP exceedances or leaks in the last 5 years resulting from startups or shutdowns? (please describe)* (SRN.MO-LOOPER.MOPEXCEED.S)

## Screening - MO - Low-Stress Rural Pipelines

**1. Low Stress Pipelines in Rural Areas** *What, if any, Low-Stress pipelines are included in this inspection? (Provide description)* (SRN.MO-LS.LOWSTRESS.S)

## Screening - MO - ROW Markers, Patrols, Monitoring and Analysis

**1. ROW Issues** *What, if any, issues have occurred in the last 5 years regarding pipeline ROW monitoring, marking, 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.*

**2. GOA Exposed Underwater Pipeline** *What issues have been discovered in the last 5 years regarding the GOA (Gulf of America) pipeline that has the potential of being exposed or a hazard to navigation?* (SRN.MO-RW.GOAEXPOSED.S)



## Screening - MO - Extreme Weather

**1. Extreme Weather Inspection** *Has the operator experienced any extreme weather events or natural disasters that could affect their pipelines in the last 5 years? (SRN.MO-EW.EW.S)*

## Screening - PD - Damage Prevention

**1. Damage Prevention Program** *How is the effectiveness of the Damage Prevention Program measured, and what issues have been identified in the last 5 years? (SRN.PD-DP.DPPROGRAM.S)*

**2. 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)*

**3. Tracking of "Near Misses"** *Are "near misses" tracked, and if so, how are they defined, reviewed and potentially incorporated into revised procedures or revised programs? (SRN.IM-RA.NEARMISS.S)*

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

**4. Idle 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 Issues** *What, if any, issues have occurred in the last 5 years regarding pipeline ROW monitoring, marking, 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 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 - ROW Markers, Patrols, Monitoring

**1. ROW Information Analysis** *How is the ROW information (related to potential excavation damage) gathered during pipeline patrols, surveillance, and monitoring analyzed?* (SRN.PD-RW.ROWINFO.S)

## Screening - PD - Facilities Signage and Security

**1. Facilities General** *Have any deficiencies been found regarding facilities protection (including signage, unauthorized entry, ignition source control, and fire protection) in the last 5 years?* (SRN.FS-FG.FACILGENERAL.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. 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 - Breakout Tank Cathodic Protection

**1. External Corrosion - Breakout Tanks** *Have there been tank repairs, or any tank floors replaced, due to external corrosion in the last 5 years? (If Yes, provide details)* (SRN.TD-CPBO.BOEXTCORROSION.S)

## Screening - TD - External Corrosion - Cathodic Protection

**1. 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 - External Corrosion - Cathodic Protection Monitoring

**1. External Corrosion - Cathodic Protection Monitoring** *What, if any, issues have been discovered during cathodic protection monitoring in the last 5 years? (provide details)* (SRN.TD-CPMONITOR.CORRCNTRL.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 - Exposed Pipe

**1. External Corrosion - Exposed Buried Pipe** *Have any exposed portions of buried pipe been discovered in the last 5 years? (SRN.TD-CPEXPOSED.EXPOSEDPIPE.S)*

## Screening - TD - Internal Corrosion - Preventive Measures

**1. Internal Corrosion - Preventive Measures** *What, if any, internal corrosion issues have been discovered, including breakout tank bottoms, in the last 5 years? (provide details)* (SRN.TD-ICP.INTCORROSION.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 removals?* (SRN.TQ-OQ.OQREMOVAL.S)

## Screening - TQ - Qualification of Personnel - Specific Requirements

**1. Qualification of Personnel - Specific Requirements** *What processes are in place to ensure that corrosion control supervisors and pipeline controllers are competent to perform their activities?* (SRN.TQ-QU.SPECREQMNTS.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 the welding and joining of pipe?* (SRN.TQ-QUOMCONST.OMSPECIFIC.S)

## Screening - TQ - Training of Personnel - Dispatcher

**1. Dispatcher Training Requirements** *What changes have been made to the training requirements for dispatchers (controllers) in the last 5 years?* (SRN.TQ-TRCNTRL.DISPATCHER.S)

## Screening - TQ - Training of Personnel - Emergency Response

**1. Training of Personnel - Emergency Response Improvements** *What changes have been made in emergency response training as a result of drills and/or emergency responses in the last 5 years?* (SRN.TQ-TRERP.IMPROVE.S)

**2. Emergency Response Training in OQ Plan** *What changes have been made 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-TRERP.OQEMERGRESP.S)

