

Utilities and Transportation Commission

Standard Inspection Report for Intrastate Gas Systems

Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
 If an item is marked U, N/A, or N/C, an explanation must be included in this report.

A completed **Inspection Checklist, Cover Letter and Field Report** are to be submitted to the Chief Engineer within **30 days** from completion of the inspection.

| Inspection Report | | | |
|---|--|------------------------|-------------------|
| Docket Number | ID 2581 | | |
| Inspector Name & Submit Date | Stephanie Zuehlke 5/22/2012 | | |
| Sr. Eng Name & Review/Date | Joe Subsits 05/22/2012 | | |
| Operator Information | | | |
| Name of Operator: | Northwest Natural Gas Company | OP ID #: | 13840 |
| Name of Unit(s): | Headquarters | | |
| Records Location: | 220 NW Second Avenue Portland, Oregon 97209 | | |
| Date(s) of Last Review: | March 12-16, 2007 | Inspection Date | April 23-26, 2012 |

| |
|--|
| <p>Inspection Summary:</p> <p>See SPW 000. For manuals they are combined. Kerry Shampine states no engineering manual included here. All covered task folks are trained to reference other manuals if it references their task.</p> <p>WA & Oregon:</p> <ol style="list-style-type: none"> How field welders weld to a procedure without verifying ranges, etc they are welding to. |
|--|

| HQ Address: 220 NW Second Avenue Portland, Oregon 97209 | | System/Unit Name & Address: N/A | |
|--|--|--|-----|
| Co. Official: | Grant M. Yoshihara Vice President of Utility Operations | Phone No.: | N/A |
| Phone No.: | 503-226-4211 ext.2374 | Fax No.: | N/A |
| Fax No.: | None | Emergency Phone No.: | N/A |
| Emergency Phone No.: | 503-226-4211 Ext. 4613 Control Room | | N/A |
| Persons Interviewed | Title | Phone No. | |
| Dakota Duncan | Pipeline Safety Compliance Specialist | (503) 226-4211 ext: 4389 dakota.duncan@nwnatural.com | |
| Samantha Bert | Pipeline Safety Compliance Specialist | (503) 226-4211 ext: 4366 | |
| Andrea Scott | Pipeline Safety Compliance Specialist | (503) 226-4211 ext: 4534 | |
| Margaret Loch | Compliance Engineer | (503) 226-4211 ext: 4306 | |
| Kerry Shampine | Manager, Code Compliance | (503) 226-4211 ext: 4340 Kerry.Shampine@nwnatural.com | |
| Bill Rehse | Training Supervisor | (503) 226-4211 ext: 4036 | |
| Andrew Fortier | Engineering Supervisor | (503) 226-4211 ext: 4309 | |
| Douglas Tilgner | | | |
| Bill Prevele | Technical Trainer (majority of customer service) | (503) 226-4211 ext: 4067 | |

**Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Procedures and Plan Review**

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| | | |
|----------------|---|--------------------------|
| Roy Rogers | Corrosion Engineering Supv. | (503) 226-4211 ext: 4362 |
| Scott Lundgren | Engineer III IMP | (503) 226-4211 ext: 4355 |
| Gary Hyatt | Damage Prevention Supervisor | (503) 226-4211 ext: 4320 |
| Robbie Roberts | Compliance Administration | (503) 220-2581 |
| Cory Beck | Manager Consumer Information & Internet Services. | (503) 220-2576 |

Utilities and Transportation Commission

Standard Inspection Report for Intrastate Gas Systems Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| GAS SYSTEM OPERATIONS | | | |
|--|-----|-------------------------|--|
| Gas Supplier | | | |
| Operating Pressure(s): | | MAOP (Within last year) | Actual Operating Pressure (At time of Inspection) |
| Feeder: | N/A | N/A | N/A |
| Town: | N/A | N/A | N/A |
| Other: | N/A | N/A | N/A |
| Does the operator have any transmission pipelines? | | | |

| Pipe Specifications: | | | |
|------------------------|-----|------------------------------|-----|
| Year Installed (Range) | N/A | Pipe Diameters (Range) | N/A |
| Material Type | N/A | Line Pipe Specification Used | N/A |
| Mileage | N/A | SMYS % | N/A |

49 CFR PART 191 & CHAPTER 480-93 WAC

| REPORTING PROCEDURES | | | S | U | N/A | N/C |
|----------------------|----------------|--|---|---|-----|-----|
| 1. | 480-93-180 (1) | Immediate Notice of certain incidents to NRC (800) 424-8802 , or electronically at http://www.nrc.uscg.mil/nrchp.html , and additional report if significant new information becomes available. Operator must have a written procedure for calculating an initial estimate of the amount of product released in an accident. (Amdt. 192-115, 75 FR 72878, November 26, 2010, eff. 1/1/2011). .191.5 SPW 002 . Engineering Procedure H-3. | x | | | |
| 2. | | Reports (except SRCR and offshore pipeline condition reports) must be submitted electronically to PHMSA at https://opsweb.phmsa.dot.gov unless an alternative reporting method is authorized IAW with paragraph (d) of this section. (Amdt. 191-115, 75 FR 72878, November 26, 2010, eff. 1/1/2011). 191.7 | x | | | |
| 3. | | Telephonic Reports to UTC Pipeline Safety Incident Notification 1-888-321-9146 (Within 2 hours) for events which; 480-93-200(1) | | | | |
| 4. | | (a) Results in a fatality or personal injury requiring hospitalization; SPW-002 | x | | | |
| 5. | | (b) Results in damage to the property of the operator and others of a combined total exceeding fifty thousand dollars; | x | | | |
| 6. | | (c) Results in the evacuation of a building, or high occupancy structures or areas | x | | | |
| 7. | | (d) Results in the unintentional ignition of gas; | x | | | |
| 8. | | (e) Results in the unscheduled interruption of service furnished by any operator to twenty-five or more distribution customers; | x | | | |
| 9. | | (f) Results in a pipeline or system pressure exceeding the MAOP plus ten percent or the maximum pressure allowed by proximity considerations outlined in WAC 480-93-020 ; | x | | | |
| 10. | | (g) Is significant, in the judgment of the operator, even though it does not meet the criteria of (a) through (e) of this subsection; or | x | | | |
| 11. | 480-93-180 (1) | Telephonic Reports to UTC Pipeline Safety Incident Notification 1-888-321-9146 (Within 24 hours) for; 480-93-200(2) | x | | | |
| 12. | | (a) The uncontrolled release of gas for more than two hours; | x | | | |
| 13. | | b) The taking of a high pressure supply or transmission pipeline or a major distribution supply pipeline out of service; | x | | | |
| 14. | | (c) A pipeline or system operating at low pressure dropping below the safe operating conditions of attached appliances and gas equipment; or | x | | | |
| 15. | | (d) A pipeline or system pressure exceeding the MAOP. | x | | | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| REPORTING PROCEDURES | | | S | U | N/A | N/C |
|-----------------------------|----------------|--|----------|----------|------------|------------|
| 16. | | 30 day written incident (federal) reports; (DOT Form F 7100.1) 191.9(a) For Transmission & Gathering Lines; (DOT Form F 7100.2) 191.15(a) 30-day follow-up written report Submittal must be electronically to http://pipelineonlinereporting.phmsa.dot.gov (Amdt. 192-115, 75 FR 72878, November 26, 2010, eff. 1/1/2011). SPW-002-3.3 | x | | | |
| 17. | | Supplemental incident reports 191.15(c) SPW 002-3.3.2 | x | | | |
| 18. | | Written incident reports filed with the commission (within 30 days); and include the following; 480-93-200(4) (a) thru (g) | x | | | |
| 19. | 480-93-180 (1) | Supplemental reports filed with the commission 480-93-200(5) SPW-002-3.4 | x | | | |
| 20. | 480-93-180 (1) | Written report within 45 days of receiving the failure analysis of any incident or hazardous condition due to construction defects or material failure 480-93-200(6) SPW-002-3.4.2 – within 5 days for WA. | x | | | |
| 21. | | Annual Report (DOT Form PHMSA F-7100.2-1) For Transmission & Gathering 191.17(a) Complete and submit DOT Form PHMSA F 7100-2.1 by March 15 of each calendar year for the preceding year. (NOTE: June 15, 2011 for the year 2010). (Amdt. 192-115, 75 FR 72878, November 26, 2010). | x | | | |
| | | Annual Reports filed with the commission no later than March 15 for the proceeding calendar year 480-93-200(7) jSPW-002.3.2 | | | | |
| 22. | | <ul style="list-style-type: none"> A copy of PHMSA form F-7100.1-1 or F-7100.2-1 annual report required by the PHMSA/OPS 480-93-200(7)(a) SPW-002-3.2 | x | | | |
| 23. | | <ul style="list-style-type: none"> Annual Damage Prevention Statistics Report (eff 6/02/05) including the following; 480-93-200(7)(b)(i) thru (iii) SPW002-3.3 | x | | | |
| 24. | | Annual report on construction defects or material failures 480-93-200(7)(c) SPW002-3.3 | x | | | |
| 25. | 480-93-180 (1) | Providing updated emergency contact information to the Commission and appropriate officials 480-93-200(8) SPW-619-3.3 | x | | | |
| 26. | | Providing daily construction and repair activities reports 480-93-200(9) SPW-007-3.7.7 | x | | | |
| 27. | | Submitting copy of DOT Drug and Alcohol Testing MIS Data Collection Form (when required) 480-93-200(10) SPW-003-3.3.4 | x | | | |
| 28. | | Each operator must obtain an OPID, validate its OPIDs, and notify PHMSA of certain events at https://opsweb.phmsa.dot.gov (Amdt. 192-115, 75 FR 72878, November 26, 2010, eff. 1/1/2011). 191.22 Deadline into August because PHMSA website down. | x | | | |
| 29. | | Safety related condition reports (SRCR) 191.23 SPW-005 | x | | | |
| 30. | | Filing the SRCR within 5 days of determination, but not later than 10 days after discovery 191.25 SPW-005 | x | | | |

| Required Submission of Data to the National Pipeline Mapping System Under the Pipeline Safety Improvement Act of 2002 | | | S | U | N/A | N/C |
|--|------------------|---|----------|----------|------------|------------|
| 49 U.S.C. 60132, Subsection (b) | ADB-08-07 | Updates to NPMS: Operators are required to make update submissions every 12 months if any system modifications have occurred. Go to http://www.npms.phmsa.dot.gov/submission/ to review existing data on record. Also report no modifications if none have occurred since the last complete submission. Include operator contact information with all updates. Notice that report deposited 02.28.12 SPW 007-3.7.4 Include Language stating the submissions are required every 12 months. | | x | | |
| RCW 81.88.080 | | Pipeline Mapping System: Has the operator provided accurate maps (or updates) of pipelines, operating over two hundred fifty pounds per square inch gauge, to specifications developed by the commission sufficient to meet the needs of first responders? No reference found in manual. Submitted to Rey Dejos on 03.20.12. | | x | | |

Comments:

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| | |
|--|--|
| | |
|--|--|

| 49 CFR PART 192 SUBPART A – GENERAL CHAPTER 480-93 WAC – GAS COMPANIES---SAFETY | | | S | U | N/A | N/C |
|--|----------------|---|----------|----------|------------|------------|
| 31. | 480-93-180 (1) | Procedures for notifying new customers, within 90 days , of their responsibility for those selections of service lines not maintained by the operator. §192.16 SPW 482.3 In P/A Plan NWN has included a brochure for residential for Houeline maintenance Notice. | x | | | |
| 32. | | Conversion to Service - Any pipelines previously used in service not subject to Part 192? 192.14 None N/A | x | | | |

| | |
|------------------|--|
| Comments: | |
|------------------|--|

| SUBPART B - MATERIALS | | | S | U | N/A | N/C |
|------------------------------|----------------|--|----------|----------|------------|------------|
| | | Are minimum requirements prescribed for the selection and qualification of pipe and components for use in pipelines 192.51 | | | | |
| 33. | 480-93-180 (1) | For steel pipe, manufactured in accordance with and meet the listed specification found under Appendix B 192.55 SPW053-3.2.1 Material SPW-003 | x | | | |
| | | For new plastic pipe, qualified for use under this part if: 192.59(a) | | | | |
| 34. | 480-93-180 (1) | <ul style="list-style-type: none"> It is manufactured in accordance with a listed specification; and 192.59(a)(1) EMS-004 All medium density. It is resistant to chemicals with which contact may be anticipated. 192.59(a) (2) Iin Storage and handling of PE pipe and fittings.SPW-059-2 | x | | | |
| | | For used plastic pipe, qualified for use under this part if: 192.59(b) | | | | |
| 35. | 480-93-180 (1) | <ul style="list-style-type: none"> It was manufactured in accordance with a listed specification; 192.59(b)(1) It is resistant to chemicals with which contact may be anticipated; 192.59(b)(2) It has been used only in natural gas service. 192.59(b)(3)(4) Its dimensions are still within the tolerances of the specification to which it was manufactured; and, 192.59(b) It is free of visible defects. 192.59(b)(5) SPW-160-3.3.2 if subject to 192 they do not reuse. | x | | | |
| 36. | | Marking of Materials 192.63 SPW063- | x | | | |

| | |
|------------------|--|
| Comments: | |
|------------------|--|

| SUBPART C – PIPE DESIGN | | |
|--------------------------------|--|--|
| | Procedures for assuring that the minimum requirements for design of pipe are met | |

Utilities and Transportation Commission

Standard Inspection Report for Intrastate Gas Systems

Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
 If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| SUBPART C – PIPE DESIGN | | | | | | |
|-------------------------|---|---|---|---|-----|-----|
| | | For Steel Pipe | S | U | N/A | N/C |
| 37. | AOC #37 480-93-180 (1) 480-93-180 (1) AOC | Pipe designed of sufficient wall thickness, or installed with adequate protection, to withstand anticipated external pressures and loads that will be imposed on the pipe after installation. 192.103 EPW-D2 But does not include RSTRENG. Kerry will provide the reference. | | x | | |
| 38. | | Design formula for steel pipe. 192.105(a) EPW-D2 | x | | | |
| 39. | | Yield strength (S) for steel pipe. 192.107 | x | | | |
| 40. | | Nominal wall thickness (t) for steel pipe. 192.109 (a) & (b) (a) If the nominal wt is not known..... Determined by measuring the thickness of each piece of pipe at quarter points on one end unless..... (b) If the pipe is of uniform grade, size, and thickness and more than 10 lengths of pipeline, only 10 percent of the individual lengths, but not less than 10 lengths, need be measured. The thickness of the lengths that are not measured must be verified by applying a gauge set to the minimum thickness found by the measurement. The nominal wall thickness to be used in the design formula in §192.105 is the next wall thickness found in commercial specifications that is below the average of all the measurements taken. However, the nominal wall thickness used may not be more than 1.14 times the smallest measurement taken on pipe less than 20 inches (508 millimeters) in outside diameter, nor more than 1.11 times the smallest measurement taken on pipe 20 inches (508 millimeters) or more in outside diameter. | x | | | |
| 41. | | Design factor (F) for steel pipe. 192.111 | | | | |
| 42. | | (a) Except as otherwise provided in paragraphs (b), (c), and (d) of this section, the design factor to be used in the design formula in §192.105 is determined in accordance with the following Class location Design factor (F) table. Class 1 0.72 , Class 2 0.60 , Class 3 0.50 , Class 4 0.40 | x | | | |
| 43. | | (b) A design factor of 0.60 or less must be used in the design formula in §192.105 for steel pipe in Class 1 locations that: (1) Crosses the right-of-way of an unimproved public road, without a casing; (2) Crosses without a casing, or makes a parallel encroachment on, the right-of-way of either a hard surfaced road, a highway, a public street, or a railroad; (3) Is supported by a vehicular, pedestrian, railroad, or pipeline bridge; or (4) Is used in a fabricated assembly, (including separators, mainline valve assemblies, cross-connections, and river crossing headers) or is used within five pipe diameters in any direction from the last fitting of a fabricated assembly, other than a transition piece or an elbow used in place of a pipe bend which is not associated with a fabricated assembly. Unable to find this documentation in manual but in Engineering manual Link to SPW. | | x | | |
| 44. | | (c) For Class 2 locations, a design factor of 0.50, or less, must be used in the design formula in §192.105 for uncased steel pipe that crosses the right-of-way of a hard surfaced road, a highway, a public street, or a railroad. Unable to find this documentation in manual but they identify it in Engineering manual Link to SPW | | x | | |
| 45. | | (d) For Class 1 and Class 2 locations, a design factor of 0.50, or less, must be used in the design formula in §192.105 for- (1) Steel pipe in a compressor station, regulating station, or measuring station, and (2) Steel pipe, including a pipe riser, on a platform located offshore or in inland navigable waters. Unable to find this documentation in manual but they identify it in enginerring manual. Link to SPW | | x | | |
| 46. | | Longitudinal joint factor (E) for steel pipe. 192.113 EPW-D2 | x | | | |
| 47. | 480-93-180 (1) Temperature derating factor (T) for steel pipe. 192.115 | x | | | | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| SUBPART C – PIPE DESIGN | | | | | |
|-------------------------|----------------|--|---|--|--|
| | | For Plastic Pipe | | | |
| 48. | 480-93-180 (1) | Subject to the limitations of §192.123, for determining the design pressure for plastic pipe in accordance with either formula listed. 192.121 EPW-D2 SPW-160 Design and construction requirements for Distribution mains and service lines with MAOP<=60psig. | x | | |
| 49. | | For assuring that the design limitations for plastic pipe are not exceeded. 192.123 (a) thru (e) | x | | |

