Assessment and Repair - Confirmatory Direct Assessment

4. CDA Plan (detail) *Is an adequate Confirmatory Direct Assessment Plan in place?* (AR.CDA.CDAPLAN.P) (detail)

192.931 (192.931(a); 192.931(b); 192.931(c); 192.931(d))	Sat+	SatX	Concern	Unsat	NA	NC

Notes: PSE Transmission Integrity Management Program Plan (TIMP) 2013 Appendix G Section 4.

5. External Corrosion Plan (detail) *From the review of the results of selected integrity assessments, was the external corrosion plan properly implemented?* (AR.CDA.CDAEXTCORR.R) (detail)

192.931(b)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: PSE implemented their plan according to their procedures.

6. Internal Corrosion Plan (detail) *From the review of the results of selected integrity assessments, was the internal corrosion plan properly implemented?* (AR.CDA.CDAINTCORR.R) (detail)

192.931(c)	Sat+	Sat	Concern	Unsat	NAX	NC

Notes: PSE does not currently have an Internal Corrosion Plan, they transport dry gas in their transmission pipelines. If internal corrosion was found to be a risk they would develop a plan at that time.

7. Remediation of Indications (detail) *From the review of the results of selected integrity assessments, was the need to accelerate the next assessment evaluated?* (AR.CDA.CDAINDICATION.R) (detail)

192.931(d)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: Found no corrosion that would accelerate the next assessment.

Assessment and Repair - External Corrosion Direct Assessment (ECDA)

3. ECDA Plan (detail) *Is an adequate ECDA plan and process in place for conducting ECDA?* (AR.EC.ECDAPLAN.P) (detail)

192.925(a) (192.925(b))	Sat+	SatX	Concern	Unsat	NA	NC

Notes: PSE TIMP 2013 Appendix H: External Corrosion Direct Assessment Plan

4. ECDA Pre-Assessment (detail) *From the review of the results of selected integrity assessments, does the ECDA pre-assessment process comply with NACE SP0502-2008 Section 3 and §192.925(b)(1)?* (AR.EC.ECDAPREASSESS.R) (detail)

192.925(b)(1) (NACE SP-0502-2008, Section 3.2)	Sat+X	Sat	Concern	Unsat	NA	NC

Notes: PSE does the indirect assessment for the intire line instead of only the HCA's. All assessments are reassessments so they are only required to use one tool. Reviewed the Feasibility Analysis Report (PSE form 4026+) and ECDA Region Report (PSE form, 4020)

5. Integration of ECDA Results with other Information (detail) *Is the process for integrating ECDA results with other information adequate?* (AR.EC.ECDAINTEGRATION.P) (detail)

192.917(b) (B31.8S Section 4.5)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: ECDA information is incorporated into the IRAS database every year. They use the Appendix A, Figure 3-16 background process appears to be adequate.

6. Integration of ECDA Results with other Information (detail) *From a review of records, did the operator integrate other data/information when evaluating data/results?* (AR.EC.ECDAINTEGRATION.R) (detail)

192.917(b) (B31.8S Section 4.5)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: Information for previous years is incorporated yearly into the database and new risk ranking is generated every year. In one case a church was added to a segment and the HCA had to be extended the next year to accommodate that change.

7. ECDA Region Identification (detail) *From the review of the results of selected integrity assessments, did the operator identify ECDA Regions?* (AR.EC.ECDAREGION.R) (detail)

192.925(b)(1) (NACE SP 0502 2008)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: ECDA Region report form is filled out during the Pre Inspection.

8. ECDA Indirect Examination (detail) *From the review of the results of selected integrity assessments, does the ECDA indirect inspection process comply with NACE SP0502-2008 Section 4 and ASME B31.8S-2004, Section 6.4?* (AR.EC.ECDAINDIRECT.R) (detail)

192.925(b)(2) (NACE SP0502-2008, Section 4)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: TIMP 2013 Appendix H Table 9-1 has Severity Classifications.

9. ECDA Direct Examination (detail) *From the review of the results of selected integrity assessments, were excavations and data collection performed in accordance with NACE SP0502-2008, Sections 5 and 6.4.2 and ASME B31.8S, Section 6.4?* (AR.EC.ECDADIRECT.R) (detail)

192.925(b)(3) (NACE SP-0502-2008 Sections 5 and 6.4.2)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: Direct examination was performed per NACE SP0502-2008 Section 5 in 2012.

10. Quality of ECDA Data Analysis (detail) *From the review of the results of integrity assessments, was analysis of the ECDA data and other information adequate to identify external corrosion threats to the pipeline?* (AR.EC.ECDAANALYSIS.R) (detail)

192.925(b)(4) (192.933(b); B31.8S Section 6.4)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: Yes, during Lynnwood ECDA they found an area where coating was thinned but no corrosion was present. I consider that the ECDA tool they are using is adequate for this purpose.

12. ECDA Post-Assessment (detail) *From the review of the results of selected integrity assessments, were requirements met for post assessment?* (AR.EC.ECDAPOSTASSESS.R) (detail)

192.925(b)(4) (NACE SP-0502-2002 Section 6.2)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: Remaining Life of North Midway is 19 years of remaining life at an corrosion rate of .007 per year.