## Screening - TQ - Training of Personnel - O and M Construction

**1. Training of Personnel - O&M Construction Improvements** *What changes have been made in personnel training relating to weld NDT activities and procedures in the last 5 years?* (SRN.TQ-TROMCONST.IMPROVE.S)

## Time-Dependent Threats - Atmospheric Corrosion

**1. Atmospheric Corrosion Coating** *Does the process give adequate instruction for the protection of pipeline against atmospheric corrosion?* (TD.ATM.ATMCORRODECOAT.P) 195.402(c)(3) (195.581(a);195.581(b);195.581(c))

**2. Atmospheric Corrosion Coating** *Do records document adequate protection of pipeline against atmospheric corrosion?* (TD.ATM.ATMCORRODECOAT.R) 195.589(c) (195.581(a);195.581(b);195.581(c))

**3. Atmospheric Corrosion Monitoring** *Does the process give adequate instruction for the inspection of aboveground pipeline segments exposed to the atmosphere?* (TD.ATM.ATMCORRODEINSP.P) 195.402(c)(3) (195.583(a);195.583(b);195.583(c))

**4. Atmospheric Corrosion Monitoring** *Do records document inspection of aboveground pipe exposed to atmospheric corrosion?* (TD.ATM.ATMCORRODEINSP.R) 195.589(c) (195.583(a);195.583(b);195.583(c))

**5. Atmospheric Corrosion Monitoring** *Is aboveground pipe that is exposed to atmospheric corrosion protected?* (TD.ATM.ATMCORRODEINSP.O) 195.583(c) (195.581(a))

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

**1. Cathodic Protection for Breakout Tanks** *Does the process describe when cathodic protection must be installed on breakout tanks?* (TD.CPBO.BO651.P) 195.402(c)(3) (195.563(d);195.565)

**2. Cathodic Protection for Breakout Tanks** *Does the process adequately detail when and how cathodic protection systems will be inspected on breakout tanks?* (TD.CPBO.BO.P) 195.402(c)(3) (195.573(d))

**3. Cathodic Protection for Breakout Tanks** *Do records adequately document when and how cathodic protection systems were inspected on breakout tanks?* (TD.CPBO.BO.R) 195.589(c) (195.573(d))

**4. Cathodic Protection for Breakout Tanks** *Are cathodic protection monitoring tests performed correctly on breakout tank bottoms?* (TD.CPBO.BO.O) 195.573(d)

**5. Correction of Corrosion Control Deficiencies (Breakout Tank)** *Does the process require correction of any identified deficiencies in corrosion control for breakout tanks?* (TD.CPBO.DEFICIENCYBO.P) 195.402(c)(3) (195.573(e))

**6. Correction of Corrosion Control Deficiencies (Breakout Tank)** *Do records document adequate operator actions taken to correct any identified deficiencies in breakout tank corrosion control?* (TD.CPBO.DEFICIENCYBO.R) 195.589(c) (195.573(e))

**7. Cathodic Protection System Maps and Records (Breakout Tank)** *Does the process require maps and/or records of cathodic protection systems that have been installed on breakout tanks constructed, relocated, replaced, or otherwise changed?* (TD.CPBO.MAPRECORDBO.P) 195.589(a) (195.589(b))

**8. Cathodic Protection System Maps and Records (Breakout Tank)** *Do maps and or records document cathodic protection system appurtenances that have been installed on breakout tanks that have been constructed, relocated, replaced, or otherwise changed?* (TD.CPBO.MAPRECORDBO.R) 195.589(a) (195.589(b))

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

**1. Cathodic Protection System Maps and Records** *Does the process require maps and/or records of cathodic protection systems that have been installed on pipelines constructed, relocated, replaced, converted to hazardous liquid service, or otherwise changed?* (TD.CP.MAPRECORD.P) 195.589(a) (195.589(b))

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

**2. Correction of Corrosion Control Deficiencies** *Does the process require correction of any identified deficiencies in corrosion control?* (TD.CP.DEFICIENCY.P) 195.402(c)(3) (195.573(e))

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

**3. Corrosion Control Qualification for Supervisors** *Are supervisors required to maintain a thorough knowledge of corrosion control procedures they are responsible for, and is it verified?* (TQ.QU.CORROSIONSUPERVISE.P) 195.402(c) (195.555;195.505(h))

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

**4. Corrosion Control Qualification for Supervisors** *Is qualification of supervisors in corrosion control procedures documented?* (TQ.QU.CORROSIONSUPERVISE.R) 195.555 (195.507(a);195.507(b))