Comments:

| SUBPART D – DESIGN OF PIPELINE COMPONENTS | | | S | U | N/A | N/C |
|---|--|--|--|---|-----|-----|
| | | For the design and installation of pipeline components and facilities, and relating to protection against accidental over-pressuring. 192.141 | | | | |
| 50. | 480-93-180 (1) | General requirements.... 192.143 Introduction of SPW | x | | | |
| 51. | | Qualifying metallic components. 192.144 (a) & (b) SPW-053 | x | | | |
| 52. | | For steel valves; meeting the minimum requirements of API 6D, or other standard that provides an equivalent performance level. 192.145 (a) thru (e) Engineering Std 04-001 -2.3 Transmission Valves 4-24 Ansi 300 or higher. Class 4- | x | | | |
| 53. | | For each flange or flange accessory (other than cast iron) must meet the minimum requirements of ASME/ANSI B16.5, MSS SP-44, or the equivalent. 192.147 (a) thru (c) Eng. Std. 02-001 2. | x | | | |
| 54. | | For ensuring that each new transmission line and each replacement of line pipe, valve, fitting, or other line component in a transmission line is designed and constructed to accommodate the passage of instrumented internal inspection devices. 192.150 (a) thru (c) SPW150-3.1 for design and constr. | x | | | |
| 55. | | Components fabricated by welding. 192.153 (a) thru (d) SPW221-4.1 states that NWN utilizes materials whose strength cannot be determined. All other locations state that they don't do this. James Gregor has ASME welders outside the company, for repair sleeves only. Requested review of procedure. We requested that NWN provide an explanation of this in their procedures manual in more detail explaining. Welding ind testing accordance with the ASME Boiler Pressure Vessel Code. Couldn't find ASME testing info. | | x | | |
| 56. | | Must conduct hydrotest safely – NWN install branch reinforcement after testing. | Welded branch connections. 192.155 Verify uses of Gas Transmission/Distribution pipeline nnnn Look up reference in WINDOT - Copies in folder. Branch Reinforcement installed without tell-tale holes (welded). NWN procedures require the welding of split rings, branch connections, saddles.. Cannot weld hole shut. Weld procedure 4. | | x | |
| 57. | Flexibility. 192.159 Each pipeline must be designed with enough flexibility to prevent thermal expansion or contraction from causing excessive stresses in the pipe or components, excessive bending or unusual loads at joints, or undesirable forces or moments at points of connection to equipment, or at anchorage or guide points. SPW150 and EPW-J6 regarding loading issues. | | x | | | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| SUBPART D – DESIGN OF PIPELINE COMPONENTS | | | S | U | N/A | N/C |
|--|----------------|---|----------|----------|------------|------------|
| 58. | | Supports and Anchors 192.161(a) (a) thru (f) | x | | | |
| Compressor Stations | | | | | | |
| 59. | 480-93-180 (1) | Compressor stations: Design and construction. 192.163 (a) thru (e) None in WA | x | | | |
| 60. | | Compressor stations: Liquid removal. 192.165 (a) & (b) None in WA | x | | | |
| 61. | | Compressor stations: Emergency shutdown. 192.167 (a) thru (c) None in WA | x | | | |
| 62. | 480-93-180 (1) | Compressor stations: Pressure limiting devices. 192.169 (a) & (b) None in WA | x | | | |
| 63. | | Compressor stations: Additional safety equipment. 192.171 (a) thru (e) None in WA | x | | | |
| 64. | | Compressor stations: Ventilation. 192.173 None in WA | x | | | |
| 65. | | Pipe-type and bottle-type holders. 192.175 | x | | | |
| 66. | | Additional provisions for bottle-type holders. 192.177 | x | | | |
| 67. | 480-93-180 (1) | Transmission line valves.192.179 (a) thru (d) SPW 405- 4.5 | x | | | |
| 68. | | Distribution line valves. 192.181(a) thru (c) SPW 405.4.2 | x | | | |
| 69. | 480-93-180 (1) | Vaults: Structural design requirements 192.183 (a) thru (c) SPW 749 | x | | | |
| 70. | | Vaults: Accessibility 192.185 (a) thru (c) SPW 749 | x | | | |
| 71. | | Vaults: Sealing, venting, and ventilation. 192.187 (a) thru (c) SPW 749 | x | | | |
| 72. | | Vaults: Drainage and waterproofing 192.189 (a) thru (c) SPW 749- 3.1.5 | x | | | |
| 73. | | Design pressure of plastic fittings 192.191 (a) & (b) EP-D7 PE pipe and fittings. | x | | | |
| 74. | | Valve installation in plastic pipe. 192.193 Field Operating Manual (Constr. Field Manual) (FOM) 1400 Requested the design criteria/step by step for valve install re: torsion/shear/etc. from a WAC standpoint. | x | | | |
| 75. | 480-93-180 (1) | Protection against accidental over-pressuring 192.195 (a) & (b) SPW 743 and EP – D10 (Reg and Relief Set Points). | x | | | |
| 76. | | Control of the pressure of gas delivered from high-pressure distribution systems. 192.197 (a) thru (c) SPW 743 | x | | | |
| 77. | | Except for rupture discs, each pressure relief or pressure limiting device must: 192.199 (a) thru (h)SPW 7.4.3-3.1 | x | | | |
| 78. | | Required capacity of pressure relieving and limiting stations. 192.201(c) General Procedures G-39. General Procedures describe a construction activity. | x | | | |
| 79. | | Instrument, Control, and Sampling Pipe and Components 192.203(a) & (b)SPW 743 | x | | | |

Comments:

| SUBPART E – WELDING OF STEEL IN PIPELINES | | | S | U | N/A | N/C |
|--|-----------------------|--|----------|----------|------------|------------|
| WAC 480-93-080 – WELDER & PLASTIC JOINER IDENTIFICATION and QUALIFICATION | | | | | | |
| 80. | 480-93-180(1) 2 PV | Welding procedures must be qualified under Section 5 of API 1104 or Section IX of ASME Boiler and Pressure Code (2001 ed.) by destructive test. Amdt. 192-103 pub 06/09/06, eff. 07/10/06. .225(a) The quality of the test welds used to qualify welding procedures shall be determined by destructive testing in accordance with the applicable welding standard(s). Destructive testing SPW 221 use qualification sheets OPF -160. | | x | | |

Utilities and Transportation Commission

Standard Inspection Report for Intrastate Gas Systems Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| | | | | | | |
|-----|----------------|---|----------|----------|------------|------------|
| | | WAC requires the record be identified that they are keeping this documentation on. WAC 018(3). | | | | |
| | | NWN shop qualifies API 1104. NWN checks qualifications of subs for ASME. SPW 221. Requalification intervals by standardized testing. NWN qualifies in Appendix C - Oxy-Acetylene. SPW 221-6.6.2 both oxy and arc. NTE 15 months to requalify and API 1104 NTE 6 months. | | | | |
| 81. | | Retention of welding procedure – details and test .225(b) | x | | | |
| 82. | | Welders must be qualified by Section 6 of API 1104 (20th edition 2007, including errata 2008) or Section IX of the ASME Boiler and Pressure Vessel Code (2007 edition, July 1, 2007) , except that a welder qualified under an earlier edition than currently listed in 192.7 may weld, but may not requalify under that earlier edition. (Amdt 192-114 Pub. 8/11/10 eff. 10/01/10). SPW 221-8 - Include the current edition rather than stating “latest edition adopted by PHMSA”. | | x | | |
| 83. | | Welders may be qualified under section I of Appendix C to weld on lines that operate at < 20% SMYS . .227(b) SPW 221-6.2.1 under Oxy/Acetylene only. | x | | | |
| | | Oxyacetylene welders may qualify under 49 CFR § 192 Appendix C, but may only weld the following size pipe: 480-93-080(1)(a) | S | U | N/A | N/C |
| 84. | 480-93-180 (1) | <ul style="list-style-type: none"> Nominal two-inch or smaller branch connections to nominal six-inch or smaller main or service pipe. 480-93-080(1)(a)(i) None | x | | | |
| 85. | | <ul style="list-style-type: none"> Nominal two-inch or smaller below ground butt welds 480-93-080(1)(a)(ii) | x | | | |
| 86. | | <ul style="list-style-type: none"> Nominal four-inch or smaller above ground manifold and meter piping operating at 10 psig or less. 480-93-080(1)(a)(iii) None | x | | | |
| 87. | | <ul style="list-style-type: none"> Appendix C Welders re-qualified 2/Yr (7.5Months) 480-93-080(1)(a)(iv) SPW 221-6.6.2 | x | | | |
| 88. | PV | Use of testing equipment to record and document essential variables 480-93-080(1)(b) (eff 6/02/05) SPW 221 5.2 – multi meter not calibrated. No voltage/amperage testing of equipment during welding for accuracy – even though have a large range they don’t know they are outside of the range when operating on low and high end of range. PV 080: (c) When testing welders or qualifying procedures, each gas pipeline company must use the testing equipment necessary to measure the amperage, voltage, and speed of travel. <u>All essential variables, as defined by the applicable procedure, must be recorded and documented as performed during the welder and procedure testing.</u> | | x | | |
| 89. | | Qualified written welding procedures must be located on-site where welding is being performed 480-93-080(1)(e) Qualified written welding procedures must be located on-site where welding is being performed. SPW 221-3 | x | | | |
| 90. | | Identification and qualification cards/certificates w/name of welder/joiner, their qualifications, date of qualification and operator whose qualification procedures were followed. 480-93-080(3) (eff 6/02/05) (3) Welders and plastic joiners must carry appropriate identification and qualification cards or certificates showing the name of the welder or joiner, their qualifications, the date of qualification and the gas pipeline company whose procedures were followed for the qualification. Welder and plastic joiner qualification cards are subject to commission inspection at all times when qualified personnel are working on facilities subject to commission jurisdiction. SPW223-3.1 | x | | | |
| 91. | 480-93-180(1) | To weld on compressor station piping and components, a welder must successfully complete a destructive test .229(a) SPW221-3.2.4 | x | | | |
| 92. | | Welder must have used welding process within the preceding 6 months .229(b) SPW 221-6.6.2 | x | | | |
| 93. | | A welder qualified under .227(a)... .229(c) | | | | |
| 94. | | <ul style="list-style-type: none"> May not weld on pipe that operates at \geq 20% SMYS unless within the preceding 6 calendar months the welder has had one weld tested and found acceptable under the sections 6 or 9 of API Standard 1104; may maintain an ongoing qualification status by performing welds tested and found acceptable at least twice per year, not exceeding 7½ months; may not requalify under an earlier referenced edition. .229(c)(1) Does not apply since no qualify to earlier editions. | x | | | |

Utilities and Transportation Commission Standard Inspection Report for Intrastate Gas Systems Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| | | | | | | |
|------|---|---|---|---|-----|-----|
| 95. | | <ul style="list-style-type: none"> May not weld on pipe that operates at < 20% SMYS unless is tested in accordance with .229(c)(1) or re-qualifies under .229(d)(1) or (d)(2). .229(c)(2) SPW 221-6.2.1 Appendix C | x | | | |
| | | Welders qualified under .227(b) may not weld unless: .229(d) | S | U | N/A | N/C |
| 96. | 480-93-180(1) PV And PV 192.807 | <ul style="list-style-type: none"> Re-qualified within 1 year/15 months, or .229(d)(1) | x | | | |
| 97. | | <ul style="list-style-type: none"> Within 7½ months but at least twice per year had a production weld pass a qualifying test .229(d)(2) | x | | | |
| 98. | | Welding operation must be protected from weather .231 SPW 223 3.2.3 | x | | | |
| 99. | | Miter joints (consider pipe alignment) .233 SPW 223 3.3 | x | | | |
| 100. | | Welding preparation and joint alignment .235 Welding procedures – 50% of weld must be completed before removal of clamps from January 2012 Welding procedures manual. | x | | | |
| 101. | | Visual inspection must be conducted by an individual qualified by appropriate training and experience to ensure: .241(a) thru (c) SPW 223 3.2.1 & 3.6.1 No documentation completed by welder to record they visually inspected their weld. | x | | | |
| 102. | | Nondestructive testing of welds must be performed by any process, other than trepanning, that clearly indicates defects that may affect the integrity of the weld .243 (a) thru (f) NDT procedures are the contractors – NWN approval on an annual basis. NWN also keeps technicians updated testing credentials. Example eye and completion of NDT within the last 6 months . Welder OQ program contains the procedures/requirements for keeping these records. NWN will verify. Under 192.807 (b): Records supporting an individual’s current qualification shall be maintained while the individual is performing the covered task. Records of prior qualification and records of individuals no longer performing covered tasks shall be retained for a period of five years. But, NWN tosses these records annually but will go to company to obtain records – I identified that NWN is required to have the records so if co goes out of business it could be a problem. | | | x | |
| 103. | Repair or removal of defects.245 (a) thru (c) SPW 225, 226, and 227. Regarding arc stricks SPW227 3.1.2.4 | x | | | | |
| | | <ul style="list-style-type: none"> Sleeve Repair – low hydrogen rod (Best Practices –ref. API 1104 App. B, In Service Welding) | | | | |

Comments:

AI – procedure needs to be reviewed/rethought. NWN added a std welding practice under requirement of reinforcement saddle regarding hydrostatic testing. Nozzles and branch connections with reinforcement of overlay. If they determine need reinforcement they need hydrostatic testing. Tell-tail hole should remain open.