Assessment and Repair - Internal Corrosion Direct Assessment

3. ICDA Plan (detail) *Is an adequate ICDA plan and process in place for conducting ICDA?* (AR.IC.ICDAPLAN.P) (detail)

192.927(c) (192.927(a); 192.927(b); ASME B31.8S, Section 6.4 and Appendix B2)	Sat+	Sat	Concern	Unsat	NAX	NC

> **Notes: PSE does not currently use ICDA for Integrity Management. PSE uses ECDA exclusively. PSE does not transport corrosive gas in any of their transmission lines. If ICDA is required, they will develop a plan.**

4. Pre-Assessment (detail) *From the review of the results of selected integrity assessments, were the requirements met for an ICDA pre-assessment?* (AR.IC.ICDAPREASSESS.R) (detail)

192.927(c)(1) (B31.8S Appendix A2)	Sat+	Sat	Concern	Unsat	NAX	NC

> **Notes: PSE does not currently use ICDA for Integrity Management. PSE uses ECDA exclusively. PSE does not transport corrosive gas in any of their transmission lines. If ICDA is required, they will develop a plan.**

5. Integration of ICDA Results with other Information (detail) *Is the process for integrating ICDA results with other information adequate?* (AR.IC.ICDAINTEGRATION.P) (detail)

192.917(b) (B31.8S Section 4.5)	Sat+	Sat	Concern	Unsat	NAX	NC

> **Notes: PSE does not currently use ICDA for Integrity Management. PSE uses ECDA exclusively. PSE does not transport corrosive gas in any of their transmission lines. If ICDA is required, they will develop a plan.**

6. Integration of ICDA Results with Other Information (detail) *From a review of records, were other data/information integrated when evaluating data/results?* (AR.IC.ICDAINTEGRATION.R) (detail)

192.917(b) (B31.8S Section 4.5)	Sat+	Sat	Concern	Unsat	NAX	NC

> **Notes: PSE does not currently use ICDA for Integrity Management. PSE uses ECDA exclusively. PSE does not transport corrosive gas in any of their transmission lines. If ICDA is required, they will develop a plan.**

7. ICDA Region Identification (detail) *From the review of the results of selected integrity assessments, were ICDA Regions adequately identified?* (AR.IC.ICDAREGION.R) (detail)

192.927(c)(2) (192.927(c)(5))	Sat+	Sat	Concern	Unsat	NAX	NC

> **Notes: PSE does not currently use ICDA for Integrity Management. PSE uses ECDA exclusively. PSE does not transport corrosive gas in any of their transmission lines. If ICDA is required, they will develop a plan.**

8. Identification of Locations for Excavation and Direct Examination (detail) *From the review of the results of selected integrity assessments, were sites identified where internal corrosion may be present?* (AR.IC.ICDADIRECT.R) (detail)

192.927(c)(3) (192.927(c)(5))	Sat+	Sat	Concern	Unsat	NAX	NC

> **Notes: PSE does not currently use ICDA for Integrity Management. PSE uses ECDA exclusively. PSE does not transport corrosive gas in any of their transmission lines. If ICDA is required, they will develop a plan.**

10. Post-Assessment Evaluation and Monitoring (detail) *From the review of the results of selected integrity assessments, did the operator assess the effectiveness of the ICDA process?* (AR.IC.ICDAPOSTASSESS.R) (detail)

192.927(c)(4)(i) (192.927(c)(4)(ii))	Sat+	Sat	Concern	Unsat	NAX	NC

Notes: PSE does not currently use ICDA for Integrity Management. PSE uses ECDA exclusively. PSE does not transport corrosive gas in any of their transmission lines. If ICDA is required, they will develop a plan.

11. Quality of ICDA Data Analysis (detail) *From the review of the results of integrity assessments, was analysis of the ICDA data and other information adequate to identify internal corrosion threats to the pipeline?* (AR.IC.ICDAANALYSIS.R) (detail)

192.927 (192.933(b); B31.8S Section 6.4, Appendix A2 and Appendix B2)	Sat+	Sat	Concern	Unsat	NAX	NC

Notes: PSE does not currently use ICDA for Integrity Management. PSE uses ECDA exclusively. PSE does not transport corrosive gas in any of their transmission lines. If ICDA is required, they will develop a plan.

Assessment and Repair - Repair Criteria

1. Definition of Discovery (detail) *Does the integrity assessment process properly define discovery and the required time frame?* (AR.RC.DISCOVERY.P) (detail)

192.933(b)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: Discovery is properly defined in TIMP 2013 Section 9 and Appendix J Section 4.

2. Inclusion of All IM Repair Criteria (detail) *Do the operator's Integrity Management Plan and/or maintenance processes include all of the §192.933 repair criteria?* (AR.RC.IMPRC.P) (detail)

192.911(e) (192.933(c); 192.933(d))	Sat+	SatX	Concern	Unsat	NA	NC

Notes: PSE TIMP 2013 Appendix J Sections 6 and 7

3. Categorization of Defects (detail) *From the review of the results of integrity assessments, were all defects properly categorized or discovered?* (AR.RC.DEFECTCAT.R) (detail)

192.933(d) (192.933(b); 192.933(c))	Sat+	SatX	Concern	Unsat	NA	NC

Notes: Reviewed three integrity assessments. PSE followed their program and categorized indications as required.

4. Pressure Reductions Taken in Response to Remediation of Conditions (detail) *From the review of the results of integrity assessments, was an acceptable pressure reduction promptly taken for each Immediate Repair condition or when a repair schedule could not be met?* (AR.RC.PRESSREDUCE.R) (detail)

192.933(a)	Sat+	Sat	Concern	Unsat	NAX	NC

Notes: No pressure reductions have been required.