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

**5. Cathodic Protection for New Pipelines** *Does the process specify when cathodic protection must be operational on constructed, relocated, replaced, or otherwise changed pipelines?* (TD.CP.NEWOPERATE.P) 195.402(c)(3) (195.563(a);195.563(c);195.563(d))

**6. Cathodic Protection for New Pipelines** *Do records document when cathodic protection was operational on constructed, relocated, replaced, converted to service, or otherwise changed pipelines?* (TD.CP.NEWOPERATE.R) 195.589(c) (195.563(a))

**7. 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) 195.402(c)(3) (195.563(e);195.573(b)(1);195.573(b)(2))

**8. Unprotected Buried Pipelines (typically bare pipelines)** *Do records document the adequate re-evaluation of buried pipelines with no cathodic protection for areas of active corrosion?* (TD.CP.UNPROTECT.R) 195.589(c) (195.573(b)(1);195.573(b)(2))

**9. Isolation from Other Metallic Structures** *Does the process provide 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.ISOLATE.P) 195.402(c)(3) (195.575(a);195.575(b);195.575(d))

**10. Isolation from Other Metallic Structures** *Do records document adequate 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.ISOLATE.R) 195.589(c) (195.575(a);195.575(b);195.575(d))



**11. 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.ISOLATE.O) 195.575(a) (195.575(b);195.575(d))

**12. 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.ISOLATETEST.P) 195.402(c)(3) (195.575(c))

**13. 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.ISOLATETEST.R) 195.589(c) (195.575(c))

**14. Inspection/Testing to Ensure Electrical Isolation** *Do field observations verify that inspection and electrical testing ensures that electrical isolation is adequate?* (TD.CP.ISOLATETEST.O) 195.575(c)

**15. Protection from Fault Currents** *Does the process give 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) 195.402(c)(3) (195.575(e))

**16. Protection from Fault Currents** *Do records document adequate installation and inspection of fault current and lightning protection?* (TD.CP.FAULTCURRENT.R) 195.589(c) (195.575(e))

**17. Protection from Fault Currents** *Are fault current and lightning protection for the pipeline installed and inspected?* (TD.CP.FAULTCURRENT.O) 195.575(e)

**18. Correction of Corrosion Control Deficiencies** *Do records document adequate operator actions taken to correct any identified deficiencies in corrosion control?* (TD.CP.DEFICIENCY.R) 195.589(c) (195.573(e))

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

**19. Cathodic Protection System Maps and Records** *Do maps and or records document cathodic protection system appurtenances that have been installed on pipelines that have been constructed, relocated, replaced, or otherwise changed or been converted to hazardous liquid service?* (TD.CP.MAPRECORD.R) 195.589(a) (195.589(b))

*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 Monitoring

**1. Cathodic Protection System Maps and Records** *Does the process require maps and/or records of cathodic protection systems that have been installed on pipelines constructed, relocated, replaced, converted to hazardous liquid service, or otherwise changed?* (TD.CP.MAPRECORD.P) 195.589(a) (195.589(b))

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

**2. Correction of Corrosion Control Deficiencies** *Does the process require correction of any identified deficiencies in corrosion control?* (TD.CP.DEFICIENCY.P) 195.402(c)(3) (195.573(e))

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

**3. Test Leads Installation** *Does the process provide adequate instructions for the installation of test leads?* (TD.CPMONITOR.TESTLEADINSTALL.P) 195.402(c) (195.567(b))

**4. Test Leads Installation** *Do records document that pipelines with cathodic protection have electrical test leads installed in accordance with requirements of Subpart H?* (TD.CPMONITOR.TESTLEADINSTALL.R) 195.589(c) (195.567(b))

**5. Test Leads Installation** *Do pipelines with cathodic protection have electrical test leads installed in accordance with requirements of Subpart H?* (TD.CPMONITOR.TESTLEADINSTALL.O) 195.567(a) (195.567(b))

**6. Test Leads Maintenance** *Does the process require that test lead wires must be properly maintained?* (TD.CPMONITOR.TESTLEADMAINT.P) 195.402(c)(3) (195.567(c))

**7. Test Leads Maintenance** *Do records document that CP test lead wires have been properly maintained?* (TD.CPMONITOR.TESTLEADMAINT.R) 195.589(c) (195.567(c))

**8. Test Leads Maintenance** *Are CP test lead wires properly maintained?* (TD.CPMONITOR.TESTLEADMAINT.O) 195.567(c)

**9. Cathodic Protection Monitoring Criteria** *Does the process require that CP monitoring criteria be used that is acceptable?* (TD.CPMONITOR.MONITORCRITERIA.P) 195.402(c)(3) (195.571)