AOC: Correction of SPW 221-4, 4.1, and 4.2 Section 8 should read Section 8 Division 2.

| SUBPART F - JOINING OF PIPELINE MATERIALS OTHER THAN BY WELDING | | | S | U | N/A | N/C |
|--|--|---|---|---|-----|-----|
| WAC 480-93-080 – WELDER & PLASTIC JOINER IDENTIFICATION and QUALIFICATION | | | | | | |
| 104. | | Joining of plastic pipe .281 | | | | |
| 105. | | A plastic pipe joint that is joined by solvent cement, adhesive, or heat fusion may not be disturbed until it has properly set. Plastic pipe may not be joined by a threaded joint or miter joint. 281(a) These are specifically excluded SPW 160 – 3.4 | x | | | |
| 106. | | Each solvent cement joint on plastic pipe must comply with the following: .281(b) | | | | |
| 107. | | <ul style="list-style-type: none"> The mating surfaces of the joint must be clean, dry, and free of material which might be detrimental to the joint. .281(b)(1) N/A – do not use. | x | | | |
| 108. | | <ul style="list-style-type: none"> The solvent cement must conform to ASTM Designation: D 2513. .281(b)(2) | x | | | |
| 109. | | <ul style="list-style-type: none"> The joint may not be heated to accelerate the setting of the cement. .281(b)(3) | x | | | |
| 110. | | Each heat-fusion joint on plastic pipe must comply with the following: .281(c) | | | | |
| 111. | | <ul style="list-style-type: none"> A butt heat-fusion joint must be joined by a device that holds the heater element square to the ends of the piping, compresses the heated ends together, and holds the | x | | | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| | | | | | | |
|------|---|--|---|---|--|--|
| | | pipe in proper alignment while the plastic hardens. .281(c)(1) FOM 406 pg 143. Chart for fuse, time, temp table. – page 146. | | | | |
| 112. | 480-93-180(1) | <ul style="list-style-type: none"> A socket heat-fusion joint must be joined by a device that heats the mating surfaces of the joint uniformly and simultaneously to essentially the same temperature. .281(c)(2) Do not do socket fusion SPW 160 3.4.8.2 | x | | | |
| 113. | | <ul style="list-style-type: none"> An electrofusion joint must be joined utilizing the equipment and techniques of the fittings manufacturer or equipment and techniques shown, by testing joints to the requirements of §192.283(a)(1)(iii), to be at least equivalent to those of the fittings manufacturer. .281(c)(3) FOM 406 pag 162. They have 2 types of electro fusion machines and both read bar code. | x | | | |
| 114. | | <ul style="list-style-type: none"> Heat may not be applied with a torch or other open flame. .281(c)(4) SPW 160-4.9 | x | | | |
| 115. | | Each adhesive joint on plastic pipe must comply with the following: .281(d) N/A do not use. | | | | |
| 116. | | <ul style="list-style-type: none"> The adhesive must conform to ASTM Designation: D 2517. .281(d)(1) N/A | x | | | |
| 117. | | <ul style="list-style-type: none"> The materials and adhesive must be compatible with each other. .281(d)(1)N/A | x | | | |
| 118. | | Each compression type mechanical joint on plastic pipe must comply with the following: .281(e) | | | | |
| 119. | | <ul style="list-style-type: none"> The gasket material in the coupling must be compatible with the plastic. .281(e)(1) SPW 160-3.3.3.1 | x | | | |
| 120. | | <ul style="list-style-type: none"> A rigid internal tubular stiffener, other than a split tubular stiffener, must be used in conjunction with the coupling. .281(e)(2) | x | | | |
| 121. | | 480-93-180(1) | Before any written procedure established under §192.273(b) is used for making plastic pipe joints by a heat fusion, solvent cement, or adhesive method, the procedure must be qualified by subjecting specimen joints made according to the procedure to the following tests: .283(a) | | | |
| 122. | The burst test requirements of– .283(a)(1) | | | | | |
| 123. | <ul style="list-style-type: none"> Thermoplastic pipe: paragraph 6.6 (sustained pressure test) or paragraph 6.7 (Minimum Hydrostatic Burst Test) or paragraph 8.9 (Sustained Static pressure Test) of ASTM D2513 .283(a)(1)(i) SPW 160- 3.3.4 | | x | | | |
| 124. | <ul style="list-style-type: none"> Thermosetting plastic pipe: paragraph 8.5 (Minimum Hydrostatic Burst Pressure) or paragraph 8.9 (Sustained Static Pressure Test) of ASTM D2517; or .283(a)(1)(ii) Do not use this (Adhesive) N/A | | x | | | |
| 125. | <ul style="list-style-type: none"> Electrofusion fittings for polyethylene pipe and tubing: paragraph 9.1 (Minimum Hydraulic Burst Pressure Test), paragraph 9.2 (Sustained Pressure Test), paragraph 9.3 (Tensile Strength Test), or paragraph 9.4 (Joint Integrity Tests) of ASTM Designation F1055. .283(a)(1)(iii) Reference not included. They need to add this reference to their manual. They need to reference all subset procedures such as this and Administrative Procedures. | | | x | | |
| 126. | For procedures intended for lateral pipe connections, subject a specimen joint made from pipe sections joined at right angles according to the procedure to a force on the lateral pipe until failure occurs in the specimen. If failure initiates outside the joint area, the procedure qualifies for use; and, .283(a)(2) SPW 251. Company procedures for fusion testing must be consistent with standardized procedures warranted by the manufacturer or manufacturers to meet the requirements of 192.283. – Basically this would reference them back to the original AStM D2513. | | x | | | |
| 127. | For procedures intended for non-lateral pipe connections, follow the tensile test requirements of ASTM D638, except that the test may be conducted at ambient temperature and humidity If the specimen elongates no less than 25 percent or failure initiates outside the joint area, the procedure qualifies for use. .283(a)(3) SPW 251. Company procedures for fusion testing must be consistent with standardized procedures warranted by the manufacturer or manufacturers to meet the requirements of 192.283. – Basically this would reference them back to the original AStM D2513. | | x | | | |
| 128. | Before any written procedure established under §192.273(b) is used for making mechanical plastic pipe joints that are designed to withstand tensile forces, the procedure must be qualified by subjecting five specimen joints made according to the procedure to the following tensile test: .283(b) | | | | | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| | | | | | | |
|------|---|--|---|--|--|--|
| 129. | 480-93-180(1) | <ul style="list-style-type: none"> Use an apparatus for the test as specified in ASTM D 638 (except for conditioning). .283(b)(1) N/A they comply with mfgs. Instructions – no testing by NWN | x | | | |
| 130. | | <ul style="list-style-type: none"> The specimen must be of such length that the distance between the grips of the apparatus and the end of the stiffener does not affect the joint strength. .283(b)(2) N/A | x | | | |
| 131. | | <ul style="list-style-type: none"> The speed of testing is 0.20 in. (5.0 mm) per minute, plus or minus 25 percent. .283(b)(3) N/A | x | | | |
| 132. | | <ul style="list-style-type: none"> Pipe specimens less than 4 inches (102 mm) in diameter are qualified if the pipe yields to an elongation of no less than 25 percent or failure initiates outside the joint area. .283(b)(4) N/A | x | | | |
| 133. | | <ul style="list-style-type: none"> Pipe specimens 4 inches (102 mm) and larger in diameter shall be pulled until the pipe is subjected to a tensile stress equal to or greater than the maximum thermal stress that would be produced by a temperature change of 100° F (38° C) or until the pipe is pulled from the fitting. If the pipe pulls from the fitting, the lowest value of the five test results or the manufacturer's rating, whichever is lower must be used in the design calculations for stress. .283(b)(5) N/A | x | | | |
| 134. | | <ul style="list-style-type: none"> Each specimen that fails at the grips must be retested using new pipe. .283(b)(6) N/A | x | | | |
| 135. | | <ul style="list-style-type: none"> Results pertain only to the specific outside diameter, and material of the pipe tested, except that testing of a heavier wall pipe may be used to qualify pipe of the same material but with a lesser wall thickness. .283(b)(7) N/A | x | | | |
| 136. | 480-93-180(1) | A copy of each written procedure being used for joining plastic pipe must be available to the persons making and inspecting joints. .283(c) OQ procedures OP-C130-01 . On-line mobile data terminal (MDT) . Contractor's carry paper copy – Verify procedures update process with contractors. Must have a procedure. Contractor get electronically and they reproduce for their folks. OQ program under heading administration – 3.5 communicating procedural change to covered workers. They will provide a copy. Received. | x | | | |
| 137. | | Pipe or fittings manufactured before July 1, 1980, may be used in accordance with procedures that the manufacturer certifies will produce a joint as strong as the pipe. .283(d) SPW 160 – 3.4.11 | x | | | |
| 138. | | No person may make a plastic pipe joint unless that person has been qualified under the applicable joining procedure by: .285(a) | | | | |
| 139. | | <ul style="list-style-type: none"> Appropriate training or experience in the use of the procedure; and .285(a)(1) SPW 251 -2 | x | | | |
| 140. | | <ul style="list-style-type: none"> Making a specimen joint from pipe sections joined according to the procedure that passes the inspection and test set forth in paragraph (b) of this section. .285(a)(2) SPW 251 – 3.2.2 | x | | | |
| 141. | | The specimen joint must be: .285(b) | | | | |
| 142. | | <ul style="list-style-type: none"> Visually examined during and after assembly or joining and found to have the same appearance as a joint or photographs of a joint that is acceptable under the procedure; and .285(b)(1) SPW 251 – 3.2.2 | x | | | |
| 143. | | <ul style="list-style-type: none"> In the case of a heat fusion, solvent cement, or adhesive joint; .285(b)(2) Heat fusion only. | x | | | |
| 144. | | Tested under any one of the test methods listed under §192.283(a) applicable to the type of joint and material being tested; .285(b)(2)(i) SPW 251 – 3.2.2 | x | | | |
| 145. | | Examined by ultrasonic inspection and found not to contain flaws that may cause failure; or .285(b)(2)(ii) | x | | | |
| 146. | Cut into at least three longitudinal straps, each of which is: .285(b)(2)(iii) | x | | | | |
| 147. | Visually examined and found not to contain voids or discontinuities on the cut surfaces of the joint area; and .285(b)(2)(iii)(A) | x | | | | |
| 148. | Deformed by bending, torque, or impact, and if failure occurs, it must not initiate in the joint area. .285(b)(2)(iii)(B) | x | | | | |
| 149. | A person must be requalified under an applicable procedure, if during any 12-month period that person: .285(c) | | | | | |
| 150. | <ul style="list-style-type: none"> Does not make any joints under that procedure; or .285(c)(1) SPW 251- 3.3.1 | x | | | | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| | | | | | | |
|------|----------------------------|---|---|--|--|--|
| 151. | 480-93-180(1) | <ul style="list-style-type: none"> Has 3 joints or 3 percent of the joints made, whichever is greater, under that procedure that are found unacceptable by testing under §192.513. .285(c)(2) SPW 251 – 3.3.5 | x | | | |
| 152. | | Each operator shall establish a method to determine that each person making joints in plastic pipelines in the operator’s system is qualified in accordance with this section. .285(d) SPW 251 – 3.3 Program Administer. | x | | | |
| | | Plastic pipe joiners re-qualified 1/Yr (15 Months) 480-93-080 (2) | | | | |
| 153. | | <ul style="list-style-type: none"> Qualified written plastic joining procedures must be located on-site where plastic joining is being performed. 480-93-080(2)(a) SPW 251-2. | x | | | |
| 154. | 480-93-180(1) | <ul style="list-style-type: none"> Plastic pipe joiners re-qualified if no production joints made during any 12 month period 480-93-080(2)(b) (eff 6/02/05) SPW 251 – 3.3.1 They do not track production joints – they requalify annually. | x | | | |
| 155. | | <ul style="list-style-type: none"> Tracking production joints or re-qualify joiners 1/Yr (12Months) 480-93-080(2)(c) (eff 6/02/05) | x | | | |
| 156. | 480-93-180(1) / 192.273(b) | No person may carry out the inspection of joints in plastic pipes required by §§192.273(c) and 192.285(b) unless that person has been qualified by appropriate training or experience in evaluating the acceptability of plastic pipe joints made under the applicable joining procedure. .287 SPW 160 -2 | x | | | |

Comments:

| SUBPART G – CONSTRUCTION REQUIREMENTS for TRANSMISSION LINES and MAINS | | | S | U | N/A | N/C |
|---|---------------|---|----------|----------|------------|------------|
| 157. | | Compliance with specifications or standards. 192.303 SPW 150 – 2. | x | | | |
| 158. | | Inspection of each transmission line and main during construction 192.305 SPW 223- 3.4.3 Is NDT | x | | | |
| 159. | 480-93-180(1) | Inspection of materials 192.307 Each length of pipe and each other component must be visually inspected at the site of installation to ensure that it has not sustained any visually determinable damage that could impair its serviceability. SPW 150 – 3.4.2 Inspection of materials. What about site receipt and stores receipt of pipe for visual inspection.. No procedure specifying how to complete inspection of pipe. They have no process for documenting. Site specific under 192.307: Each length of pipe and each other component must be visually inspected at the site of installation to ensure that it has not sustained any visually determinable damage that could impair its serviceability. | | x | | |
| 160. | | Repair of steel pipe 192.309 (a) thru (e) SPW 225 does not reference FOM 359 and SPW 225 Still have issues with no reference to specific step by step procedures such as this. | | x | | |
| 161. | | Repair of plastic pipe. 192.311 SPW 160 to FOM 406 contains the step by step | x | | | |
| 162. | PV. | Bends and elbows. 192.313 (a) thru (c) FOM 407 contains step by step beginning on pg 218 and SPW 150-3.1 | x | | | |
| 163. | | Wrinkle bends in steel pipe. 192.315 (a) & (b) SPW 227 3.2.1.5 | x | | | |
| 164. | | Protection from hazards 192.317 (a) thru (c) SPW 150 3.1 General design of protection . | x | | | |
| 165. | | Installation of Pipe in a ditch 192.319 (a) thru (c) SPW 150 – 3.4.4 to FOM 400 Distribution Systems but applies to all installations. And SPW 3.4.4 – Include statement that shallow install and how to construct will come from Engineering – (protection measures) And Engineering will identify the exact install requirements. | | x | | |
| 166. | | Installation of plastic pipe. 192.321 (a) thru (h) SPW 160 – 3.5.1 Include statement that shallow install and how to construct will come from Engineering – (protection measures) And Engineering will identify the exact install requirements. | | x | | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| 480-93-178 WAC | | | S | U | N/A | N/C |
|-----------------------------------|---------------|--|----------|----------|------------|------------|
| PROTECTION OF PLASTIC PIPE | | | | | | |
| 167. | 480-93-180(1) | Procedures for the storage, handling, and installation of plastic pipelines in accordance with the latest applicable manufacturer's recommended practices. 480-93-178(1) | | | | |
| 168. | | Stated acceptable time limit for maximum cumulative ultraviolet light exposure 480-93-178 (2) SPW-059 3.2 | x | | | |
| 169. | | Separation requirements when installing plastic pipelines parallel to other underground utilities 480-93-178 (4) SPW -160 – 3.5.2 | x | | | |
| 170. | | Separation requirements when installing plastic pipelines perpendicular to other underground utilities 480-93-178 (5) SPW -160 – 3.5.2 | x | | | |
| 171. | | Casings 192.323 (a) thru (d) Transmission – FOM 800 Corrosion. Margaret will provide shear and tensile protection regarding installation under SPW 160 3.4.4. | x | | | |
| 172. | | Casing of pipelines. 480-93-115 (1) thru (4) FOM 800 Corrosion. | x | | | |
| 173. | | Underground clearance. 192.325 (a) thru (d). See above. Okay. | x | | | |
| 174. | | Cover. 192.327 (a) thru (g) | x | | | |

Comments:

| SUBPART H - CUSTOMER METERS, SERVICE REGULATORS, and SERVICE LINES | | | | | | |
|---|-----------------------|--|----------|----------|------------|------------|
| | | | S | U | N/A | N/C |
| 175. | 480-93-180 (1) AOC | Meters and service regulators installed at locations as prescribed under 192.353 (a) thru (d) Residential - 361 Commercial – 383 Residential interior – 384 3.1 page 2 of 7. Typo – need to indent “Any source of ignition that could arc or spark during normal operation.” so that it is under the 3’0” separation requirement. | | x | | |
| 176. | | Service regulator vents and relief vents installed and protected from damage. Vaults housing meters and regulators protected from loading due to vehicular traffic. 192.355 (a) thru (c) | x | | | |
| 177. | 480-93-180 (1) | Meters and regulators installed to minimize stresses and insure that potential releases vent to outside atmosphere. 192.357 (a) thru (d) Not included in manual: A through C is missing. | | x | | |
| 480-93-140 WAC | | | S | U | N/A | N/C |
| SERVICE REGULATORS | | | | | | |
| 178. | 480-93-180 (1) AOC | Procedures for installing, operating, and maintaining service regulators in accordance with federal and state regulations, and manufacturer's recommended installation and maintenance practices. 480-93-140(1) SPW 361 and 383 and 384 (mfgers recommendations) to FOM 515 to OP Q 80206. There are multiple OQ – AOC Q -02 is for all regulator AOC’s. NWN identified they replace all residential regulators that have issues. And sam with commercial. – Engineered designs (atypical). There is no clear line on how to get from any of these points to the next points from a maintenance standpoint. There is no step by step instruction on maintenance (Repair/replace of AOC’s) . NWN practice is to replace any defective reg but the AOC says repair replace. Copy of AOC – Q 02 in folder. | | x | | |
| 179. | | Procedures for inspecting and testing service regulators and associated safety devices during the initial turn-on, and when a customer experiences a pressure problem. Testing must include..... 480-93-140(2) FOM 515 to OP Q 802-06. | x | | | |
| 180. | | Minimum service line installation requirements as prescribed under 192.361 (a) thru (g) SPW-160 3.5.5 Drainage 3.5.8 – No procedure for completing drainage. | | x | | |
| 181. | | Location of service-line valves as prescribed under 192.365 (a) thru (c) SPW 405-4.3.1 | x | | | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| SUBPART H - CUSTOMER METERS, SERVICE REGULATORS, and SERVICE LINES | | | | | | |
|--|----------------|--|---|--|--|--|
| 182. | 480-93-180 (1) | General requirements for locations of service-line connections to mains and use of compression fittings 192.367 (a) thru (b)(2) Missing from FOM 406 pg 158 (summary) OP F 133-01 okay for b(2) | x | | | |
| 183. | | Connections of service lines to cast iron or ductile iron mains. 192.369 (a) thru (b) None – N/A | x | | | |
| 184. | | Provisions for new service lines not in use 192.379 (a) thru (c) SPW reference 733 states NWN will lock to prevent unauthorized use. Services not actively used for the transportation of gas to a customer must be locked, idle, disconnected, or abandoned. All must be secured against unauthorized turn-on. FOM Pipe Steel Abandonment pg 191 reference is for Poly squeeze off. | x | | | |
| 185. | | EFV performance requirements §192.381 (a) thru (e) FOM Pipe PE Excess Flow Valve pg 167 (NWN reference Engineering procedure J7 pg 14.) NWN uses a by-pass valve. Design philosophy for all sizes. In mapping and on riser (with ring) J7 pg 6. | x | | | |
| 186. | | Excess flow valves, does the program must meet the requirements outlined in §192.381? NWN reference SPW 381 does not include 192.381 (a)(1), (b)-(e) See above # 185. | x | | | |
| 187. | | Customer notification in accordance with §192.383. | x | | | |