5. Prioritized Schedule (detail) *From the review of the results of integrity assessments, did the operator develop a prioritized schedule?* (AR.RC.SCHEDULE.R) (detail)

192.933(c) (ASME B31.8S, Section 7)	Sat+	SatX	Concern	Unsat	NA	NC

Notes; Reviewed PSE prioritized schedule and the scheduling of ECDA's and found that the digs were performed per the schedule.

6. Adequacy of Remediation (detail) *From the review of the results of integrity assessments, is the remediation specified in the prioritized schedule adequate to ensure the integrity of the pipeline until the next scheduled reassessment?* (AR.RC.METHOD.R) (detail)

192.933(a)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: External Corrosion and third party damage are PSE's major threats. PSE uses the tools CIS and DCVG to determine where the external coating may be compromised.

7. Repair Criteria in Covered Segments (detail) *Does the repair process cover all of the elements for making repairs in covered segments?* (AR.RC.CRITERIA.P) (detail)

192.933(c)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: PSE TIMP 2013 Appendix J: Anomalous Conditions Sections 5-8.

8. Timely Remediation (detail) *From the review of the results of integrity assessments, were defects in segments that could affect an HCA remediated or dispositioned (i.e., repair, pressure reduction, or notification to PHMSA) within the applicable mandatory time limits of 192.933(d)?* (AR.RC.SCHEDULEIMPL.R) (detail)

192.933(d) (ASME B31.8S Section 7)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: Example was the immediate repair of a corrosion defect on the Midway Transmission section that could have reduced the MAOP, the defect was repaired by installing a full encirclement sleeve.

Assessment and Repair - Stress Corrosion Cracking

2. SCCDA Plan (detail) *Is an adequate plan developed for performing SCCDA, if the conditions for SCC were present?* (AR.SCC.SCCDAPLAN.P) (detail)

192.929(b) (B31.8S Appendix A3)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: TIMP 2013 Appendix E Section 16 shows how PSE determined that the conditions for SCC were not present on any of PSEs transmission lines. If they do find SCC to be a threat they will develop a plan for SCC.

3. Collect and Evaluate Data (detail) *From the review of the results of selected integrity assessments, were data collected and evaluated?* (AR.SCC.SCCDADATA.R) (detail)

192.929(b)(1) (B31.8S Appendix A3.2)	Sat+	Sat	Concern	Unsat	NAX	NC

Notes: Conditions for SCC do not exist on PSE transmission lines.

4. Assessment Method (High pH SCC) (detail) *From the review of the results of selected integrity assessments, did the operator perform an assessment using one of the methods specified in B31.8S Appendix A3? (AR.SCC.SCCDAMETHOD.R) (detail)*

192.929(b)(2) (B31.8S Appendix A3)	Sat+	Sat	Concern	Unsat	NAX	NC

Notes: Conditions for SCC do not exist on PSE transmission lines.

5. Assessing for Near Neutral SCC (detail) *From the review of the results of selected integrity assessments, was the pipeline evaluated for near neutral SCC? (AR.SCC.SCCDANEARNEUTRAL.R) (detail)*

192.929(b)(2)	Sat+	Sat	Concern	Unsat	NAX	NC

Notes: Conditions for SCC do not exist on PSE transmission lines.

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

192.939(a)(3)	Sat+	Sat	Concern	Unsat	NAX	NC

Notes: Conditions for SCC do not exist on PSE transmission lines.

Integrity Management - Baseline Assessments

1. IM Baseline Assessments - Methods (detail) *Does the process include requirements for specifying an assessment method(s) for each covered segment that is best suited for identifying anomalies associated with specific threats identified for the segment? (IM.BA.BAMETHODS.P) (detail)*

192.919(b) (192.921(a); 192.921(c); 192.921(h))	Sat+	SatX	Concern	Unsat	NA	NC

Notes:
External Corrosion and third party damage are their two major threats. Close Interval Survey (CIS) & Direct Current Voltage Gradient (DCVG) are the assessment methods used by PSE.

2. IM Baseline Assessments - Methods (detail) *Was an assessment method(s) specified for each covered segment that is best suited for identifying anomalies associated with specific threats identified for the segment? (IM.BA.BAMETHODS.R) (detail)*

192.919(b) (192.921(a); 192.921(c); 192.921(h))	Sat+	SatX	Concern	Unsat	NA	NC

Notes: 2004 Transmission Integrity Management Program (TIMP) Manual Appendix 4-4 Integrity Assessment Methods and Detailed Assessment Schedules for All Segments.

3. IM Baseline Assessments - Prioritized Schedule (detail) *Does the BAP process require a schedule for completing the assessment activities for all covered segments and consideration of applicable risk factors in the prioritization of the schedule? (IM.BA.BASCHEDULE.P) (detail)*

192.917(c), (192.919(c); 192.921(b))	Sat+	SatX	Concern	Unsat	NA	NC

Notes: 2004 TIMP Manual Appendix A4-4,   and current manual TIMP 2013 Appendix F, Section 4(page 173)

4. IM Baseline Assessments - Prioritized Schedule (detail) *Does the BAP contain a schedule for completing the assessment activities for all covered segments that appropriately considered the applicable risk factors in the prioritization of the schedule as required by the process? (IM.BA.BASCHEDULE.R) (detail)*

192.917(c) (192.919(c); 192.921)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: Baseline Assessment was prioritized in 2004 and covered segments had electrical surveys performed from 2005-2010 except for casings. Casings were removed in 2009 thru 2012. Pipe under the casing was Jeeped and all holidays in coating were removed to determine if any corrosion was present. Corrosion was found in two locations and they were mitigated. Evaluation was completed per the risk model.