**10. Cathodic Protection Monitoring Criteria** *Do records document that CP monitoring criteria used was acceptable?* (TD.CPMONITOR.MONITORCRITERIA.R) 195.589(c) (195.571)

**11. Cathodic Protection Monitoring Readings** *Do the methods for taking CP monitoring readings allow for the application of appropriate CP monitoring criteria?* (TD.CPMONITOR.MONITOR.O) 195.571

**12. Cathodic Protection Monitoring** *Does the process adequately describe how to monitor CP that has been applied to pipelines?* (TD.CPMONITOR.TEST.P) 195.402(c)(3) (195.573(a)(1))

**13. Cathodic Protection Monitoring** *Do records adequately document required tests have been done on pipe that is cathodically protected?* (TD.CPMONITOR.TEST.R) 195.589(c) (195.573(a)(1))

**14. Close Interval Surveys** *Does the process adequately describe the circumstances in which a CIS or comparable technology is practicable and necessary no more than 2 years after a cathodic protection system has been installed?* (TD.CPMONITOR.CIS.P) 195.402(c)(3) (195.573(a)(2))

**15. Close Interval Surveys** *Do records document, when circumstances dictated a need for close interval surveys, dates of completed surveys, data from completed surveys and analysis of completed surveys?* (TD.CPMONITOR.CIS.R) 195.589(c) (195.573(a)(2))

**16. Rectifiers, Bonds, Diodes and Reverse Current Switches** *Does the process give sufficient details for making electrical checks of rectifiers, interference bonds, diodes, and reverse current switches?* (TD.CPMONITOR.CURRENTTEST.P) 195.402(c)(3) (195.573(c))

**17. Rectifiers, Bonds, Diodes and Reverse Current Switches** *Do records document adequate electrical checks of rectifiers, interference bonds, diodes, and reverse current switches and at the required intervals?* (TD.CPMONITOR.CURRENTTEST.R) 195.589(c) (195.573(c))

**18. Rectifiers, Bonds, Diodes and Reverse Current Switches** *Are rectifiers, interference bonds, diodes, and reverse current switches properly maintained and are they functioning properly?* (TD.CPMONITOR.CURRENTTEST.O) 195.573(c)

**19. Interference Currents** *Does the operator have a process in place to minimize detrimental effects of interference currents on its pipeline system and do the procedures for designing and installing cathodic protection systems provide for the minimization of detrimental effects of interference currents on existing adjacent metallic structures?* (TD.CPMONITOR.INTFRCURRENT.P) 195.402(c)(3) (195.577(a);195.577(b))

**20. Interference Currents** *Do records document that the operator has an effective program in place to minimize the detrimental effects of interference currents on their pipeline system, and is minimizing detrimental effects of interference currents from their CP systems on other underground metallic structures?* (TD.CPMONITOR.INTFRCURRENT.R) 195.589(c) (195.577(a))

**21. Interference Currents** *Are areas of potential stray current identified, and if found, the detrimental effects of stray currents minimized?* (TD.CPMONITOR.INTFRCURRENT.O) 195.577(a)

**22. Correction of Corrosion Control Deficiencies** *Do records document adequate operator actions taken to correct any identified deficiencies in corrosion control?* (TD.CP.DEFICIENCY.R) 195.589(c) (195.573(e))

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

**23. Cathodic Protection System Maps and Records** *Do maps and or records document cathodic protection system appurtenances that have been installed on pipelines that have been constructed, relocated, replaced, or otherwise changed or been converted to hazardous liquid service?* (TD.CP.MAPRECORD.R) 195.589(a) (195.589(b))

*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 coatings for pipelines constructed, relocated, replaced, or otherwise changed after the applicable date in 195.401(c) to meet the requirements of 195.559?* (TD.COAT.NEWPIPE.P) 195.402(c)(3) (195.557(a);195.559;195.401(c))

**2. New Buried Pipe Coating Inspection** *Does the process require that the coating be inspected on new pipelines just prior to it being lowered into the pipe trench?* (TD.COAT.NEWPIPEINSPECT.P) 195.402(c)(3) (195.561(a);195.561(b))

**3. New Buried Pipe Coating** *Do records document that coatings for pipelines constructed, relocated, replaced, or otherwise changed meet the requirements of §195.559?* (TD.COAT.NEWPIPE.R) 195.589(c) (195.557(a);195.559;195.401(c))