Comments:

| SUBPART I - CORROSION CONTROL | | | S | U | N/A | N/C |
|-------------------------------|----------------------|---|---|---|-----|-----|
| 188. | 480-93-180(1) AOC | Corrosion procedures established for the Design, Operations, Installation & Maintenance of CP systems, carried out by, or under the direction of, a person qualified in pipeline corrosion control methods .453 OQ is OP I series of procedures. How is the person identified in SPW 455 qualified in pipeline corrosion methods? Formal training for the designee engineers. Technicians, Corrosion engineer or designee (engineer ?) AI wants to know what qualifies a corrosion engineer under SPW 455. No language describing. | | x | | |
| 189. | 480-93-180(1) PV | For pipelines installed after July 31, 1971 , buried segments must be externally coated and .455 (a) cathodically protected within one year after construction (see exceptions in code) .455 (b)SPW 455 4.1 doesn't state CP within a year after install per (d) Notwithstanding the provisions of paragraph (b) or (c) of this section, if a pipeline is externally coated, it must be cathodically protected in accordance with paragraph (a)(2) of this section. It states: 3. A cathodic protection system designed, installed, and functioning prior to introduction of gas in the pipeline. Include NTE 1 year for CP – NWN will add this to their procedures. | | x | | |
| 190. | 480-93-180(1) | Aluminum may not be installed in a buried or submerged pipeline if exposed to an environment with a natural pH in excess of 8 (see exceptions in code) .455 (c) Not used. | x | | | |
| 191. | 480-93-180(1) | All effectively coated steel transmission pipelines installed prior to August 1, 1971 , must be cathodically protected .457 (a) SPW 455 4.2 | x | | | |
| 192. | | If installed before August 1, 1971 , cathodic protection must be provided in areas of active corrosion for: bare or ineffectively coated transmission lines, and bare or coated c/s, regulator sta., meter sta. piping, and (except for cast iron or ductile iron) bare or coated distribution lines. .457 (b) SPW 455 4.2 | x | | | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| SUBPART I - CORROSION CONTROL | | | S | U | N/A | N/C |
|-------------------------------|---------------|--|---|---|-----|-----|
| 193. | PV | Written procedures explaining how cathodic protection related surveys, reads, and tests will be conducted. 480-93-110(4) NWN SPW 801 4.1 reference is not applicable. SPW 465 references but not forms/data base for recording records. OQ procedures OP I 136-01 series don't find reference to the FOM 2000 2000 record to be retained/used for recording data. OPI 201-01 Requested NWN include language in their SPW 465 regarding the fact that they will record the information in their computer database. | | x | | |
| 194. | | Examination of buried pipeline when exposed: if corrosion is found, further investigation is required .459 459 OP I 136-01 | x | | | |
| 195. | 480-93-180(1) | Recording the condition of all underground metallic facilities each time the facilities are exposed. 480-93-110(6) 459 NWN reference OP I Procedures don't identify record used for recording data. FOM 2000 – 8391 Pipe Inspection Report | x | | | |
| 196. | | CP test reading on all exposed facilities where coating has been removed 480-93-110(8) (eff 6/02/05) OP-I-201-01 is not in manual. This is under SPW 459 | x | | | |
| 197. | | Procedures must address the protective coating requirements of the regulations. External coating on the steel pipe must meet the requirements of this part. .461 | S | U | N/A | N/C |
| 198. | 480-93-180(1) | Cathodic protection level according to Appendix D criteria .463 OP I 132-01 and FOM 407 Steel Pipe Coating starting pg 361 | x | | | |
| 199. | | Pipe-to-soil monitoring (1 per yr/15 months) .465(a) OP 201-01 and SPW 463, 465 and OP L 201-08 | x | | | |
| 200. | | Rectifier monitoring (6 per yr/2½ months) .465(b) SPW 465 3.4 and OP I 200-01 | x | | | |
| 201. | | Interference bond monitoring (as required) .465(c) SPW 465 3.5 and OP I 201-03 & 04 NWN will include the language that their interference bond and critical bond survey and the frequency is on a 2.5 month cycle. | x | | | |
| 202. | | Remedial action taken within 90 days (Up to 30 additional days if other circumstances. Must document) 480-93-110(2) SPW 463.3.5.2 | x | | | |
| 203. | | Electrical surveys (closely spaced pipe to soil) on bare/unprotected lines, cathodically protect active corrosion areas (1 per 3 years/39 months) .465(e) SPW 455 4.3 | x | | | |
| 204. | | Sufficient test stations to determine CP adequacy .469 OP C, D, E 131-02 | x | | | |
| 205. | | Test lead maintenance .471 OP C, D, E 131-02 | x | | | |
| 206. | | Interference currents .473 OP I 201-03 & 04 And 465 3.5 | x | | | |
| 207. | | Proper procedures for transporting corrosive gas? .475(a) None. N/A | x | | | |
| 208. | | Written program to monitor for indications of internal corrosion. The program must also have remedial action requirements for areas where internal corrosion is detected. 480-93-110(7) (eff 6/02/05) Cant find OP O 220-02. Not in OP M 220-02. In OP F 220-02 but no remediation other than notification. Don't find internal corrosion remedial action requirements in SPW 459 3.2. SPW 483.3 – remediation. Also, NWN follows the repair review remediation in accordance with their IMP plan for all distribution and transmission. | x | | | |
| 209. | | Removed pipe must be inspected for internal corrosion. If found, the adjacent pipe must be inspected to determine extent. Certain pipe must be replaced. Steps must be taken to minimize internal corrosion. .475(b) OP C, D, E, F, M 220-02 SPW 459 3.2 | x | | | |
| 210. | | Systems to reduce internal corrosion Amdt 192- (no number) Pub. 4/23/07, eff. 5/23/07 (a) New construction .476 N/A No inhibitor required/used. | x | | | |
| 211. | 480-93-180(1) | (b) Exceptions – offshore pipeline and systems replaced before 5/23/07 N/A | x | | | |
| 212. | | (c) Evaluate impact of configuration changes to existing systems N/A | x | | | |
| 213. | | Internal corrosion control coupon (or other suit. Means) monitoring (2 per yr/7½ months) .477 No corrosive gas transported. | x | | | |
| 214. | | Each exposed pipe must be cleaned and coated (see exceptions under .479(c)) .479(a) SPW 480 | x | | | |
| 215. | | Offshore splash zones and soil-to-air interfaces must be coated SPW 480 | x | | | |
| 216. | | • Coating material must be suitable .479(b) SPW 480 | x | | | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| SUBPART I - CORROSION CONTROL | | | S | U | N/A | N/C |
|--|--|---|----------|----------|------------|------------|
| 217. | PV | Coating is not required where operator has proven that corrosion will: .479(c) Coating is required. OP C-E, I, M, O, Q 220-01 | | | | |
| 218. | | 1. Only be a light surface oxide, or .479(c)(1) See 217above | x | | | |
| 219. | | 2. Not affect safe operation before next scheduled inspection .479(c)(2) See 217 above | x | | | |
| 220. | | Written atmospheric corrosion control monitoring program. The program must have time frames for completing remedial action. 480-93-110(9) (eff 6/02/05) Provide remedial action time frames. SPW 480-4 states if found corrective action within 1 year. OP Q 220-01 | x | | | |
| 221. | | Atmospheric corrosion control monitoring (1 per 3 yrs/39 months onshore; 1 per yr/15 months offshore) .481(a) SPW 480 3.2 | x | | | |
| 222. | | Special attention required at soil/air interfaces, thermal insulation, under dis-bonded coating, pipe supports, splash zones, deck penetrations, spans over water .481(b) SPW 480 3.2 | x | | | |
| 223. | | Protection must be provided if atmospheric corrosion is found (per §192.479) .481(c) Reference painting but identify must be approved under SPW 480 3.3.3 – where is paint coating material specified? OP C 132-01 Coating Pipeline Facilities but does not include application procedures. Just states apply primer and paint all exposed areas of pipe. | | x | | |
| 224. | | Replacement and required pipe must be coated and cathodically protected (see code for exceptions) .483 | x | | | |
| 225. | | Procedures to replace pipe or reduce the MAOP if general corrosion has reduced the wall thickness? .485(a) SPW 483-3.1.1 | x | | | |
| 226. | | Procedures to replace/repair pipe or reduce MAOP if localized corrosion has reduced wall thickness (unless reliable engineering repair method exists)? .485(b) Same locations as above. | x | | | |
| 227. | 480-93-180(1) Procedures to use Rstreng or B-31G to determine remaining wall strength? .485(c) Same as 224.. | x | | | | |
| 228. | Remedial measures (distribution lines other than cast iron or ductile iron) .487 SPW 483 and 226 | x | | | | |
| 229. | Remedial measures (cast iron and ductile iron pipelines) .489None | x | | | | |
| 230. | Records retained for <u>each</u> cathodic protection test, survey, or inspection required by 49 CFR Subpart I, and chapter 480-93 WAC. 480-93-110 SPW 465 | x | | | | |
| 231. | Corrosion control maps and record retention (pipeline service life or 5 yrs) .491 Should state they maintain records and don't discard so SPW 465 3.6 should state what they actually do. | x | | | | |
| WAC 480-93-110 Corrosion Requirements | | | S | U | N/A | N/C |
| 232. | 480-93-180(1) | Casings inspected/tested annually not to exceed fifteen months 480-93-110(5) | x | | | |
| 233. | | Casings w/no test leads installed prior to 9/05/1992. Demonstrate other acceptable test methods 480-93-110(5)(a) SPW 467 OPO I 201-01 | x | | | |
| 234. | | Possible shorted conditions – Perform confirmatory follow-up inspection within 90 days 480-93-110(5)(b) | x | | | |
| 235. | | Casing shorts cleared when practical 480-93-110(5)(c) | x | | | |
| 236. | 480-93-180(1) Shorted conditions leak surveyed within 90 days of discovery. Twice annually/7.5 months 480-93-110(5)(d) | x | | | | |
| 237. | AOC CP Test Equipment and Instruments checked for accuracy/intervals (Mfct Rec or Opr Sched) 480-93-110(3) Correct language to document where/how records will be kept. NWN will include this under SPW 463. Refernce calibration requirements in procedure. | | x | | | |

Comments:

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
 If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| | | | | |
|--|--|--|--|--|
| | | | | |
|--|--|--|--|--|

| SUBPART J – TEST REQUIREMENTS | | | S | U | N/A | N/C |
|-------------------------------|---------------|---|---|---|-----|-----|
| 238. | 480-93-180(1) | Procedures to ensure that the provisions found under 192.503(a) thru (d) for new segments of pipeline, or Return to Service segments of pipeline which have been relocated or replaced are met. OPD 139 | x | | | |
| 239. | | Strength test requirements for steel pipeline to operate at a hoop stress of 30 percent or more of SMYS. 192.505 (a) thru (e) FOM 1300 Class C and higher pg 729 and Hydro on pg 740. Under OP 138-01 | x | | | |
| 240. | | Test requirements for pipelines to operate at a hoop stress less than 30 percent of SMYS and at or above 100 psig. 192.507 (a) thru (c) | x | | | |
| 241. | | Test requirements for pipelines to operate below 100 psig. 192.509 (a) & (b) | x | | | |
| 242. | | Test requirements for service lines. 192.511 (a) thru (c) | x | | | |
| 243. | | Test requirements for plastic pipelines. 192.513 (a) thru (d) | x | | | |
| 244. | | Environmental protection and safety requirements. 192.515 (a) & (b) | x | | | |
| 245. | | Records 192.517 Refer also to 480-93-170 (7) (a-h) below. | x | | | |

| | |
|------------------|--|
| Comments: | |
|------------------|--|

| WAC 480-93-170 PRESSURE TEST PROCEDURES | | | S | U | N/A | N/C |
|--|---------------|---|---|---|-----|-----|
| 246. | 480-93-180(1) | Notification in writing, to the commission, at least two business days prior to any pressure test of a gas pipeline that will have a MAOP that produces a hoop stress of twenty percent or more of the SMYS 480-93-170(1) SPW 007 3.5 | x | | | |
| 247. | | <ul style="list-style-type: none"> • In Class 3 or Class 4 locations, as defined in 49 CFR § 192.5, or within one hundred yards of a building, must be at least eight hours in duration. 480-93-170(1)(a) | x | | | |
| 248. | | <ul style="list-style-type: none"> • When the test medium is to be a gas or compressible fluid, each operator must notify the appropriate public officials so that adequate public protection can be provided for during the test. 480-93-170(1)(b) | x | | | |
| 249. | | <ul style="list-style-type: none"> • In an emergency situation where it is necessary to maintain continuity of service, the requirements of subsection (1) of this section and subsection (1)(a) may be waived by notifying the commission by telephone prior to performing the test. 480-93-170(1)(c) | x | | | |
| 250. | | Minimum test pressure for any steel service line or main, must be determined by multiplying the intended MAOP by a factor determined in accordance with the table located in 49 CFR § 192.619 (a)(2)(ii). 480-93-170(2) | x | | | |
| 251. | | Re-testing of service lines broken, pulled, or damaged, resulting in the interruption of gas supply to the customer, must be pressure tested from the point of damage to the service termination valve prior to being placed back into service. 480-93-170(4) | x | | | |
| 252. | | Maintain records of all pressure tests performed for the life of the pipeline and document information as listed under 480-93-170(7) (a-h). SPW 504 3.6.4 for pretested pipe includes the form for pre tested pipe. | x | | | |
| 253. | | Maintain records of each test where multiple pressure tests are performed on a single | x | | | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| | | | | | | |
|------|--|--|---|--|--|--|
| | | installation. 480-93-170(9) | | | | |
| 254. | | Pressure testing equipment must be maintained, tested for accuracy, or calibrated, in accordance with the manufacturer's recommendations.480-93-170(10) | x | | | |
| 255. | | <ul style="list-style-type: none"> When there are no manufacturer's recommendations, then tested at an appropriate schedule determined by the operator. | x | | | |
| 256. | | <ul style="list-style-type: none"> Test equipment must be tagged with the calibration or accuracy check expiration date. | x | | | |

Comments:

| SUBPART K - UPRATING | | | | | | |
|----------------------------------|---------------|--|----------|----------|------------|------------|
| | | | S | U | N/A | N/C |
| | | Provisions for meeting the minimum requirements for increasing maximum allowable operating pressure (uprating) for pipelines. | | | | |
| 257. | | General requirements. 192.553 (a) thru (d) | x | | | |
| 258. | 480-93-180(1) | Uprating to a pressure that will produce a hoop stress of 30 % or more of SMYS in steel pipelines. 192.555 (a) thru (e) | x | | | |
| 259. | | Uprating: Steel pipelines to a pressure that will produce a hoop stress less than 30 % of SMYS: (plastic, iron, and ductile iron pipelines.) 192.557 (a) thru (d) | x | | | |
| WAC 480-93-155 - UPRATING | | | | | | |
| 260. | | Notification of uprate and submission of written plan 480-93-155 (1) | x | | | |
| 261. | 480-93-180(1) | Content of written plan... 480-93-155 (1) (a) thru (j) | x | | | |
| 262. | | Uprates must be based on a previous or current pressure test that will substantiate the intended MAOP. 480-93-155 (2) | x | | | |