5. IM Baseline Assessments - Prior Assessments (detail) *Does the process require that prior assessment methods meet the requirements of §192.921(a) and associated remedial actions to have been carried out to address conditions listed in §192.933? (IM.BA.BAPRIOR.P) (detail)*

192.921(e)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: PSE requires that all assesments meet 192.921(a). No conditions per 192.933 have been discovered that would require the implementation of their program.

6. IM Baseline Assessments - Prior Assessments (detail) *From a review of selected records, have prior assessment methods met the requirements of §192.921(a) and associated remedial actions to have been carried out to address conditions listed in §192.933? (IM.BA.BAPRIOR.R) (detail)*

192.921(e)	*Sat+*	*SatX*	*Concern*	*Unsat*	*NA*	*NC*

Notes: One case only was found during this cycle. A corroded area 1.5 inches long with a remaining wall thickness of .150 was found where a casing seal had disbonded and resulted in a corrosion area. Calculations were performed and the remaining wall thickness was insufficient for the MOAP of the pipeline. PSE installed a reinforcement sleeve to mitigate the problem.

7. IM Baseline Assessments - New HCAs/Newly Installed Pipe (detail) *Does the process include requirements for updating the baseline assessment plan for new HCAs and newly installed pipe? (IM.BA.BANEW.P) (detail)*

192.905(c) (192.921(f); 192.921(g))	Sat+	Sat X	Concern	Unsat	NA	NC

Notes: TIMP 2013, section 5 and Appendix B. section 8. Baseline assessment plan is updated every year. One example is the addition of a HCA on the newly acquired Sumas line where a ball field was found adjacent to the pipeline.

8. IM Baseline Assessments - New HCAs/Newly Installed Pipe (detail) *Has the BAP been adequately updated for new HCAs and newly installed pipe? (IM.BA.BANEW.R) (detail)*

192.905(c), (192.921(f); 192.921(g))	Sat+	SatX	Concern	Unsat	NA	NC

Notes:
Reviewed the addition of a HCA in Sumas and another case where the HCA was extended to include a new church on the Lynnwood section.

9. IM Baseline Assessments - Environmental & Safety Risks (detail) *Does the process include requirements for conducting integrity assessments (baseline and reassessment) in a manner that minimizes environmental and safety risks? (IM.BA.BAENVIRON.P) (detail)*

192.911(m) (192.911(o); 192.919(e); ASME B31.8S-2004, Section 11)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: TIMP 2004 Appendix I Section 3.1

10. IM Baseline Assessments - Environmental & Safety Risks (detail) *From a review of selected records, have integrity assessments (baseline and reassessment) been conducted in a manner that minimizes environmental and safety risks?* (IM.BA.BAENVIRON.R) (detail)

192.911(m) (192.11(o); 192.919(e); ASME B31.8S-2004, Section 11)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: Safety programs are in place and in one case they supported a light pole when they were not sure how close the pipeline was to the footing.

Integrity Management - Continual Evaluation and Assessment

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

192.937(b) (192.917(a); 192.917(b); 192.917(c); 192.917(d); 192.917(e))	Sat+	SatX	Concern	Unsat	NA	NC

Notes: TIMP 2013 Section 12, Periodic Evaluation and Improvement

2. Periodic Evaluations (detail) *Have periodic evaluations of pipeline integrity been performed based on data integration and risk assessment to identify the threats specific to each covered segment and the risk represented by these threats?* (IM.CA.PERIODICEVAL.R) (detail)

192.937(b) (192.917(a); 192.917(b); 192.917(c); 192.917(d); 192.917(e))	Sat+	SatX	Concern	Unsat	NA	NC

Notes: PSE provides data to their risk model and reevaluates risk annually. Reviewed PSE Baseline Assessment in 2004 and found that subsequent reevaluations were performed per the prioritized schedule.

3. IM Continual Assessments - Methods (detail) *Is the approach for establishing reassessment method(s) consistent with the requirements in §192.937(c)?* (IM.CA.REASSESSMETHOD.P) (detail)

192.937(c) (192.931)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: PSE uses direct assessment of the pipeline as a reassessment method.

4. IM Continual Assessments - Methods (detail) *Has the approach for establishing the reassessment method been performed in a manner consistent with the requirements in §192.937(c) and as required?* (IM.CA.REASSESSMETHOD.R) (detail)

192.937(c) (192.931)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: PSE uses ECDA for all assessments of Transmission Pipelines.

5. Low Stress Reassessments (detail) *Does the process include requirements for the "low stress reassessment" method to address threats of external and/or internal corrosion for pipelines operating at below 30% SMYS.* (IM.CA.LOWSTRESSREASSESS.P) (detail)

192.941(a) (192.941(b); 192.941(c))	Sat+	Sat	Concern	Unsat	NAX	NC

Notes: PSE does not use Low Stress Reassessments, they use Confirmatory Direct Assessments.

6. Low Stress Reassessments (detail) *Is the implementation of "low stress reassessment" method to address threats of external and/or internal corrosion adequate and being performed as required?* (IM.CA.LOWSTRESSREASSESS.R) (detail)

192.941(a) (192.941(b); 192.941(c))	Sat+	Sat	Concern	Unsat	**NAX**	N C

Notes: PSE does not use Low Stress Reassessments, they use Confirmatory Direct Assessments.

7. Reassessment Intervals (detail) *Is the process for establishing the reassessment intervals consistent with §192.939 and ASME B31.8S-2004?* (IM.CA.REASSESSINTERVAL.P) (detail)

192.937(a) (192.939(a); 192.939(b); 192.913(c); ASME B31.8S-2004, Section 5, Table 3)	Sat+	**SatX**	Concern	Unsat	N A	N C

Notes: Appendix G, Table 4-1, 7 year interval for Confirmatory Direct Assessment.