**4. Converted Buried Pipe Coating** *Does the process require that pipelines that have been converted to liquid service and were constructed after the applicable date in 195.401(c) have external coating?* (TD.COAT.CONVERTPIPE.P) 195.402(c)(3) (195.557(b);195.559)

**5. Converted Buried Pipe Coating** *Do records document that pipelines that have been converted to liquid service and were constructed after the applicable date in 195.401(c) have external coating?* (TD.COAT.CONVERTPIPE.R) 195.589(c) (195.557(b);195.559)

**6. Proper Coating Application** *Do records document that coatings are applied as required by procedures?* (TD.COAT.COATAPPLY.R) 195.589(c) (195.559(b);195.401(c))

**7. Proper Coating Application** *Is protective coating adequately applied?* (TD.COAT.COATAPPLY.O) 195.561(a) (195.561(b);195.559(b);195.252(b))

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

**1. Correction of Corrosion Control Deficiencies** *Does the process require correction of any identified deficiencies in corrosion control?* (TD.CP.DEFICIENCY.P) 195.402(c)(3) (195.573(e))

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

**2. 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 required to determine the extent of the corrosion?* (TD.CPEXPOSED.EXPOSEINSPECT.P) 195.402(c)(3) (195.569)

**3. Examination of Exposed Portions of Buried Pipe** *Do records document that exposed buried piping was adequately examined for corrosion and deteriorated coating?* (TD.CPEXPOSED.EXPOSEINSPECT.R) 195.589(c) (195.569)

**4. Examination of Exposed Portions of Buried Pipe** *Verify that exposed buried piping is examined for corrosion and deteriorated coating.* (TD.CPEXPOSED.EXPOSEINSPECT.O) 195.569

**5. 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) 195.402(c)(3) (195.587)

**6. Evaluation of Externally Corroded Pipe** *Do records adequately document the evaluation of externally corroded pipe?* (TD.CPEXPOSED.EXTCORRODEEVAL.R) 195.589(c) (195.587)

**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.EXTCORRODEREPAIR.P) 195.402(c)(3) (195.585(a);195.585(b))

**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.EXTCORRODEREPAIR.R) 195.589(c) (195.585(a);195.585(b))

**9. Correction of Corrosion Control Deficiencies** *Do records document adequate operator actions taken to correct any identified deficiencies in corrosion control?* (TD.CP.DEFICIENCY.R) 195.589(c) (195.573(e))

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

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

**1. Regulated Rural Gathering Internal Corrosion Identification** *Is there a process to continuously identify operating conditions that could contribute to internal corrosion for regulated gathering lines?* (TD.ICP.REGRURALGATHER.P) 195.11(d) (195.11(b)(10))

**2. Regulated Rural Gathering Internal Corrosion Identification** *Do records indicate the process to continuously identify operating conditions that could contribute to internal corrosion on regulated gathering lines adequately identifies threats, and was the program established before transportation began or if the pipeline existed on July 3, 2008, before July 3, 2009?* (TD.ICP.REGRURALGATHER.R) 195.11(d) (195.11(b)(10))

**3. Internal Corrosion Remediation** *Does the process give adequate guidance for investigating and mitigating the corrosive effects of hazardous liquids or carbon dioxide being transported?* (TD.ICP.INVESTREMED.P) 195.402(c)(3) (195.579(a))

**4. Internal Corrosion Remediation** *Do records document investigation and mitigation of the corrosive effects of hazardous liquids or carbon dioxide being transported?* (TD.ICP.INVESTREMED.R) 195.589(c) (195.579(a))

**5. Internal Corrosion Inhibitor Monitoring** *Does the process give adequate direction for the utilization of corrosion inhibitors?* (TD.ICP.INHIBITOR.P) 195.402(c)(3) (195.579(b)(1);195.579(b)(2);195.579(b)(3))

**6. Internal Corrosion Inhibitor Monitoring** *Do records document that corrosion inhibitors have been used in sufficient quantity?* (TD.ICP.INHIBITOR.R) 195.589(c) (195.579(b)(1);195.579(b)(2);195.579(b)(3))

**7. Internal Corrosion Monitoring** *Are internal corrosion monitoring devices placed in appropriate locations?* (TD.ICP.INHIBITOR.O) 195.579(b)

**8. Internal Corrosion in Removed Pipe** *Does the process direct personnel to examine removed pipe for evidence of internal corrosion?* (TD.ICP.EXAMINE.P) 195.402(c)(3) (195.579(a);195.579(c))