Comments:

| SUBPART L - OPERATIONS | | | S | U | N/A | N/C |
|-------------------------------|-------------------------------|--|----------|----------|------------|------------|
| 263. | 480-93-180(1) / 192.605(a) | Procedural Manual Review – Operations and Maintenance (1 per yr/15 months) 192.605(a) Note: Including review of OQ procedures as suggested by PHMSA - ADB-09-03 dated 2/7/09 | x | | | |
| 264. | | Availability of construction records, maps, operating history to operating personnel 192.605(b)(3) Include language to identify computer records are where NWN is recording data. | x | | | |
| 265. | | Start up and shut down of the pipeline to assure operation within MAOP plus allowable buildup 192.605(b)(5) | x | | | |
| 266. | | Periodic review of personnel work – effectiveness of normal O&M procedures 192.605(b)(8) O&M do not address the review of personnel work. Kerry providing Q/A records to identify how they review. | | x | | |
| 267. | | Taking adequate precautions in excavated trenches to protect personnel from the hazards of | x | | | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| SUBPART L - OPERATIONS | | | S | U | N/A | N/C |
|-------------------------------|------------|---|----------|----------|------------|------------|
| | 192.605(a) | unsafe accumulations of vapors or gas, and making available when needed at the excavation, emergency rescue equipment, including a breathing apparatus and a rescue harness and line 192.605(b)(9) FOM 407 for accumulation of vapor/gas. FOM 200 – 204 for PPE beginning pg 35. | | | | |
| 268. | | Routine inspection and testing of pipe-type or bottle-type holders 192.605(b)(10) None. | x | | | |
| 269. | | Responding promptly to a report of a gas odor inside or near a building, unless the operator's emergency procedures under §192.615(a)(3) specifically apply to these reports. 192.605(b)(11) Reviewed during Columbia gorge inspection. SPW 709, OP J, L, X 501-01 Inside Odor. OP Q 501-02 for investigate & respond to inside odor. | x | | | |
| 270. | | Implementing the applicable control room management procedures required by 192.631. (Amdt. 192- 112, 74 FR 63310, December 3, 2009, eff. 2/1/2010). 605(b)(12) August 1, 2011. | x | | | |

Comments:

| SUBPART L – OPERATIONS ABNORMAL OPERATING PROCEDURES – TRANSMISSION LINES | | | | | | |
|--|---|--|----------|----------|------------|------------|
| | | | S | U | N/A | N/C |
| | | Procedures for responding to, investigating, and correcting the cause of: 192.605(c)(1) | | | | |
| 271. | 480-93-180(1) / 192.605(a) | <ul style="list-style-type: none"> • Unintended closure of valves or shut downs 192.605(c)(1)(i) SPW-303 but do not find AOC D2 Inoperability or failure of any pipeline component under OP regarding this issue – only see that it is a reference at end of procedure. It is part of SPW 616. | x | | | |
| 272. | | <ul style="list-style-type: none"> • Increase or decrease in pressure or flow rate outside of normal operating limits 192.605(c)(1)(ii) SPW 616 | x | | | |
| 273. | | <ul style="list-style-type: none"> • Loss of communications 192.605(c)(1)(iii) | x | | | |
| 274. | | <ul style="list-style-type: none"> • The operation of any safety device 192.605(c)(1)(iv) SPW 616 | x | | | |
| 275. | | <ul style="list-style-type: none"> • Malfunction of a component, deviation from normal operations or personnel error 192.605(c)(1)(v) (1) Responding to, investigating, and correcting the cause of: <ul style="list-style-type: none"> • (i) Unintended closure of valves or shutdowns; • (ii) Increase or decrease in pressure or flow rate outside normal operating limits; • (iii) Loss of communications; • (iv) Operation of any safety device; and, • (v) Any other foreseeable malfunction of a component, deviation from normal operation, or personnel error which may result in a hazard to persons or property. SPW 616 | x | | | |
| 276. | | Checking variations from normal operation after abnormal operations ended at sufficient critical locations 192.605(c)(2)SPW 616 | x | | | |
| 277. | Notifying the responsible operating personnel when notice of an abnormal operation is received 192.605(c)(3) SPW 616-3.2 | x | | | | |
| 278. | Periodic review of personnel work – effectiveness of abnormal operation procedures 192.605(c)(4) O&M do not address the review of personnel work. Kerry providing Q/A records to identify how they review. | | | x | | |

Comments:

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| | | | | | | |
|--|--|--|--|--|--|--|
| | | | | | | |
|--|--|--|--|--|--|--|

| SUBPART – L CHANGE in CLASS LOCATION PROCEDURES | | | S | U | N/A | N/C |
|--|----------------------------|--|---|---|-----|-----|
| 279. | 480-93-180(1) / 192.605(a) | Class location study 192.609 SPW 703 and OQ for patrolling transmission pipelines. Incl. OP D, E, J 120-01 for transmission, specialty construction and leakage (Don't find a link to the study for item OP J 201-01. | x | | | |
| 280. | | Confirmation or revision of MAOP 192.611 Final Rule Pub. 10/17/08, eff. 12/22/08. SPW 703. 3.3.2 and Engineering Procedure D-2 viewed on screen. | x | | | |

| SUBPART – L CONTINUING SURVEILLANCE PROCEDURES | | | S | U | N/A | N/C |
|---|---------|--|---|---|-----|-----|
| 281. | 192.613 | Procedures for surveillance and required actions relating to change in class location, failures, leakage history, corrosion, substantial changes in CP requirements, and unusual operating and maintenance conditions 192.613(a) Computer based records reviewed. Include language regarding where/how the location of records. Under WAC rule | | x | | |
| 282. | 192.613 | Procedures requiring MAOP to be reduced, or other actions to be taken, if a segment of pipeline is in unsatisfactory condition 192.613(b) SPW 613 sends them to SPW 303. Includes OQ AOC's for Damaged, nonleaking pipeline facility D-01 transmission and E-01 specialty construction. Inoperability or failure of PL component D & E-02. Escaping Gas or Fire from PL D&E-03. No gas or insufficient press D & E -04. Overpressurization in PL D & E -05. Stray current on PL D & E-06. Odorization D&E -07 for transmission and Specialty construction. Unsatisfactory Welds/Fusions D & E -08. Unsatisfactory customer service materials/condition D&E-09 for transmission and specialty construction. Environmental hazard D&E-10 for transmission and Specialty construction. | x | | | |

| SUBPART – L DAMAGE PREVENTION PROGRAM PROCEDURES | | | S | U | N/A | N/C |
|---|----------------------------|---|---|---|-----|-----|
| 283. | | Participation in a qualified one-call program, or if available, a company program that complies with the following: SPW 605 3. And 619-3. NWN belongs to the Northwest Utilities Notification center in WA. | x | | | |
| 284. | 480-93-180(1) / 192.605(a) | Identify persons who engage in excavating .614(c)(1)Referenced section does not meet requirements on a current basis for those who normally engage in excavation activities. SPW 605-4.1 NWN identifies they complete this by Damage prevention department visiting job sites in WA and by tracking on-going construction projects identified in SPW 605. Staff does not believe this list is comprehensive using this plan. Expectation is that they include the identity, on a current basis, of persons who normally engage in excavation activities in the area in which the pipeline is located. Do they use locate tickets, by list from listing service, review phone books, etc. – don't see evidence of this and this is not a procedure for completing. NWN PA 3.4.1 | x | | | |
| 285. | | Provide notification to the public in the One Call area .614(c) (2) This is not a procedure for completing this task. NWN referenced SPW 605-4.1 | x | | | |
| 286. | | Provide means for receiving and recording notifications of pending excavations .614(c) (3) SPW 605-4.2 | x | | | |
| 287. | | Provide notification of pending excavations to the members .614(c) (4) SPW 605-4.2 | x | | | |
| 288. | AOC | Provide means of temporary marking for the pipeline in the vicinity of the excavations .614(c) (5) SPW 605-4.2 identifies one-call. Procedure for marking (monitoring 3 rd party excavations) OP C-E and L, 102-01. Standby's and marking (C, D, E, and L and D-E, L, Q, X 137-02 and D137-06 Note) Don't see how NWN provide information to excavators on how to identify the markings – not included in any of the above references. 614(c)(4). Reference the P/A and Damage prevention in your procedure of temporary marking. | | x | | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| | | | | | | |
|------|---|----------|----------|------------|------------|--|
| 289. | Provides for follow-up inspection of the pipeline where there is reason to believe the pipeline could be damaged .614(c) (6) 1. Is the inspection done as frequently as necessary during and after the activities to verify the integrity of the pipeline? 2. In the case of blasting, does the inspection include leakage surveys? SPW 605-4.3 | x | | | | |
| 290. | Damage Prevention (Operator Internal Performance Measures) | S | U | N/A | N/C | |
| 291. | Does the operator have a quality assurance program in place for monitoring the locating and marking of facilities? <u>SPW 605-4.3</u> Do operators conduct regular field audits of the performance of locators/contractors and take action when necessary? (CGA Best Practices v. 6.0, Best Practice 4-18. Recommended only, not required) SPW 605-4.3 does not identify field audit of locators but does identify remark as needed to maintain marks. In quality assurance program . Check Q/A | x | | | | |
| 292. | Does operator include performance measures in facility locating services contracts with corresponding and meaningful incentives and penalties? No. Not in their current contract. | x | | | | |
| 293. | Do locate contractors address performance problems for persons performing locating services through mechanisms such as re-training, process change, or changes in staffing levels? Yes, Performance problems are handled through the contract with Locating Inc., they are required to complete QA report monthly and provide NWN with copies of the reports. NWN completes post QA reports, any failures are sent to the NWN supervisor for review and followup reports. The contractor has the ability to retrain, perform a process change and or change staffing levels based upon the performance by their employee or at the request of NWN stating the employee is no longer allowed to perform NWN locates. | x | | | | |
| 294. | Does the operator periodically review the Operator Qualification plan criteria and methods used to qualify personnel to perform locates? Yes, the locator OQ program plan and all associated procedures and AOC's are viewed annually. Where does it state this? See QA program and Annual review in August. | x | | | | |
| 295. | Review operator locating and excavation <u>procedures</u> for compliance with state law and regulations. OP C 137-02 for locating and FOM 400 (multiple locations dependent upon task) for excavation. | x | | | | |
| 296. | Are locates are being made within the timeframes required by state law and regulations? Examine record sample. | x | | | | |
| 297. | Are locating and excavating personnel properly <u>qualified</u> in accordance with the operator's Operator Qualification plan and with federal and state requirements? Where does it state OQ (written tests, and performance in OP-L-137-02 and under the operator program in conjunction with the performance manual) of locaters and excavators? | x | | | | |
| 298. | Informational purposes only. Not Required. Does the pipeline operator voluntarily submit pipeline damage statistics into the UTC Damage Information Reporting Tool (DIRT)? Operator may register at https://identity.damagereporting.org/cgareg/control/login.do Y x N | x | | | | |
| 299. | PHMSA Areas of Emphasis: <ul style="list-style-type: none"> • Does the operator have directional drilling/boring procedures which include taking actions necessary to protect their facilities from the dangers posed by drilling and other trenchless technologies? Can't find NWN reference CFM 204-16. FOM 1700 page 846. | x | | | | |
| 300. | <ul style="list-style-type: none"> • Does the operator review records of accidents and failures due to excavation damage to ensure causes of failures are addressed to minimize the possibility of recurrence? Please show me where you state this is part of your review. SPW 605-4.4 | x | | | | |

Comments:

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| SUBPART – L EMERGENCY PROCEDURES | | | S | U | N/A | N/C |
|-------------------------------------|---|---|---|---|-----|-----|
| 301. | 480-93-180(1) / 192.615 | Receiving, identifying, and classifying notices of events which require immediate response by the operator .615(a)(1) Note: Including third-party damage SPW 615-2.1 and 3.2 Also includes prioritization of events. | x | | | |
| 302. | | Establish and maintain communication with appropriate public officials regarding possible emergency .615(a)(2) SPW 615-2 includes statement but where is procedure Emergency response plan Section 8.7 and Annex H | x | | | |
| 303. | | Prompt response to each of the following emergencies: .615(a)(3) Provide procedure location for the following. SPW 615 is the policy not procedure. Mutual assistance is incorporated into the existing programs. Does it have provisions for OQ? Under the OQ program contractors are reviewed and so is the mutual assistance. And in 615-3.6 regarding Mutual Assistance. | x | | | |
| 304. | | (i) Gas detected inside a building FOM 300 and Eplan | x | | | |
| 305. | | (ii) Fire located near a pipeline FOM 300-1 and Eplan | x | | | |
| 306. | | (iii) Explosion near a pipeline FOM 300-1 and Eplan | x | | | |
| 307. | | (iv) Natural disaster Eplan | x | | | |
| 308. | | Note: Including third-party damage | x | | | |
| 309. | | Availability of personnel, equipment, instruments, tools, and material required at the scene of an emergency .615(a)(4) | x | | | |
| 310. | | Actions directed towards protecting people first, then property .615(a)(5) | x | | | |
| 311. | Emergency shutdown or pressure reduction to minimize hazards to life or property .615(a)(6) | x | | | | |
| 312. | Making safe any actual or potential hazard to life or property .615(a)(7) | x | | | | |
| 313. | Notifying appropriate public officials required at the emergency scene and coordinating planned and actual responses with these officials .615(a)(8) | x | | | | |
| 314. | Instructions for restoring service outages after the emergency has been rendered safe .615(a)(9) Eplan – 17 and SPW 615-3.6 | x | | | | |
| 315. | 480-93-180(1) / 192.615 | Investigating accidents and failures as soon as possible after emergency .615(a)(10) | x | | | |
| 316. | | Actions required to be taken by a controller during an emergency in accordance with 192.631. (Amdt. 192-112, 74 FR 63310, December 3, 2009, eff. 2/1/2010). .615(a)(11) August 1, 2012. See CRM section of O&M for detail. Eplan gas control responsibilities 5.2.2 | x | | | |
| 317. | | Furnishing applicable portions of the emergency plan to supervisory personnel who are responsible for emergency action .615(b)(1) NWN references the Emergency Response Plan. – Provide evidence that this is included. Eplan 11. | x | | | |
| 318. | | Training appropriate employees as to the requirements of the emergency plan and verifying effectiveness of training .615(b)(2) NWN references SPW 615-3.7 but this section does not identify how they verify the effectiveness of the training. Reference to scenario training to all field personnel – (all first responders) Reviewed records – in file. | x | | | |
| 319. | Reviewing activities following emergencies to determine if the procedures were effective .615(b)(3) SPW 615-3.7 identifies they will complete the review but there is no procedure for the review in the manual. NWN also identified a separate document “Emergency Response Plan” – is there a procedure in this manual for completing. Rule states, “Review employee activities to determine whether the procedures were effectively followed in each emergency.” See SPW 617. Eplan 17.0 and Eplan 18. | x | | | | |
| 320. | PV | Establish and maintain liaison with appropriate public officials, such that both the operator and public officials are aware of each other’s resources and capabilities in dealing with gas emergencies .615(c) SPW 619-3.3 identifies they keep a record but does not list the contacts or how they maintain liaison with public officials. PAP Plan includes detail – they will provide. NWN will provide information on: Learn the responsibility and resources of each government organization that may respond to a gas pipeline emergency; | | x | | |

Comments:

**Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review**

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| |
|--|
| |
|--|

| SUBPART – L PUBLIC AWARENESS PROGRAM PROCEDURES (Also in accordance with API RP 1162) | | | S | U | N/A | N/C |
|--|-------------------------------|--|---|---|-----|-----|
| 321. | 480-93-180(1) / 192.605(a) | Public Awareness Program in accordance with API RP 1162 (Amdt 192-99 pub. 5/19/05, eff. 06/20/05 and Amdt 192 – not numbered pub 12/13/07 eff. 12/13/07). .616 | | | | |
| 322. | | The operators program must specifically include provisions to educate the public, appropriate government organizations, and persons engaged in excavation related activities on: .616(d) PA plan references API 1162 in their plans section 1.3 Compliance w/Regulations and standards. | x | | | |
| 323. | | (1) Use of a one-call notification system prior to excavation and other PA 5.4.1 Targeting Excavator Audience. | x | | | |
| 324. | | (2) Possible hazards associated with unintended releases from a gas pipeline facility; PA 4.1 Message Content | x | | | |
| 325. | | (3) Physical indications of a possible release; PA 4.3.1.1 | x | | | |
| 326. | | (4) Steps to be taken for public safety in the event of a gas pipeline release; PA 4.3.1.2 | x | | | |
| 327. | | Does program include activities to advise affected municipalities, school districts, businesses, and residents of pipeline facility locations. .616(e) PA 4.6 ; 5.1.1; 5.1.2 ; 5.2, and 5.3 | x | | | |
| 328. | | The operator’s program and the media used must be comprehensive enough to reach all areas the operator transports gas. .616(f) PA 6. Delivery Methods and Frequencies | x | | | |
| 329. | | Is the program conducted in English and any other languages commonly understood by a significant number of the population? .616(g) | x | | | |
| 330. | | Operations of a master meter Not applicable | x | | | |
| 331. | | Operators of a Master Meter or petroleum gas system (unless the operator transports gas as a primary activity) must develop/implement a written procedure to provide it’s customers public awareness messages twice annually: .616(j) (1) A description of the purpose and reliability of the pipeline; (2) An overview of the hazards of the pipeline and prevention measures used; (3) Information about damage prevention; (4) How to recognize and respond to a leak; and (5) How to get additional information. N/A | x | | | |
| 332. | | IAW API RP 1162, the operator’s program should be reviewed for effectiveness within four years of the date the operator’s program was first completed. <u>For operators in existence on June 20, 2005</u> , who must have completed their written programs no later than June 20, 2006, the first evaluation is due no later than June 20, 2010 . .616(h) PA 8. Under 8.3 NWN completes the effectiveness evaluation on an annual basis. PAP Effectiveness evaluation completed November 8, 2011. NWN references 1.3-1.5 of the plan. | x | | | |

| SUBPART – L FAILURE INVESTIGATION PROCEDURES | | | S | U | N/A | N/C |
|--|----------------------------|---|---|---|-----|-----|
| 333. | 480-93-180(1) / 192.617 | Analyzing accidents and failures including laboratory analysis where appropriate to determine cause and prevention of recurrence .617 | x | | | |

| |
|-----------|
| Comments: |
|-----------|

| SUBPART – L MAOP PROCEDURES | | | S | U | N/A | N/C |
|--|--|--|---|---|-----|-----|
| Note: If the operator is operating under a Special Permit, a Waiver or 192.620, the inspector needs to review the | | | | | | |