8. Reassessment Intervals (detail) *Have reassessment intervals been established in a manner consistent with §192.939 and ASME B31.8S-2004 as required?* (IM.CA.REASSESSINTERVAL.R) (detail)

192.937(a) (192.939(a); 192.939(b); 192.913(c); ASME B31.8S-2004, Section 5, Table 3)	Sat+	**SatX**	Concern	Unsat	N A	N C

Notes: Reviewed the Reassessment Schedule in Table 3-1: of 7500.4400

9. Waiver from Reassessment Interval in Limited Situations (detail) *Does the process include requirements for reassessment interval waivers?* (IM.CA.REASSESSWAIVER.P) (detail)

192.943(a) (192.943(b))	Sat+	**SatX**	Concern	Unsat	N A	N C

Notes: TIMP 2013 Appendix G, Section 6.3, Application for Waiver

10. Waiver from Reassessment Interval in Limited Situations (detail) *Have reassessment interval waivers been adequately implemented, if applicable?* (IM.CA.REASSESSWAIVER.R) (detail)

192.943(a) (192.943(b))	Sat+	Sat	Concern	Unsat	**NAX**	N C

Notes: PSE has not requested a waiver to date.

11. Deviation from Reassessment Requirements based on Exceptional Performance (detail)
Does the process include requirements for deviations from reassessment requirements based on exceptional performance? (IM.CA.REASSESSEXCPERF.P) (detail)

192.913(a) (192.913(b); 192.913(c); ASME B31.8S-2004)	Sat+	Sat	Concern	Unsat	**NAX**	N C

Notes: PSE has a risk based model.

12. Deviation from Reassessment Requirements based on Exceptional Performance (detail)
Have deviations from reassessment requirements based on exceptional performance been adequately handled, if applicable? (IM.CA.REASSESSEXCPERF.R) (detail)

192.913(a) (192.913(b); 192.913(c); ASME B31.8S-2004)	Sat+	Sat	Concern	Unsat	**NAX**	N C

Notes: PSE has a risk based model.

Integrity Management - High Consequence Areas

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

192.905(a)	Sat+	SatX	Concern	Unsat	NA	NC

Notes PSE uses method two which is in Transmission Integrity Management Program Plan (TIMP). Sections 3.1 and 3.2.

2. IM High Consequence Areas - HCA Identification (detail) *Was the identification of pipeline segments in high consequence areas completed by December 17, 2004 in accordance with process requirements?* (IM.HC.HCAID.R) (detail)

192.905(a) (192.907(a); 192.911(a))	Sat+	SatX	Concern	Unsat	NA	NC

Notes From 2004 Manual , Appendix 3-4, Baseline Risk Assessment Results were completed by due date with the help of Dynamic Risk Assessment Systems. Dynamic Risk developed PSE's first TIMP manual.

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

192.903 (192.905(a))	Sat+	SatX	Concern	Unsat	NA	NC

Notes :PSE uses the same formula as show in 192.903 for defining their Potential Impact Radius.

4. IM High Consequence Areas - Potential Impact Radius (detail) *Do records indicate use of potential impact radius (PIR) for establishment of high consequence areas consistent with requirements of §192.903?* (IM.HC.HCAPIR.R) (detail)

192.903 (192.905(a))	Sat+	SatX	Concern	Unsat	NA	NC

Notes Reviewed records that show the definition of PIR for the remainder of the system. Confirmed that PIR of 126+ ft was correct for Sumas.

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

192.903 (192.905(b))	Sat+	SatX	Concern	Unsat	NA	NC

Notes PSE uses all the listed sources and have additional sources that they use.

6. IM High Consequence Areas - Identified Sites (detail) *Do records indicate identification of identified sites being performed as required?* (IM.HC.HCASITES.R) (detail)

192.903 (192.905(b))	Sat+	SatX	Concern	Unsat	NA	NC

Notes: Reviewed Sumas pipeline Transmission Integrity Management Patrol Report Form 4288, for Sumas when they determined they had an HCA at a ball field on 5-19-2011.

7. IM High Consequence Areas - Identification Method 1 (Class Locations) (detail) *Is the integrity management process adequate for application of §192.903 High Consequence Area definition (1) for identification of HCAs?* (IM.HC.HCAMETHOD1.P) (detail)

192.903(1)(i) (192.903(1)(ii); 192.903(1)(iii); 192.903(1)(iv))	Sat+	Sat	Concern	Unsat	**NAX**	NC

Notes: PSE uses Method 2 only for identifying HCAs.

8. IM High Consequence Areas - Identification Method 1 (Class Locations) (detail) *Do records indicate adequate application of the §192.903 High Consequence Area definition (1) for the identification of HCAs?* (IM.HC.HCAMETHOD1.R) (detail)

192.903 (1)(i) (192.903(1)(ii); 192.903(1)(iii); 192.903(1)(iv))	Sat+	Sat	Concern	Unsat	**NAX**	NC

Notes: PSE uses Method 2 only for identifying HCAs.

9. IM High Consequence Areas - Identification Method 2 (Potential Impact Radius) (detail) *Is the integrity management process adequate for application of §192.903 High Consequence Area definition (2) for identification of HCAs?* (IM.HC.HCAMETHOD2.P) (detail)

192.903(2)(i) (192.903(2)(ii))	Sat+	**SatX**	Concern	Unsat	NA	NC

Notes: Flow chart in Appendix A Fig 3-3b & 3.3b, show how PSE determines additional high consequesnce area in their program. The requirements of 49 CFR 192.903 appear to be satisfied.