**9. Internal Corrosion in Removed Pipe** *Do records document examination of removed pipe for evidence of internal corrosion?* (TD.ICP.EXAMINE.R) 195.589(c) (195.579(c);195.579(a))

**10. Internal Corrosion in Removed Pipe** *Is removed pipe examined for evidence of internal corrosion?* (TD.ICP.EXAMINE.O) 195.579(c) (195.579(a))

**11. 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) 195.402(c)(3) (195.587)

**12. Evaluation of Internally Corroded Pipe** *Do records document adequate evaluation of internally corroded pipe?* (TD.ICP.EVALUATE.R) 195.589(c) (195.587)

**13. 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.REPAIR.P) 195.402(c)(3) (195.585(a);195.585(b))

**14. 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.REPAIR.R) 195.589(c) (195.585(a);195.585(b))

**15. Internal Corrosion Lining of Breakout Tanks** *Does the process give adequate direction for installing breakout tank bottom linings?* (TD.ICP.BOLINING.P) 195.402(c)(3) (195.579(d))

**16. Internal Corrosion Lining of Breakout Tanks** *Do records document the adequate installation of breakout tank bottom linings?* (TD.ICP.BOLINING.R) 195.589(c) (195.579(d))

## Time-Dependent Threats - Special Permits

**1. Special Permit** *Has a process been developed for complying with the special permit conditions?* (TD.SP.PROCESS.P) 190.341(d)(2)

**2. Special Permit** *Do records demonstrate the operator has complied with all special permit or waiver requirements?* (TD.SP.PROCESS.R) 190.341(d)(2)



**3. Special Permit** *Is the operator complying with special permit requirements?* (TD.SP.PROCESS.O) 190.341(d)(2)

## Training and Qualification - OQ Protocol 9

**1. Covered Task Performance** *Verify the qualified individuals performed the observed covered tasks in accordance with the operator's procedures or operator approved contractor procedures.* (TQ.PROT9.TASKPERFORMANCE.O) 195.501(a) (195.509(a))

**2. Qualification Status** *Verify the individuals performing the observed covered tasks are currently qualified to perform the covered tasks.* (TQ.PROT9.QUALIFICATIONSTATUS.O) 195.501(a) (195.509(a))

**3. 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) 195.501(a) (195.509(a))

**4. Verification of Qualification** *Verify 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) 195.501(a) (195.509(a))

**5. Program Inspection Deficiencies** *Have potential issues identified by the OQ plan inspection process been corrected at the operational level?* (TQ.PROT9.CORRECTION.O) 195.501(a) (195.509(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) 195.505(a) (195.501(b);195.503)

**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) 195.505(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) 195.505(c)

**4. Evaluation Methods** *Are evaluation methods established and documented appropriate to each covered task?* (TQ.OQ.EVALMETHOD.P) 195.505(b) (195.503;195.509(d);195.509(e))

**5. Contractor and Other Entity Qualification** *Are adequate records containing the required elements maintained for contractor personnel?* (TQ.OQ.OQCONTRACTOR.R) 195.507(a) (195.507(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) 195.507(a) (195.507(b))

**7. Training Requirements (Initial, Retraining, and Reevaluation)** *Does the operators program provide for initial qualification, retraining and reevaluation of individuals performing covered tasks?* (TQ.OQ.TRAINING.P) 195.505(h)

**8. Training Requirements (Initial, Retraining, and Reevaluation)** *Does the operator have records for initial qualification, retraining and reevaluation of individuals performing covered tasks?* (TQ.OQ.TRAINING.R) 195.507(a) (195.507(b);195.505(h))

**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) 195.505(a) (195.505(f))

**10. Management of Other Entities Performing Covered Tasks** *Are contractor organizations or other entities that perform covered tasks qualified?* (TQ.OQ.OQCONTRACTOR.P) 195.505(b) (195.505(c);195.505(d);195.505(e);195.505(f))

**11. Contractor Qualification Documentation Meets Operator Requirements** *Does the OQ plan assure that procedures on which an OQ vendor has evaluated qualified personnel are the same or consistent with those used by the operator for employees and contractors in the field?* (TQ.OQ.CONTRACTOREQUIV.P) 195.505(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) 195.505(b) (195.505(c);195.503)

**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) 195.503 (195.505(b))

**14. Abnormal Operating Conditions** *Do records indicate evaluation of qualified individuals for recognition and reaction to AOCs?* (TQ.OQ.ABNORMAL.R) 195.507(a) (195.507(b);195.503)