Utilities and Transportation Commission

Standard Inspection Report for Intrastate Gas Systems Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| special conditions of the Special Permit, Waiver or refer to Attachment 1 for additional .620 requirements. | | | | | | | | | | | | | | | | | | |
|--|--|---|------------------|---------------|-----------|--|--|---|---------------------------|---------------|---------------|----------------------|---------------|---------------|---|--|--|--|
| 334. | 480-93-180(1) 192.605(a) | Establishing MAOP so that it is commensurate with the class location .619 SPW 627 for Distr. & Transm. w/MAOP >60psig. SPW 160 for Distr. & Transm w/MAOP <= 60psig OP C 139-01 Construction and OP D 138-01 Transmission. Also under SPW 150.3.3; 504.3.2 and 511.3 | x | | | | | | | | | | | | | | | |
| 335. | | MAOP cannot exceed the lowest of the following: | | | | | | | | | | | | | | | | |
| 336. | | <ul style="list-style-type: none"> • Design pressure of the weakest element; .619(a)(1) SPW 673-3.7 | x | | | | | | | | | | | | | | | |
| 337. | | <ul style="list-style-type: none"> • Test pressure divided by applicable factor .619(a)(2) SPW 627 | x | | | | | | | | | | | | | | | |
| 338. | 480-93-180(1) / 192.605(a) | <ul style="list-style-type: none"> • The highest actual operating pressure to which the segment of line was subjected during the 5 years preceding the applicable date in second column, unless the segment was tested according to .619(a)(2) after the applicable date in the third column or the segment was updated according to subpart K. Note: For gathering line related compliance deadlines and additional gathering line requirements, refer to Part 192 including this amendment. .619(a)(3) SPW 627.2 for Distr. & Transm. w/MAOP >60psig. SPW 160.2 for Distr. & Transm w/MAOP <= 60psig OP C 139-01 Construction and OP D 138-01 Transmission. Also under SPW 150.3.3; 504.3.2 and 511.3 <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th style="width: 55%;">Pipeline segment</th> <th style="width: 20%;">Pressure date</th> <th style="width: 25%;">Test date</th> </tr> </thead> <tbody> <tr> <td>-- Onshore gathering line that first became subject to this part (other than § 192.612) after April 13, 2006. --Onshore transmission line that was a gathering line not subject to this part before March 15, 2006.</td> <td>March 15, 2006, or date line becomes subject to this part, whichever is later.</td> <td>5 years preceding applicable date in second column.</td> </tr> <tr> <td>Offshore gathering lines.</td> <td>July 1, 1976.</td> <td>July 1, 1971.</td> </tr> <tr> <td>All other pipelines.</td> <td>July 1, 1970.</td> <td>July 1, 1965.</td> </tr> </tbody> </table> | Pipeline segment | Pressure date | Test date | -- Onshore gathering line that first became subject to this part (other than § 192.612) after April 13, 2006. --Onshore transmission line that was a gathering line not subject to this part before March 15, 2006. | March 15, 2006, or date line becomes subject to this part, whichever is later. | 5 years preceding applicable date in second column. | Offshore gathering lines. | July 1, 1976. | July 1, 1971. | All other pipelines. | July 1, 1970. | July 1, 1965. | x | | | |
| Pipeline segment | Pressure date | Test date | | | | | | | | | | | | | | | | |
| -- Onshore gathering line that first became subject to this part (other than § 192.612) after April 13, 2006. --Onshore transmission line that was a gathering line not subject to this part before March 15, 2006. | March 15, 2006, or date line becomes subject to this part, whichever is later. | 5 years preceding applicable date in second column. | | | | | | | | | | | | | | | | |
| Offshore gathering lines. | July 1, 1976. | July 1, 1971. | | | | | | | | | | | | | | | | |
| All other pipelines. | July 1, 1970. | July 1, 1965. | | | | | | | | | | | | | | | | |
| 339. | | <ul style="list-style-type: none"> • Maximum safe pressure determined by operator. .619(a)(4) SPW 623.-3.7 and 627-3.6 | x | | | | | | | | | | | | | | | |
| 340. | 480-93-180(1) | <ul style="list-style-type: none"> • Overpressure protective devices must be installed if .619(a)(4) is applicable .619(b) | x | | | | | | | | | | | | | | | |
| 341. | 192.605(a) | <ul style="list-style-type: none"> • The requirements on pressure restrictions in this section do not apply in the following instance. An operator may operate a segment of pipeline found to be in satisfactory condition, considering its operating and maintenance history, at the highest actual operating pressure to which the segment was subjected during the 5 years preceding the applicable date in the second column of the table in paragraph (a)(3) of this section. An operator must still comply with § 192.611. Amdt 192-102 pub. 3/15/06, eff. 04/14/06. Note: For gathering line related compliance deadlines and additional gathering line requirements, refer to Part 192 including this amendment. .619(c) SPW 743 | x | | | | | | | | | | | | | | | |
| 342. | | Refer to Attachment 1 for additional Alternative MAOP requirements. (Amdt. 192- 107, 73 FR 62147, October 17, 2008, eff. 11/17/2008). .620 N/A | | | | | | | | | | | | | | | | |
| 343. | | MAOP - High Pressure Distribution Systems .621 Note: New PA-11 design criteria is incorporated into 192.121 & .123 (Final Rule Pub. 12/24/08) SPW 627.2 for Distr. & Transm. w/MAOP >60psig. SPW 160.2 for Distr. & Transm w/MAOP <= 60psig OP C 139-01 Construction and OP D 138-01 Transmission. Also under SPW 150.3.3; 504.3.2 and 511.3 | x | | | | | | | | | | | | | | | |
| 344. | | Max./Min. Allowable Operating Pressure - Low Pressure Distribution Systems .623 SPW 623 | x | | | | | | | | | | | | | | | |

Comments:

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
 If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| | |
|--|--|
| | |
|--|--|

| WAC 480-93-015 ODORIZATION PROCEDURES | | | S | U | N/A | N/C |
|--|---------------|--|---|---|-----|-----|
| 345. | | Odorization of gas at the proper concentration in air 480-93-015 (1) | x | | | |
| 346. | 480-93-180(1) | Use of odorant testing instrumentation/Monthly testing interval 480-93-015 (2) | x | | | |
| 347. | | Odorant Testing Equipment Calibration/Intervals (Annually or Manufacturers Recommendation) 480-93-015 (3) SPW 737. | x | | | |
| 348. | 480-93-180(1) | Records maintained for usage, odorant tests performed and equipment calibration (5yrs) 480-93-015(4) SPW 625-3.7 | x | | | |

| | |
|-----------|--|
| Comments: | |
|-----------|--|

| SUBPART – L TAPPING PIPELINES UNDER PRESSURE PROCEDURES | | | S | U | N/A | N/C |
|---|---------------|--|---|---|-----|-----|
| 349. | 480-93-180(1) | Hot taps must be made by a qualified crew NDT testing is suggested prior to tapping the pipe. Reference API RP 2201 for Best Practices . .627 | x | | | |

| SUBPART – L PIPELINE PURGING PROCEDURES | | | S | U | N/A | N/C |
|---|---------------|--|---|---|-----|-----|
| 350. | 480-93-180(1) | Purging of pipelines must be done to prevent entrapment of an explosive mixture in the pipeline .629 | x | | | |
| 351. | 480-93-180(1) | (a) Lines containing air must be properly purged. | x | | | |
| 352. | 480-93-180(1) | (b) Lines containing gas must be properly purged | x | | | |

| | |
|-----------|--|
| Comments: | |
|-----------|--|

| SUBPART – M MAINTENANCE PROCEDURES | | | S | U | N/A | N/C |
|------------------------------------|---------------|--|---|---|-----|-----|
| 353. | 480-93-180(1) | Each segment of pipeline that becomes unsafe must be replaced, repaired, or removed from Service .703(b) | x | | | |
| 354. | 480-93-180(1) | Hazardous leaks must be repaired promptly .703(c) | x | | | |

| | |
|-----------|--|
| Comments: | |
|-----------|--|

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| |
|--|
| |
|--|

| * CONTROL ROOM MANAGEMENT PROCEDURES (Amdt. 192-112, 74 FR 63310, December 3, 2009, eff. 2/1/2010) | | S | U | N/A | N/C | |
|--|----------------|---|---|-----|-----|---|
| .605(a) | .631(a) | (1) This section applies to each operator of a pipeline facility with a controller working in a control room who monitors and controls all or part of a pipeline facility through a SCADA system, except where an operator's activities are limited to: (ii) Transmission without a compressor station, the operator must have and follow written procedures that implement only paragraphs (d) (regarding fatigue), (i) (regarding compliance validation), and (j) (regarding compliance and deviations) of this section. | | | | |
| | .631(a) | .605(b)(12) Each operator must have and follow written control room management procedures. NOTE: <i>An operator must develop the procedures no later than August 1, 2011 and implement the procedures no later than February 1, 2013.</i> | | | | |
| | .631(b) | The operator's program must define the roles and responsibilities of a controller during normal, abnormal and emergency conditions including a definition of: | | | | |
| | (1) | Controller's authority and responsibility. CRM-302-2.1.1 | | | | |
| | (2) | Controller's role when an abnormal operating condition is detected. CRM-302-2.2 | | | | x |
| | (3) | Controller's role during an emergency CRM-302-2.3 | | | | x |
| | (4) | A method of recording shift change responsibilities between controllers. | | | | x |
| | .631(c) | The operator's program must provide its controllers with the information, tools, processes and procedures necessary to perform each of the following: | | | | |
| | (1) | Implement sections 1, 4, 8,9,11.2, and 11.3 of API RP 1165 whenever a SCADA System is added, expanded or replaced. Not completed but not Due until August 1, 2012. | | | | x |
| | (2) | Conduct point-to-point verification between SCADA displays and related equipment when changes that affect pipeline safety are made. <u>CRM 403 – 3. Procedure 3.1.2.3.4, etc. change should to shall. Include log entry of contact.</u> | | | | x |
| | (3) | Test and verify any internal communications plan – at least once a year NTE 15 months. CRM 403 – 3. | | | | x |
| | (4) | Test any backup SCADA system at least once each year but NTE 15 months. | | | | x |
| | (5) | Establish and implement procedures for when a different controller assumes responsibility. | | | | x |
| | .631(d) | Each operator must implement and follow methods to reduce the risk associated with controller fatigue, including: | | | | |
| | (1) | Establishing shift lengths and schedule rotations that provide time sufficient to achieve eight hours of continuous sleep. Section 108 of CRM – requires documentation of deviations. | | | | x |
| | (2) | Educating controllers and supervisors in fatigue mitigation strategies. Fatigue Risk Management Plan – FRMP 4.3 (Subpart of CRM procedures.) NTE 15 mos. | | | | x |
| | (3) | Training of controllers and supervisors to recognize the effects of fatigue. FRMP 4.3 | | | | x |
| | (4) | Establishing a maximum limit on controller hours-of-service. FRMP 4.2.1 | | | | x |
| | .631(e) | Each operator must have a written alarm management plan including these provisions: | | | | |
| | (1) | Reviewing alarms using a process that ensures that they are accurate and support safe operations. Not due until August 1, 2012. N/A | | | | x |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| CONTROL ROOM MANAGEMENT PROCEDURES (Amdt. 192-112, 74 FR 63310, December 3, 2009, eff. 2/1/2010) | | | S | U | N/A | N/C |
|--|----------------|--|---|---|-----|-----|
| * | | (2) Identifying at least once a year, points that have been taken off SCADA scan or have had alarms inhibited, generated false alarms, or have had forced or manual values for periods of time exceeding that required for maintenance activities. N/A | x | | | |
| | | (3) Verifying the alarm set-point values and alarm descriptions once each year NTE 15 months. N/A | x | | | |
| | | (4) Reviewing the alarm management plan at least once every calendar year NTE 15 months. N/A | x | | | |
| | | (5) Monitoring the content and volume of activity being directed to and required of each controller once each year NTE 15 months. N/A | x | | | |
| | | (6) Addressing deficiencies identified through implementation of 1-5 of this section. N/A | x | | | |
| | .631(f) | Each operator must assure that changes that could affect control room operations are coordinated with the control room personnel by performing the following: | | | | |
| | | (1) Establishing communications between controllers, management and field personnel when implementing physical changes to the pipeline. CRM 701A. Requested a viewing of AOC/Emergency Deviation Form. | x | | | |
| | | (2) Requiring field personnel to contact the control room when emergency conditions exist and when field changes could affect control room operations. CRM 701A-3 | x | | | |
| | | (3) Seeking control room or management participation in planning prior to implementation of significant pipeline changes. CRM 702A and SPW 303 (Requirements for shutdown, Tie-in, and startup procedures. | x | | | |
| | .631(g) | Each operator must assure that lessons learned from its experience are incorporated in to its procedures by performing the following: | | | | |
| | | (1) Reviewing reportable incidents to determine if control room actions contributed to the event and correcting any deficiencies. CRM 801A, CRM meetings monthly and scenario based meetings | x | | | |
| | | (2) Including lessons learned from the operator’s training program required by this section. Same as above | x | | | |
| | .631(h) | Each operator must establish a controller training program and review its contents once a year NTE 15 months which includes the following elements: CRM 902A Training Program Elements Procedures. | x | | | |
| | | (1) Responding to abnormal operating conditions (AOCs). CRM 902A – 4.2 regarding response to issues of CRM 302 3.1-4 | x | | | |
| | | (2) Using a computerized simulator or other method for training controllers to recognize AOCs CRM 902A – 6.1- 4.2.3 | x | | | |
| | | (3) Training controllers on their responsibilities for communication under the operator’s emergency response procedures. CRM 902A – 6.1- 4.2.4 | x | | | |
| | | (4) Training that provides a working knowledge of the pipeline system, especially during AOCs. | x | | | |
| | | (5) Providing an opportunity for controllers to review relevant procedures for infrequently used operating setups. CRM 902A 6.1 4.2.4 | x | | | |

| SUBPART - M TRANSMISSION LINES - PATROLLING & LEAKAGE SURVEY PROCEDURES | | | S | U | N/A | N/C | | | | | | | | | | | | |
|--|------------------------------|--|---|---|-----|-----|---------------------|-----------------------------------|---------------------|---------|------------------|------------------|---|------------------|------------------|---|------------------|------------------|
| 355. | | Patrolling ROW conditions .705(a) Proximity issues recorded in advantica (computer) SPW 703. | x | | | | | | | | | | | | | | | |
| 356. | 480-93-180(1) /192.605(b) | Maximum interval between patrols of lines: .705 (b) Both Class locations and HCA’s. | x | | | | | | | | | | | | | | | |
| | | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Class Location</th> <th style="text-align: center;">At Highway and Railroad Crossings</th> <th style="text-align: center;">At All Other Places</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1 and 2</td> <td style="text-align: center;">2/yr (7½ months)</td> <td style="text-align: center;">1/yr (15 months)</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">4/yr (4½ months)</td> <td style="text-align: center;">2/yr (7½ months)</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">4/yr (4½ months)</td> <td style="text-align: center;">4/yr (4½ months)</td> </tr> </tbody> </table> | | | | | Class Location | At Highway and Railroad Crossings | At All Other Places | 1 and 2 | 2/yr (7½ months) | 1/yr (15 months) | 3 | 4/yr (4½ months) | 2/yr (7½ months) | 4 | 4/yr (4½ months) | 4/yr (4½ months) |
| Class Location | | At Highway and Railroad Crossings | | | | | At All Other Places | | | | | | | | | | | |
| 1 and 2 | | 2/yr (7½ months) | | | | | 1/yr (15 months) | | | | | | | | | | | |
| 3 | | 4/yr (4½ months) | | | | | 2/yr (7½ months) | | | | | | | | | | | |
| 4 | 4/yr (4½ months) | 4/yr (4½ months) | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 357. | | Leakage surveys – 1 year/15 months .706 | | | | | | | | | | | | | | | | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| | | | | | | |
|------|--|---|--|--|--|--|
| 358. | | Leak detector equipment survey requirements for lines transporting un-odorized gas (N/A - All pipelines in WA require odorization) | | | | |
|------|--|---|--|--|--|--|