10. IM High Consequence Areas - Identification Method 2 (Potential Impact Radius) (detail) *Do records indicate adequate application of §192.903 High Consequence Area definition (2) for identification of HCAs?* (IM.HC.HCAMETHOD2.R) (detail)

192.903(2)(i) (192.903(2)(ii))	Sat+	**SatX**	Concern	Unsat	NA	NC

Notes : Reviewed HCA maps for Olympia and Midway for years 2005, 2006, 2007, 2010, 2011.   Reviewed PIR calculations for transmission segment.

11. IM High Consequence Areas - Newly Identified HCAs (detail) *Does the process include a requirement for evaluation of new information that may show that a pipeline segment impacts a high consequence area?* (IM.HC.HCANEW.P) (detail)

192.905(c)	Sat+	**SatX**	Concern	Unsat	NA	NC

Notes; Process sets up inspections(ground surveys) of the area within PIR for each transmission segment, and has that information assessed to determine if another HCA exists on the pipeline.

12. IM High Consequence Areas - Newly Identified HCAs (detail) *Are evaluations of new information that may show that a pipeline segment impacts a high consequence area being performed as required?* (IM.HC.HCANEW.R) (detail)

192.905(c)	**Sat+X**	Sat	Concern	Unsat	NA	NC

Notes: Found during inspections in 2006, and added to the Baseline Assessment in 2007, which was shown in the new baseline as an extended HCA, assessed in 2010.

Integrity Management - Preventive and Mitigative Measures

1. P&M Measures - General Requirements (detail) *Does the process include requirements to identify additional measures to prevent a pipeline failure and to mitigate the consequences of a pipeline failure in a high consequence area?* (IM.PM.PMMGENERAL.P) (detail)

192.935(a)	**Sat+**	**SatX**	**Concern**	**Unsat**	**NA**	**NC**

> **Notes: PSE TIMP 2013 Appendix K, Preventative and Mitigative Measures.**

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

192.935(a)	**Sat+**	**SatX**	**Concern**	**Unsat**	**NA**	**NC**

> **Notes: For PSE they leak survey transmission lines and stations every 6 months instead of annually as an example of an implementation of P&MM.**

3. P&M Measures - Third Party Damage (detail) *Does the preventive and mitigative process include requirements that threats due to third party damage be addressed? (Note: A subset of these enhancements are required for pipelines operating below 30% SMYS - See IM.PM.PMMTPDSMYS.P)* (IM.PM.PMMTPD.P) (detail)

192.917(e)(1) (192.935(b)(1); 192.935(e))	**Sat+**	**SatX**	**Concern**	**Unsat**	**NA**	**NC**

> **Notes: TIMP 2013, Appendix K, Preventative and Mitigative Measures, P&M Measures to Address Third Party Damage (page 220)**

4. P&M Measures - Third Party Damage (detail) *Has P&MM been implemented regarding threats due to third party damage as required by the process?* (IM.PM.PMMTPD.R) (detail)

192.917(e)(1) (192.935(b)(1); 192.935(e))	**Sat+**	**SatX**	**Concern**	**Unsat**	**NA**	**NC**

> **Notes: PSE uses qualified operators and locaters and have a Public Awareness program. They subscribe to a one-call program and monitor any transmission line excavations.**

5. P&M Measures - Third Party Damage (Special Cases) (detail) *Does the process include requirements for preventive and mitigative requirements for pipelines operating below 30% SMYS?* (IM.PM.PMMTPDSMYS.P) (detail)

192.935(d) (192.935(e); 192 Table E.II.1)	**Sat+**	**SatX**	**Concern**	**Unsat**	**NA**	**NC**

> **Notes: TIMP 2013, Appendix K, Preventative and Mitigative Measures, Covered and Noncovered Segments Operating Below 30% SMYS (page 222)**

6. P&M Measures - Third Party Damage (Special Cases) (detail) *Are preventive and mitigative requirements for pipelines operating below 30% SMYS being performed as required?* (IM.PM.PMMTPDSMYS.R) (detail)

192.935(d) (192.935(e); 192 Table E.II.1)	**Sat+**	**SatX**	**Concern**	**Unsat**	**NA**	**NC**

> **Notes PSE is part of a one-call system and routinely monitors excavation on or near a covered segment. PSE qualifies their personnel and contractor personnel.**

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

192.935(b)(2)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: TIMP 2013, Appendix K, Preventative and Mitigative Measures, P&M Measures to Address Outside Force Damage (page 222)

8. P&M Measures - Outside Force Damage (detail) *Are significant threats due to outside force (e.g., earth movement, floods, unstable suspension bridge) being adequately addressed?* (IM.PM.PMMOF.R) (detail)

192.935(b)(2)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: Reviewed Bridge patrols (quarterly) for Transmission Pipe under bridge over Green River. 4625.1750 covers what is examined during the bridge patrol. Documentation is adequate.

9. P&M Measures - Corrosion (detail) *Does the process adequately account for taking required actions to address significant corrosion threats?* (IM.PM.PMMCORR.P) (detail)

192.917(e)(5)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: TIMP 2013, Appendix K, Preventative and Mitigative Measures, P&M Measures to Address Corrosion (page 223)

10. P&M Measures - Corrosion (detail) *Are required actions being taken to address significant corrosion threats as required?* (IM.PM.PMMCORR.R) (detail)

192.917(e)(5)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: When corrosion was found in 2010 first quarter, during casing removal, PSE accelerated their schedule and removed all casings on the Midway Segment.