**15. Abnormal Operating Conditions** *Do individuals performing covered tasks have adequate knowledge to recognize and react to abnormal operating conditions (AOCs)?* (TQ.OQ.ABNORMAL.O) 195.503

**16. Personnel Performance Monitoring** *Does the OQ 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 covered tasks?* (TQ.OQ.PERFMONITOR.P) 195.505(d) (195.505(e))

**17. Personnel Performance Monitoring** *Does the operator have records to demonstrate that they have evaluated individuals who may have contributed to an incident/accident while performing a covered task or where there is reason to believe that an individual may have no longer been qualified to perform a covered task?* (TQ.OQ.PERFMONITOR.R) 195.505(d) (195.505(e))

**18. Operator Qualification Plan and Covered Tasks** *Do individuals performing covered tasks demonstrate adequate skills and knowledge?* (TQ.OQ.OQPLAN.O) 195.505(h)

**19. Management of Change** *Does the OQ program identify how changes to procedures, tools standards and other elements used by individuals in performing covered tasks are communicated to the individuals, including contractor individuals, and how these changes are implemented in the evaluation method(s)?* (TQ.OQ.MOC.P) 195.505(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) 195.505(i)

**21. Records of OQ Program Changes** *Are records maintained for changes that affect covered tasks and significant OQ plan changes?* (TQ.OQ.CHANGERECD.R) 195.505(i) (195.505(f))

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

**1. Corrosion Control Qualification for Supervisors** *Are supervisors required to maintain a thorough knowledge of corrosion control procedures they are responsible for, and is it verified?* (TQ.QU.CORROSIONSUPERVISE.P) 195.402(c) (195.555;195.505(h))

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

**2. Corrosion Control Qualification for Supervisors** *Is qualification of supervisors in corrosion control procedures documented?* (TQ.QU.CORROSIONSUPERVISE.R) 195.555 (195.507(a);195.507(b))

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

**3. Controller Training** *Does the process establish, maintain, and review controller qualifications, abilities, and performance metrics, with particular attention to response to abnormal operating conditions?* (TQ.QU.CONTROLLER.P) 195.446(h) (195.505(b))

**4. Controller Training** *Is controller training and qualification documented?* (TQ.QU.CONTROLLER.R) 195.446(h) (195.507(a);195.507(b))

**5. Controller Training** *Do controllers demonstrate adequate skills and knowledge?* (TQ.QU.CONTROLLER.O) 195.446(b) (195.446(c);195.505(b))

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

**1. Qualification of Inspectors** *Does the process require personnel who conduct pipe or pipeline system construction inspections to be adequately trained and qualified?* (TQ.QUOMCONST.INSPECTORQUAL.P) 195.204

**2. Qualification of Inspectors** *Do records indicate adequate qualification documentation for personnel who conduct pipe or pipeline system construction inspections?* (TQ.QUOMCONST.INSPECTORQUAL.R) (detail) (TQ.QUOMCONST.INSPECTORQUAL.R) 195.204

**3. Qualification of Inspectors** *Does the inspector who ensures pipeline systems are installed per requirements demonstrate adequate skills and knowledge?* (TQ.QUOMCONST.INSPECTORQUAL.O) 195.204

**4. Qualification of Welders** *Does the process require welders to be qualified in accordance with API Std 1104 (21st Edition) or the ASME BPVC-2007?* (TQ.QUOMCONST.WELDER.P) 195.222(a) (195.222(b);Section 6 of API Std-1104 (21st Edition), Section IX-2007 of ASME Boiler & Pressure Vessel Code;195.214(a))

**5. Qualification Records for Welders** *Do records indicate that welders are adequately qualified?* (TQ.QUOMCONST.WELDER.R) 195.222(a) (195.214(a);195.222(b))

**6. Skills and Knowledge of Welders** *Do welders demonstrate adequate skills and knowledge?* (TQ.QUOMCONST.WELDER.O) 195.222(a) (195.505(b);195.214(a))

## Training and Qualification - Training of Personnel - Dispatcher

**1. Dispatcher Training** *Does the process require that dispatchers are trained in the recognition of CPM alarms?* (TQ.TRCNTRL.CNTRLTRAINING.P) 195.444 (195.446(e))

**2. Dispatcher Training - API 1130** *Do the process require dispatcher training be provided in compliance with API RP1130 (3rd Edition)?* (TQ.TRCNTRL.CNTRLTRAINING1130.P) 195.444 (195.505(h))