11. P&M Measures - Automatic Shut-Off Valves or Remote Control Valves (detail) *Does the process include requirements to decide if automatic shut-off valves or remote control valves represent an efficient means of adding protection to potentially affected high consequence areas?* (IM.PM.PMMASORCV.P) (detail)

192.935(c)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: TIMP 2013, Appendix K, Preventative and Mitigative Measures, P&M Measures to Reduce Consequences (page 223)

12. P&M Measures - Automatic Shut-Off Valves or Remote Control Valves (detail) *Has an adequate determination been made to determine if automatic shut-off valves or remote control valves represent an efficient means of adding protection to potentially affected high consequence areas?* (IM.PM.PMMASORCV.R) (detail)

192.935(c)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: Reviewed minutes of 2007 Preventative and Mitigative Measures Committee. They review the use of ASV and RCV's every year, and have found that these valves would not add any significant level of safety to their transmission lines.

Integrity Management - Quality Assurance

1. Quality Assurance (detail) *Are quality assurance processes in place for risk management applications that meet the requirements of ASME B31.8S-2004, Section 12?* (IM.QA.QARM.P) (detail)

192.911(l)	**Sat+**	**SatX**	**Concern**	**Unsat**	**NA**	**NC**

Notes: TIMP 2013 Appendix C: Quality Control Plan includes required criteria.

2. Quality Assurance (detail) *Do records indicate the quality assurance processes for risk management applications meet the requirements of ASME B31.8S-2004, Section 12 and are the processes being performed as required?* (IM.QA.QARM.R) (detail)

192.911(l)	**Sat+**	**SatX**	**Concern**	**Unsat**	**NA**	**NC**

Notes: Internal audit in 2012 determined that Integrity Management function should be consolidated into one group. The consolidation and rewriting the manual were done this year. (2013)

3. Personnel Qualification and Training Requirements (detail) *Does the process include requirements to assure personnel involved in the integrity management program are qualified for their assigned responsibilities?* (IM.QA.IMPERSONNEL.P) (detail)

192.911(l) (192.915; ASME B31.8S-2004, Section 12(b)(4))	**Sat+**	**SatX**	**Concern**	**Unsat**	**NA**	**NC**

Notes: TIMP 2013 Appendix C, Quality Control Plan,

4. Personnel Qualification and Training Requirements (detail) *Are personnel involved in the integrity management program qualified for their assigned responsibilities?* (IM.QA.IMPERSONNEL.R) (detail)

192.911(l) (192.915(a); 192.915(b); 192.915(c); ASME B31.8S-2004, Section 12(b)(4))	**Sat+**	**SatX**	**Concern**	**Unsat**	**NA**	**NC**

Notes: Reviewed a sample of personnel work history reports to confirm qualification of personnel.

5. Invoking Non-Mandatory Statements in Standards (detail) *Does the process include requirements that non-mandatory requirements (e.g., "should" statements) from industry standards or other documents invoked by Subpart O (e.g., ASME B31.8S-2004 and NACE RP0502-2002) be addressed by an appropriate approach?* (IM.QA.IMNONMANDT.P) (detail)

192.7(a)	**Sat+**	**SatX**	**Concern**	**Unsat**	**NA**	**NC**

Notes: ASME B31.8S section 11, (f) should statement is turned into a shall statement in TIMP 2013, Section 12, Periodic Evaluation,

NACE 0502 Section 3.4.1.2 should statement is a shall statement in TIMP 2013 Appendix H Section 13.1 for the selection of complimentary tools for indirect inspection.

6. Management of Change (detail) *Are the processes for management of changes to the IMP and management of change of associated procedures and processes adequate?* (IM.QA.IMMOC.P) (detail)

192.909(a) (192.909(b); 192.911(k))	**Sat+**	**SatX**	**Concern**	**Unsat**	**NA**	**NC**

Notes: Management of change and associated processes appear to be adequate.

7. Management of Change (detail) *Are changes to the IMP and management of changes to IMP-related processes being performed as required?* (IM.QA.IMMOC.R) (detail)

192.909(a) (192.909(b); 192.911(k))	Sat+	**SatX**	Concern	Unsat	NA	NC

Notes: Reviewed Management of change form 3773 for 7-16-2013 which lists various minor changes to the TIMP manual that have been incorporated.

8. Performance Measures (detail) *Does the process include requirements for measuring and reporting integrity management program effectiveness?* (IM.QA.IMPERFMEAS.P) (detail)

192.945(a) (192.913(b); 192.951; ASME B31.8S-2004 Section 12(b)(5))	Sat+	**SatX**	Concern	Unsat	NA	NC

Notes: TIMP 2013 Section 11: Covers the measurement of performance and uses three sections, Overall Performance Measures, Threat Specific Performance Measures, and ECDA Performance Measures.   Overall Performance Measures are submitted to OPS/PHMSA annually.

9. Performance Measures (detail) *Has the IMP effectiveness been adequately measured and reported, as applicable, to PHMSA?* (IM.QA.IMPERFMEAS.R) (detail)

192.945(a) (192.913(b); 192.951; ASME B31.8S-2004 Section 12(b)(5))	Sat+	**SatX**	Concern	Unsat	NA	NC

Notes: PSE reports Overall Performance Measures to PHMSA every year as required. Reviewed Annual Report for natural Gas transmission.