**3. Dispatcher Training** *Is dispatcher training and qualification documented?* (TQ.TRCNTRL.CNTRLTRAINING.R) 195.444 (195.507(a);195.507(b))

**4. Dispatcher Training** *Do dispatchers demonstrate adequate skills and knowledge?* (TQ.TRCNTRL.CNTRLTRAINING.O) 195.444 (195.505(b))

## Training and Qualification - Training of Personnel - Emergency Response

**1. Emergency Response Training - Conditions** *Are conditions that are likely to cause emergencies, their consequences, and appropriate corrective action identified in the ER training?* (TQ.TRERP.ERCONDITIONS.P) 195.403(a)(3)

**2. Emergency Response Training - Fire** *Are the potential causes, types, sizes, and consequences of fire and appropriate use of portable fire extinguishers and other on-site fire control equipment covered in the ER training?* (TQ.TRERP.ERFIREPROT.P) 195.403(a)(5)

**3. Emergency Response Training - Hazards** *Are the characteristics and hazards of the hazardous liquids or carbon dioxide transported covered in the ER training?* (TQ.TRERP.ERHAZTRAINING.P) 195.403(a)(2)

**4. Emergency Response Training - Release Control** *Are the steps necessary to control any accidental release of hazardous liquid to minimize the potential for fire, explosion, toxicity, or environmental damage identified in the ER training?* (TQ.TRERP.ERRELEASECONTROL.P) 195.403(a)(4)

**5. Emergency Response Training - Procedures** *Does emergency response training cover the emergency procedures established under 195.402?* (TQ.TRERP.ERTRAINING.P) 195.403(a)(1)

**6. Training Records for Emergency Response Personnel** *Is training for emergency response personnel documented?* (TQ.TRERP.ERTRAININGRECORDS.R) 195.404(c) (195.403(a))

**7. Emergency Response Personnel Skills and Knowledge** *Do emergency response personnel demonstrate adequate skills and knowledge?* (TQ.TRERP.ERTRAINING.O) 195.403(a)

**8. Emergency Response Training Performance Review** *Does the process require review of emergency response personnel performance at the required frequency?* (TQ.TRERP.ERTRAININGREVIEW.P) 195.403(b)

**9. Emergency Response Training Performance Review** *Has review of emergency response personnel performance at the required frequency been documented?* (TQ.TRERP.ERTRAININGREVIEW.R) 195.404(c) (195.403(b))

**10. Emergency Response Supervisor Training** *Does the process require supervisors be trained on emergency response procedures for which they are responsible?* (TQ.TRERP.ERTRAININGSUPERVISE.P) 195.403(c)

**11. Emergency Response Supervisor Training** *Do emergency response supervisors demonstrate adequate skills and knowledge?* (TQ.TRERP.ERTRAININGSUPERVISE.O) 195.403(c) (195.405)

## Training and Qualification - Training of Personnel - O and M Construction

**1. Training for Nondestructive Testing** *Does the process require nondestructive testing of welds (for maintenance and construction) be performed by personnel trained and qualified in procedures and in use of the testing equipment?* (TQ.TROMCONST.NDT.P) 195.234(b)(2)

**2. Training for Nondestructive Testing** *Is training for personnel, who perform nondestructive testing of welds, documented and demonstrated?* (TQ.TROMCONST.NDT.R) 195.234(b)(2)

## Section 114 - Section 114 - Hazardous Liquid

### 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. 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.*

### 6. 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.*

### 7. 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)*

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

### 8. 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.*



**9. 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.*

**10. 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.*

**11. 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.*

**12. 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 - Small LPG

**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. 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.*

**6. 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.*

**7. 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)

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

**8. 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.*

**9. 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.*

**10. 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.*

**11. 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.*

**12. 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 Permission** *Generic question - please provide context in result notes.*  
(GENERIC.GENERICSPP.GENRECORD.R)

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

Except as required to be disclosed by law, any inspection documentation, including completed protocol forms, summary reports, executive summary reports, and enforcement documentation are for internal use only by federal or state pipeline safety regulators. Some inspection documentation may contain information which the operator considers to be confidential. In addition, supplemental inspection guidance and related documents in the file library are also for internal use only by federal or state pipeline safety regulators (with the exception of documents published in the federal register, such as advisory bulletins). Do not distribute or otherwise disclose such material outside of the state or federal pipeline regulatory organizations. Requests for such information from other government organizations (including, but not limited to, NTSB, GAO, IG, or Congressional Staff) should be referred to PHMSA Headquarters Management.