10. Record Keeping (detail) *Is the process adequate to assure that required records are maintained for the useful life of the pipeline?* (IM.QA.RECORDS.P) (detail)

192.947(a) (192.947(b); 192.947(c); 192.947(d); 192.947(e); 192.947(f); 192.947(g); 192.947(h); 192.947(i); 192.911(n); ASME B31.8S-2004 Sections 12.1, 12.2(b)(1))	Sat+	**SatX**	Concern	Unsat	NA	NC

Notes: TIMP 2013 Section 14: Record Keeping lists the records required per 192.947. Record keeping appears to be adequate.

11. Record Keeping (detail) *Are required records being maintained for the useful life of the pipeline?* (IM.QA.RECORDS.R) (detail)

192.947(a) (192.947(b); 192.947(c); 192.947(d); 192.947(e); 192.947(f); 192.947(g); 192.947(h); 192.947(i); ASME B31.8S-2004 Sections 12.1, 12.2(b)(1))	Sat+	**SatX**	Concern	Unsat	NA	NC

Notes: Reviewed various records including Employee History Report, Baseline Assessment, and HCA surveys. Records are available.

Integrity Management - Risk Analysis

1. Threat Identification (detail) *Does the process include requirements to identify and evaluate all potential threats to each covered pipeline segment?* (IM.RA.THREATID.P) (detail)

192.917(a) (192.917(e); 192.913(b)(1); ASME B31.8S-2004, Section 2.2 and Section 5.10)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: Yes TIMP 2004 Table 3-4-1 shows all of the segments and the threat scores for each of the listed threats. A list of the threats considered is in TIMP 2013 Section 6.

2. Threat Identification (detail) *Do records indicate that all potential threats to each covered pipeline segment have been identified and evaluated?* (IM.RA.THREATID.R) (detail)

192.917(a) (192.917(e); 192.913(b)(1); ASME B31.8S-2004, Section 2.2 and Section 5.10)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: TIMP 2013 Appendix D Table 5-1 Threat Data Assessment lists all of the threats discussed during the initial risk ranking. All potential threats were identified and evaluated in TIMP 2004 Appendix 3-4.

3. Data Gathering (detail) *Does the process include requirements to gather existing data and information on the entire pipeline that could be relevant to covered segments?* (IM.RA.RADATA.P) (detail)

192.917(b) (192.917(e)(1); 192.911(k); ASME B31.8S-2004, Sections 4, 5.7(e), 11(a), 11(d), Appendix A)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: TIMP 2013 - Appendix A

4. Data Gathering (detail) *Is existing data and information on the entire pipeline that could be relevant to covered segments being adequately gathered?* (IM.RA.RADATA.R) (detail)

192.917(b) (192.917(e)(1); 192.911(k); ASME B31.8S-2004, Sections 4, 5.7(e), 11(a), 11(d), Appendix A)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: TIMP 2004 Appendix3-4 Baseline Risk Assessment Results

5. Data Integration (detail) *Does the process include requirements to integrate existing data and information on the entire pipeline that could be relevant to covered segments?* (IM.RA.RAINTEGRATE.P) (detail)

192.917(b) (192.917(e)(1); 192.911(k); ASME B31.8S-2004, Sections 4, 5.7(e), 11(a), 11(d), Appendix A)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: TIMP 2013 Appendix D, Section 6.4.

6. Data Integration (detail) *Is existing data and information on the entire pipeline that could be relevant to covered segments being adequately integrated?* (IM.RA.RAINTEGRATE.R) (detail)

192.917(b) (192.917(e)(1); 192.911(k); ASME B31.8S-2004, Sections 4, 5.7(e), 11(a), 11(d), Appendix A)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: Example was the integration of a new church in 2006 into the Baseline Assesment for 2007 on Lynnwood Segment.   The map from 2006 to 2007 showed that the HCA had been extended to include the new church.

7. Risk Analysis - Methodology (detail) *Does the process include requirements for a risk assessment that follows ASME B31.8S-2004, Section 5, and that considers the identified threats for each covered segment?* (IM.RA.RAMETHOD.P) (detail)

192.917(c) (192.917(d); ASME B31.8S-2004, Section 5.3, Section 5.4, Section 5.5, Section 5.12)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: PSE uses a relative risk assessment model in accordance with ASME/ANSI B31.8S, Section 5.5.

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

192.917(c) (ASME B31.8S-2004, Section 3.1, Section 3.3, Section 5.2, Section 5.3, and Section 5.7)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: PSE 's risk analysis process performed by Dynamic Risk appears to include all factors that are required by the regulations. See TIMP 2013 Appendix E Risk Evaluation and Prioritization.

9. Risk Analysis - Determination of Risk (detail) *Is risk analysis data combined in an appropriate manner to produce a risk value for each pipeline segment?* (IM.RA.RAFACTORS.R) (detail)

192.917(c) (ASME B31.8S-2004, Section 3.1, Section 3.3, Section 5.2, Section 5.3, and Section 5.7)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: PSE does yearly inputs to the IRAS database and has a new Risk Reassessment every year. Reviewed reassessments for 2005, 2006, 2007, 2008, 2010, 2011, 2012.

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

192.917(c) (ASME B31.8S-2004, Section 5.4, 5.7, 5.11, 5.12)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: Yes, new information is submitted every year to Dynamic Risk(IRAS) and PSE receives a new risk ranking.

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

192.917(c) (ASME B31.8S-2004, Section 5.4, 5.7, 5.11, 5.12)	Sat+	SatX	Concern	Unsat	NA	NC

Notes: Yes, PSE sends risk information to Dynamic Risk and they enter the information into IRAS. PSE is then able to query IRAS for information.