| WAC 480-93-185 GAS LEAK INVESTIGATION | | | S | U | N/A | N/C |
|--|---------------|---|----------|----------|------------|------------|
| | | Procedures for the prompt investigation of any notification of a leak, explosion, or fire, which may involve gas pipelines or other gas facilities. | | | | |
| 359. | 480-93-180(1) | <ul style="list-style-type: none"> • received from any outside source such as a police or fire department, other utility, contractor, customer, or the general public 480-93-185(1) | x | | | |
| 360. | 480-93-180(1) | <ul style="list-style-type: none"> • Grade leak in accordance with WAC 480-93-186, and take appropriate action 480-93-185(1) | x | | | |
| 361. | 480-93-180(1) | <ul style="list-style-type: none"> • retain the leak investigation record for the life of the pipeline. 480-93-185(1) | x | | | |
| 362. | 480-93-180(1) | Prevent removal of any suspected gas facility until the commission or the lead investigative authority has designated the release of the gas facility and keep the facility intact until directed by the lead investigative authority 480-93-185(2) | x | | | |
| 363. | 480-93-180(1) | Taking appropriate action when leak indications originating from a foreign source. Notification requirements. 480-93-185(3) | x | | | |

| WAC 480-93-186 LEAK EVALUATION | | | S | U | N/A | N/C |
|---|---------------|--|----------|----------|------------|------------|
| 364. | 480-93-180(1) | Grade leaks as defined in WAC 480-93-18601 to establish the leak repair priority. 480-93-186(1) | x | | | |
| 365. | 480-93-180(1) | procedure for evaluating the concentration and extent of gas leakage 480-93-186(2) | x | | | |
| 366. | 480-93-180(1) | Use of a combustible gas indicator to check the perimeter of a leak area. Follow-up inspection on repaired leaks no later than thirty days following repair. 480-93-186(3) | x | | | |
| 367. | 480-93-180(1) | Grade 1 and 2 leaks downgraded once to Grade 3 leak without a physical repair. After downgrade, repair must be made not to exceed twenty-one months 480-93-186(4) | x | | | |

Comments:

| WAC 480-93-187 GAS LEAK RECORDS | | | S | U | N/A | N/C |
|--|---------------|--|----------|----------|------------|------------|
| | | Gas leak records must contain, at a minimum, the criteria outlined in 480-93-187 (1-13) | | | | |
| 368. | 480-93-180(1) | 1) Date and time the leak was detected, investigated, reported, and repaired, and the name of the employee(s) conducting the investigation; (2) Location of the leak (sufficiently described to allow ready location by other qualified personnel); (3) Leak grade; (4) Pipeline classification (e.g., distribution, transmission, service); (5) If reported by an outside party, the name and address of the reporting party; (6) Component that leaked (e.g., pipe, tee, flange, valve); (7) Size and material that leaked (e.g., steel, plastic, cast iron); (8) Pipe condition; (9) Type of repair; (10) Leak cause; (11) Date pipe installed (if known); (12) Magnitude and location of CGI readings left; and (13) Unique identification numbers (such as serial numbers) of leak detection equipment. | x | | | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

Comments:

| WAC 480-93-188 GAS LEAK SURVEYS | | | S | U | N/A | N/C |
|--|---------------|--|----------|----------|------------|------------|
| 369. | 480-93-180(1) | gas leak surveys using a gas detection instrument covering areas listed in 480-93-188(1)(a-e) | x | | | |
| 370. | | Gas detection instruments tested for accuracy/intervals (Mfct rec or monthly not to exceed 45 days) 480-93-188(2) | x | | | |
| 371. | | Surveys conducted according to the minimum frequencies outlined under 480-93-188(3)(a-d) | x | | | |
| 372. | | Surveys conducted under the following circumstances outlined under 480-93-188(4)(a-e) | x | | | |
| 373. | | Survey records must be kept for a minimum of five years and contain information required under 480-93-188(5)(a-f) Retained permanently | x | | | |
| 374. | | Self audits as necessary, but not to exceed three years between audits and meet the criteria outlined under 480-93-188(6)(a-e) SPW 707 Compliance Engineering will be completing the self audits in the future – the procedure is changing. NWN is considering completing annually but at present it is completed @ 3 yrs. | x | | | |

Comments:

| PIPELINE MARKERS PROCEDURES | | | S | U | N/A | N/C |
|------------------------------------|---------------------|---|----------|----------|------------|------------|
| 375. | 480-93-180(1) PV | Placement of markers - railroad, road, irrigation and drainage ditch crossings... 480-93-124 (1) | x | | | |
| 376. | | Placement of markers - Separation/Other locations... 480-93-124 (2) & 192.707 | x | | | |
| 377. | | Installed at each end of bridges or other spans / Inspected 1/YR (15 Months) 480-93-124 (3) | x | | | |
| 378. | | Markers reported missing or damaged replaced within 45 days? 480-93-124(4) If markers are discovered missing/damaged outside the normal discovery where is procedure for notifying or completing form. | | x | | |
| 379. | | Surveys of pipeline markers – Not to exceed 5/YR Records 10/Yrs minimum 480-93-124(5) | x | | | |
| 380. | | Maintain maps, drawings or other records indicating class locations and other areas where pipeline markers are required 480-93-124(6) | x | | | |

Comments:

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| SUBPART - M | | | | S | U | N/A | N/C |
|---|--------------------------------|--|--|----------|----------|------------|------------|
| TRANSMISSION RECORD KEEPING PROCEDURES | | | | | | | |
| 381. | | Records must be maintained... .709 | | x | | | |
| 382. | 480-93-180(1) / 192.605 (b) | (a) Repairs to the pipe – life of system | | x | | | |
| 383. | | (b) Repairs to “other than pipe” – 5 years NWN procedure meets code but they actually keep for life of pipe | | x | | | |
| 384. | | (c) Operation (Sub L) and Maintenance (Sub M) patrols, surveys, tests – 5 years or until next one | | x | | | |

| SUBPART - M | | | | S | U | N/A | N/C |
|--|---|---|---|----------|----------|------------|------------|
| TRANSMISSION LINE FIELD REPAIR PROCEDURES | | | | | | | |
| Imperfections and Damages | | | | | | | |
| 385. | 480-93-180(1) / 192.605 (b) | Repairs of imperfections and damages on pipelines operating above 40% SMYS | | | | | |
| 386. | | <ul style="list-style-type: none"> Cut out a cylindrical piece of pipe and replace with pipe of \geq design strength .713(a)(1) SPW 227 Procedure does not contain wall evaluation. Evaluation of w.t. is under 3.1.2.4 | | x | | | |
| 387. | | <ul style="list-style-type: none"> Use of a reliable engineering method .713(a)(2) | | x | | | |
| 388. | | Reduce operating pressure to a safe level during the repair .713(b) SPW 227 needs to reference the procedure to complete this which is in Transmission IMP 5.1.3 | | | x | | |
| Permanent Field Repair of Welds | | | | | | | |
| 389. | 480-93-180(1) / 192.605 (b) | Welds found to be unacceptable under §192.241(c) must be repaired by: .715 | | | | | |
| 390. | | (a) Taking the line out of service and repairing in accordance with §192.245: | | s | | | |
| 391. | | <ul style="list-style-type: none"> Cracks longer than 8% of the weld length (except offshore) must be removed | | x | | | |
| 392. | | <ul style="list-style-type: none"> For each weld that is repaired, the defect must be removed down to clean metal and the pipe preheated if conditions demand it | | x | | | |
| 393. | | <ul style="list-style-type: none"> Repairs must be inspected to ensure acceptability | | x | | | |
| 394. | | <ul style="list-style-type: none"> Crack repairs or defect repairs in previously repaired areas must be done in accordance with qualified written welding procedures | | x | | | |
| 395. | | (b) If the line remains in service, the weld may be repaired in accordance with §192.245 if: | | | | | |
| 396. | | <ul style="list-style-type: none"> The weld is not leaking (1) | | x | | | |
| 397. | | <ul style="list-style-type: none"> he pressure is reduced to produce a stress that is 20% of SMYS or less (2) | | x | | | |
| 398. | | <ul style="list-style-type: none"> Grinding is limited so that 1/8 inch of pipe weld remains (3) SPW 227-3.2.1 They do not do. | | x | | | |
| 399. | <ul style="list-style-type: none"> If the weld cannot be repaired in accordance with (a) or (b) above, a full encirclement welded split sleeve must be installed (c) | | x | | | | |
| Permanent Field Repair of Leaks | | | | | | | |
| 400. | | Field repairs of leaks must be made as follows: .717 | | | | | |
| 401. | | <ul style="list-style-type: none"> Replace by cutting out a cylinder and replace with pipe similar or of greater design (a) | | x | | | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| SUBPART - M | | | S | U | N/A | N/C |
|--|-----------------------------|--|----------|----------|------------|------------|
| TRANSMISSION LINE FIELD REPAIR PROCEDURES | | | | | | |
| 402. | 480-93-180(1) / 192.605 (b) | <ul style="list-style-type: none"> Install a full encirclement welded split sleeve of an appropriate design unless the pipe is joined by mechanical couplings and operates at less than 40% SMYS (b)(1) SPW 227-3.2.3 | x | | | |
| 403. | | <ul style="list-style-type: none"> A leak due to a corrosion pit may be repaired by installing a bolt on leak clamp (b)(2) SPW 227-3.2.3 | x | | | |
| 404. | 480-93-180(1) / 192.605 (b) | <ul style="list-style-type: none"> For a corrosion pit leak, if a pipe is not more than 40,000 psi SMYS, the pits may be repaired by fillet welding a steel plate. The plate must have rounded corners and the same thickness or greater than the pipe, and not more than ½D of the pipe size (b)(3) Not allowed to patch and limited to full encirclement sleeve in 227-3.2.3B | x | | | |
| 405. | | <ul style="list-style-type: none"> Submerged offshore pipe or pipe in inland navigable waterways may be repaired with a mechanically applied full encirclement split sleeve of appropriate design (b)(4) N/A | x | | | |
| 406. | | <ul style="list-style-type: none"> Apply reliable engineering method (b)(5) | x | | | |
| Testing of Repairs | | | | | | |
| 407. | 480-93-180(1) / 192.605 (b) | Replacement pipe must be pressure tested to meet the requirements of a new pipeline .719(a) | | | | |
| 408. | | (b) For lines of 6-inch diameter or larger and that operate at 20% of more of SMYS , the repair must be nondestructively tested in accordance with §192.241(c) SPW 223 | x | | | |

| SUBPART - M | | | S | U | N/A | N/C |
|--|-----------------------------|--|----------|----------|------------|------------|
| DISTRIBUTION SYSTEM PATROLLING & LEAKAGE SURVEY PROCEDURES | | | | | | |
| Margaret will include language in patrol inspection procedures and computer form to include location for identification of small/new business district. | | | | | | |
| 409. | 480-93-180(1) / 192.605 (b) | Frequency of patrolling mains must be determined by the severity of the conditions which could cause failure or leakage (i.e., consider cast iron, weather conditions, known slip areas, etc.) .721(a) SPW 703-3.1-4 | x | | | |
| 410. | | Patrolling surveys are required in business districts at intervals not exceeding 4½ months, but at least four times each calendar year .721 (b)(1) | x | | | |
| 411. | | Patrolling surveys are required outside business districts at intervals not exceeding 7½ months, but at least twice each calendar year .721 (b)(2) | x | | | |
| 412. | | Periodic leak surveys determined by the nature of the operations and conditions. .723 (a)& (b) | x | | | |
| 413. | | In business districts as specified, 1/yr (15 months) .723(b)(1) | x | | | |
| 414. | | Outside of business districts as specified, once every 5 calendar years/63 mos.; for unprotected lines subject to .465(e) where electrical surveys are impractical, once every 3 years/39 mos. .723 (b)(2) SPW 707-3.2 | x | | | |

| SUBPART - M | | | S | U | N/A | N/C |
|--|-----------------------------|---|----------|----------|------------|------------|
| TEST REQUIREMENTS FOR REINSTATING SERVICE LINES | | | | | | |
| 415. | 480-93-180(1) / 192.605 (b) | Except for .725(b), disconnected service lines must be tested the same as a new service line. .725(a) SPW 725 3.2.4 | x | | | |
| 416. | | Service lines that are temporarily disconnected must be tested from the point of disconnection, the same as a new service line, before reconnect. See code for exception to this. .725(b) SPW 725 3.2.4 | x | | | |

Comments:

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| |
|--|
| |
|--|

| SUBPART - M | | | S | U | N/A | N/C |
|---|--------------------------------|--|----------|----------|------------|------------|
| ABANDONMENT or DEACTIVATION of FACILITIES PROCEDURES | | | | | | |
| 417. | 480-93-180(1) / 192.605 (b) | Operator must disconnect both ends, purge, and seal each end before abandonment or a period of deactivation where the pipeline is not being maintained. Offshore abandoned pipelines must be filled with water or an inert material, with the ends sealed .727(b) SPW 725 A-B | x | | | |
| 418. | | Except for service lines, each inactive pipeline that is not being maintained under Part 192 must be disconnected from all gas sources/supplies, purged, and sealed at each end. .727 (c) SPW 723 FOM -409 | x | | | |
| 419. | | Whenever service to a customer is discontinued, do the procedures indicate one of the following: .727(d) | | | | |
| 420. | | The valve that is closed to prevent the flow of gas to the customer must be provided with a locking device or other means designed to prevent the opening of the valve by persons other than those authorized by the operator .727(d) (1) Even though procedures say locked and not shut and locked there is only one way to lock and that is to shut. | x | | | |
| 421. | | A mechanical device or fitting that will prevent the flow of gas must be installed in the service line or in the meter assembly .727(d)(2) | x | | | |
| 422. | | The customer’s piping must be physically disconnected from the gas supply and the open pipe ends sealed .727(d) (3) | x | | | |
| 423. | | If air is used for purging, the operator shall ensure that a combustible mixture is not present after purging .727 (e) SPW 729-3/1 | x | | | |
| 424. | | Operator must file reports upon abandoning underwater facilities crossing navigable waterways, including offshore facilities. .727(g) SPW 007-3.9 | x | | | |

| |
|------------------|
| Comments: |
|------------------|

| SUBPART - M | | | S | U | N/A | N/C | |
|--------------------------------------|--------------------|--|----------|----------|------------|------------|--|
| COMPRESSOR STATION PROCEDURES | | | | | | | |
| .605(b) | SUBPART - M | | | | | | |
| N/A | .605(b)(6) | Maintenance procedures, including provisions for isolating units or sections of pipe and for purging before returning to service | x | | | | |
| | .605(b)(7) | Starting, operating, and shutdown procedures for gas compressor units | x | | | | |
| | .731 | Inspection and testing procedures for remote control shutdowns and pressure relieving devices (1 per yr/15 months) , prompt repair or replacement | x | | | | |
| | .735 | (a) Storage of excess flammable or combustible materials at a safe distance from the compressor buildings | x | | | | |
| | | (b) Tank must be protected according to NFPA #30 ; Amdt 192-103 pub. 06/09/06 eff. 07/10/06. | x | | | | |
| | .736 | Compressor buildings in a compressor station must have fixed gas detection and alarm systems (must be performance tested) , unless: | x | | | | |
| | | ▪ 50% of the upright side areas are permanently open, or | x | | | | |

**Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review**

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| | | | | | | | | |
|---------|--|--|--|--|---|---|-----|-----|
| .605(b) | SUBPART - M | | | | S | U | N/A | N/C |
| | COMPRESSOR STATION PROCEDURES | | | | | | | |
| | <ul style="list-style-type: none"> It is an unattended field compressor station of 1000 hp or less | | | | x | | | |

| SUBPART - M | | | S | U | N/A | N/C | | | | | | |
|---|--|--|-----------------------------------|-----------------------------|------------------------------------|---------------------|---------------------------------|--|---|--|--|--|
| PRESSURE LIMITING and REGULATING STATION PROCEDURES | | | | | | | | | | | | |
| 425. | 480-93-180(1) / 192.605 (b) | Inspection and testing procedures for pressure limiting stations, relief devices, pressure regulating stations and equipment (1 per yr/15 months) .739(a) FOM 800-01 reg but does not reference relief valves. And OP 804-01 | x | | | | | | | | | |
| 426. | | In good mechanical condition .739(a) (1) | x | | | | | | | | | |
| 427. | | Adequate from the standpoint of capacity and reliability of operation for the service in which it is employed .739(a)(2) SPW 743-3.6 but this does not reference the engineering capacity calculation procedure. NWN needs to reference the Engineering Procedure D-10 Regulator and Relief Set Point Requirements. | | x | | | | | | | | |
| 428. | | Set to control or relieve at correct pressures consistent with .201(a), except for .739(b). .739(a) (3) SPW 743 needs to reference Engineering Procedure D-10 Regulator and Relief Set Point Requirmenets. | | | x | | | | | | | |
| 429. | | Properly installed and protected from dirt, liquids, other conditions that may prevent proper oper. .739(a)(4) SPW 743-.2 | x | | | | | | | | | |
| 430. | | For steel lines if MAOP is determined per .619(c) and the MAOP is 60 psi gage or more739(b) | | | | | | | | | | |
| 431. | 480-93-180(1) / 192.605 (b) | <table border="1"> <tr> <td>If MAOP produces hoop stress that</td> <td>Then the pressure limit is:</td> </tr> <tr> <td>Is greater than 72 percent of SMYS</td> <td>MAOP plus 4 percent</td> </tr> <tr> <td>Is unknown as a percent of SMYS</td> <td>A pressure that will prevent unsafe operation of the pipeline considering its operating and maintenance history and MAOP</td> </tr> </table> | If MAOP produces hoop stress that | Then the pressure limit is: | Is greater than 72 percent of SMYS | MAOP plus 4 percent | Is unknown as a percent of SMYS | A pressure that will prevent unsafe operation of the pipeline considering its operating and maintenance history and MAOP | x | | | |
| If MAOP produces hoop stress that | | Then the pressure limit is: | | | | | | | | | | |
| Is greater than 72 percent of SMYS | | MAOP plus 4 percent | | | | | | | | | | |
| Is unknown as a percent of SMYS | A pressure that will prevent unsafe operation of the pipeline considering its operating and maintenance history and MAOP | | | | | | | | | | | |
| 432. | 480-93-180(1) / 192.605 (b) | Pressure limiting and regulating stations: Telemetry or recording gages 192.741(a) thru (c) | x | | | | | | | | | |
| 433. | Testing of Relief Devices .743 (a) thru (c) | x | | | | | | | | | | |

Comments:

| SUBPART - M | | | S | U | N/A | N/C |
|--|--------------------------------|---|---|---|-----|-----|
| VALVE AND VAULT MAINTENANCE PROCEDURES | | | | | | |
| 434. | 480-93-180(1) / 192.605 (b) | Written valve maintenance program detailing the valve selection process, inspection, maintenance, and operating procedures. The written program must detail which valves will be maintained under 49 CFR § 192.745, 49 CFR § 192.747, and 480-93-100. 480-93-100(1) No vaults that meet 200cf criteria. SPW 405 | x | | | |
| | | Transmission Valves | | | | |
| 435. | 480-93-180(1) / 192.605 (b) | Inspect and partially operate each transmission valve that might be required during an emergency (1 per yr/15 months) .745(a) OP – 830.01-03 | x | | | |
| 436. | | Prompt remedial action required, or designate alternative valve .745(b) No procedure identified for a remedial action activity. | | x | | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| | | Distribution Valves | | | | |
|------|--------------------------------|--|---|---|-----|-----|
| 437. | 480-93-180(1) / 192.605 (b) | Check and service each valve that may be necessary for the safe operation of a distribution system (1 per yr/15 months) .747(a) | x | | | |
| 438. | | Prompt remedial action required, or designate alternative valve .747(b) No procedure identified for a remedial action activity. | | x | | |
| | | Service Valves | S | U | N/A | N/C |
| 439. | 480-93-180(1) / 192.605 (b) | Written service valve installation and maintenance program detailing the valve selection process, inspection, maintenance, and operating procedures. Does the program consider the criteria listed under 480-93-100(2)(a-f)? | x | | | |
| 440. | | Service valve maintenance (1 per yr/15 months) 480-93-100(3) | x | | | |
| 441. | | Service valve installation and maintenance program fully implemented by 6/01/07? 480-93-100(6) No procedure identified for a remedial action activity. | | x | | |
| | | Vaults | | | | |
| 442. | 480-93-180(1) / 192.605 (b) | Inspection of vaults greater than 200 cubic feet (1 per yr/15 months) .749 None | x | | | |

| | | SUBPART - M PREVENTION of ACCIDENTAL IGNITION PROCEDURES | S | U | N/A | N/C |
|------|---------------------------------------|--|---|---|-----|-----|
| 443. | 480-93-180(1) / 192.605 (b) AOC | Reduce the hazard of fire or explosion by: (a) When a hazardous amount of gas is being vented into open air, each potential source of ignition must be removed from the area and a fire extinguisher must be provided. (b) Gas or electric welding or cutting may not be performed on pipe or on pipe components that contain a combustible mixture of gas and air in the area of work. (c) Post warning signs, where appropriate. 192.751 (a) thru (c) SPW 751 and OQ not referenced – Link all procedures to each other. | | x | | |

Comments:

| | | SUBPART - M CAULKED BELL AND SPIGOT JOINTS PROCEDURES | S | U | N/A | N/C |
|------|--------------------------------|---|---|---|-----|-----|
| 444. | 480-93-180(1) / 192.605 (b) | Cast-iron caulked bell and spigot joint repair: .753 | | | | |
| 445. | | <ul style="list-style-type: none"> When subject to more than 25 psig, sealed with mechanical clamp, or sealed with material/device which does not reduce flexibility, permanently bonds, and seals and bonds as prescribed in §192.753(a)(2)(iii) .753(a) None | x | | | |
| 446. | | <ul style="list-style-type: none"> When subject to 25 psig or less, joints, when exposed for any reason, must be sealed by means other than caulking .753(b) None | x | | | |

| | | SUBPART - M PROTECTING CAST-IRON PIPELINE PROCEDURES | S | U | N/A | N/C |
|------|--------------------------------|---|---|---|-----|-----|
| 447. | 480-93-180(1) / 192.605 (b) | Operator has knowledge that the support for a segment of a buried cast-iron pipeline is disturbed must provide protection. .755 None | | | | |
| 448. | | <ul style="list-style-type: none"> Vibrations from heavy construction equipment, trains, trucks, buses or blasting? .755(a) None | x | | | |
| 449. | | <ul style="list-style-type: none"> Impact forces by vehicles? .755(b) None | x | | | |
| 450. | | <ul style="list-style-type: none"> Earth movement? .755(c) None | x | | | |

**Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review**

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| | | | | | | |
|------|--|---|---|--|--|--|
| 451. | | <ul style="list-style-type: none"> Other foreseeable outside forces which might subject the segment of pipeline to a bending stress .755(d) None | x | | | |
| 452. | | Provide permanent protection for the disturbed section as soon as feasible .755(e) None | x | | | |

Comments:

| SUBPART N — QUALIFICATION of PIPELINE PERSONNEL | | | S | U | N/A | N/C |
|---|--------------------|---|---|---|-----|-----|
| Date of last UTC staff OQ plan review | | | | | | |
| 453. | 192.801 192.809 | Any revisions to plan since last review? Yes No If yes, review revisions made. | | | | |
| 454. | 480-93-180(1) | Have “New Construction” activities been identified and included in the operator’s covered task list? 480-93-013 | | | | |

Comments:

| FILING REQUIREMENTS for DESIGN, SPECIFICATION, and CONSTRUCTION | | | S | U | N/A | N/C |
|---|---------------|---|---|---|-----|-----|
| 455. | 480-93-180(1) | Submittal of construction procedures, designs, and specifications used for each pipeline facility prior to operating the pipeline. All procedures must detail the acceptable types of materials, fittings, and components for the different types of facilities in the operator's system. 480-93-017(1) SPW 007-3.1 | x | | | |
| 456. | 480-93-180(1) | Construction plans not conforming with a gas company's existing and accepted construction procedures, designs, and specifications on file with the commission, submitted to the commission for review at least forty-five days prior to the initiation of construction activity. 480-93-017(2)SPW 007-3.1 and 3.4 | x | | | |

| MAPS, DRAWINGS, and RECORDS of GAS FACILITIES | | | S | U | N/A | N/C |
|---|---------------|---|---|---|-----|-----|
| 457. | 480-93-180(1) | Records updated no later than 6 months from completion of construction activity and made available to appropriate personnel. 480-93-018(3) | x | | | |

| PROXIMITY CONSIDERATIONS | | | S | U | N/A | N/C |
|--------------------------|---------------|--|---|---|-----|-----|
| 458. | 480-93-180(1) | Each operator must submit a written request and receive commission approval prior to: Operating any gas pipeline facility at greater than five hundred psig that is within five hundred feet of any of the following places: 480-93-20 (1)(a) <ul style="list-style-type: none"> A building that is in existence or under construction prior to the date authorization for construction is filed with the commission, and that is not owned and used by the | x | | | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| | | | | | | |
|------|---------------|--|---|--|--|--|
| | | <ul style="list-style-type: none"> petitioning operator in its gas operations; or : 480-93-20 (1)(a)(i) A high occupancy structure or area that is in existence or under construction prior to the date authorization for construction is filed with the commission; or : 480-93-20(1)(a)(ii) A public highway, as defined in RCW 81.80.010(3). 480-93-20 (1)(a)(iii) SPW 007 3.3 Item 1 | | | | |
| 459. | 480-93-180(1) | <p>Operating any gas pipeline facility at greater than two hundred fifty psig, up to and including five hundred psig, that is operated within one hundred feet of either of the following places: 480-93-20(1)(b)</p> <ul style="list-style-type: none"> A building that is in existence or under construction prior to the date authorization for construction is filed with the commission, and that is not owned and used by the petitioning operator in its gas operations; or: 480-93-20(1)(b)(i) A high occupancy structure or area that is in existence or under construction prior to the date authorization for construction is filed with the commission. 480-93-20(1)(b)(ii) <p>For proposed new construction, document evidence to demonstrate that it is not practical to select an alternate route that will avoid areas or which demonstrates that the operator has considered future development of the area and has designed their pipeline facilities accordingly. 480-93-20(2) SPW 007 3.3 Item 1</p> | x | | | |

Comments:

Attachment 1

Alternative Maximum Allowable Operating Pressure N/A NWN does not use.

For additional guidance refer to <http://primis.phmsa.dot.gov/maop/faqs.htm>
For FAQs refer to <http://primis.phmsa.dot.gov/maop/faqs.htm>

| 192.620 | Alternative MAOP Procedures and Verifications | | S | U | N/A | N/C |
|---------|--|---|---|---|-----|-----|
| | The alternative MAOP is calculated by using different factors in the same formulas used for calculating MAOP in §192.619. In determining the alternative design pressure under §192.105 use a design factor determined in accordance with §192.111(b), (c), or (d), or, if none of these apply in accordance with: | | | | | |
| | Class Location | Alternative Design Factor (F) | | | | |
| | 1 | 0.80 | | | | |
| | 2 | 0.67 | | | | |
| | 3 | 0.56 | | | | |
| .620(a) | (1) | Establish alternative MAOP commensurate with class location – no class 4 | | | x | |
| | (2) | MAOP cannot exceed the lowest of the following: | | | | |
| | | (i) Design pressure of the weakest element | | | x | |
| | | (ii) Test pressure divided by applicable factor | | | x | |
| .620(b) | (2) | Pipeline constructed of steel pipe meeting additional requirements in §192.112. | | | x | |
| | (3) | SCADA system with remote monitoring and control | | | x | |
| | (4) | Additional construction requirements described in §192.328 | | | x | |
| | (5) | No mechanical couplings | | | x | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| 192.620 | Alternative MAOP Procedures and Verifications | S | U | N/A | N/C |
|---------|--|---|---|-----|-----|
| | (6) No failures indicative of systemic material fault – if previously operated at lower MAOP | | | x | |
| | (7) 95% of girth welds have NDT | | | x | |
| .620(c) | (1) PHMSA notified 180 days before operating at alternative MAOP | | | x | |
| | (2) Senior Executive signatures and copy to PHMSA | | | x | |
| | (4) Strength test per §192.505 or certify previous strength test | | | x | |
| | (6) Construction tasks treated as covered tasks for Operator Qualification | | | x | |
| | (7) Records maintained for life of system | | | x | |
| | (8) Class location change anomaly remediations | | | x | |
| .620(d) | (1) Threat matrix developed consistent with §192.917 | | | x | |
| | (2) Recalculate the potential impact circle per §192.903 and implement public education per §192.616 | | | x | |
| | (3) Responding to an emergency in an HCA | | | | |
| | (i) Identify HCAs using larger impact circle | | | x | |
| | (ii) Check personnel response times | | | x | |
| | (iii) Verify remote valve abilities | | | x | |
| | (iv) Verify line break valve control system | | | x | |
| | (4) Protect the right-of-way: | | | | |
| | (i) ROW patrols 12 per year not to exceed 45 days | | | x | |
| | (ii) Plan to identify and mitigate unstable soil | | | x | |
| | (iii) Replace loss of cover if needed | | | x | |
| | (iv) Use line-of-sight markers per §192.707 | | | x | |
| | (v) Review damage prevention program in light of national consensus practices | | | x | |
| | (vi) ROW management plan to protect against excavation activities | | | x | |
| | (5) Control Internal Corrosion: | | | | |
| | (i) Program to monitor gas constituents | | | x | |
| | (ii) Filter separators if needed | | | x | |
| | (iii) Gas Monitoring equipment used | | | x | |
| | (iv) Cleaning pigs, inhibitors, and sample accumulated liquids | | | | |
| .620(d) | (v) Limit CO ₂ , H ₂ S, and water in the gas stream | | | x | |
| | (vi) Quarterly program review based on monitoring results | | | x | |
| | (6) (i) Control interference that can impact external corrosion | | | x | |
| | (ii) Survey to address interference currents and remedial actions | | | x | |
| | (7) Confirm external corrosion control through indirect assessment | | | x | |
| | (i) Assess adequacy of CIS and perform DCVG or ACVG within 6 months | | | | |
| | (ii) Remediate damage with IR drop > 35% | | | x | |
| | (iii) Integrate internal inspection results with indirect assessment | | | x | |
| | (iv) Periodic assessments for HCAs | | | x | |
| | (A-C) Close interval surveys, test stations at ½ mile intervals, and integrate results | | | | |
| | (8) Cathodic Protection | | | x | |
| | (i) Complete remediations within 6 months of failed reading | | | | |
| | (ii) Confirm restoration by a close interval survey | | | x | |
| | (iii) Cathodic protection system operational within 12 months of construction completion | | | x | |

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
If an item is marked U, N/A, or N/C, an explanation must be included in this report.

| 192.620 | Alternative MAOP Procedures and Verifications | S | U | N/A | N/C |
|---------|--|---|---|-----|-----|
| (9) | Baseline assessment of integrity | | | x | |
| | (i)(A) Geometry tool run within 6 months of service | | | | |
| | (i)(B) High resolution MFL tool run within 3 years of service | | | x | |
| | (ii) Geometry and MFL tool 2 years prior to raising pressure for existing lines | | | x | |
| | (iii) If short portions cannot accommodate tools, use direct assessment per §192.925, 927, 929 or pressure testing | | | x | |
| (10) | Periodic integrity assessments | | | x | |
| | (i) Frequency for assessments determined as if all segments covered by Subpart O | | | | |
| | (ii) Inspect using MFL tool or direct assessment per §192.925, 927, 929 or pressure testing. | | | x | |
| (11) | Repairs | | | x | |
| | (i)(A) Use of the most conservative calculation for anomaly remaining strength | | | | |
| | (B) Tool tolerances taken into consideration | | | x | |
| | (ii) Immediate repairs for: | | | x | |
| | (A) Dents meeting 309(b) criteria | | | | |
| | (B) Defects meeting immediate criteria in §192.933(d) | | | x | |
| | (C) Calculated failure pressure ratio less than 1.25 for .67 design factor | | | x | |
| | (D) Calculated failure pressure ratio less than 1.4 for .56 design factor | | | x | |
| | (iii) Repairs within 1 year for: | | | x | |
| | (A) Defects meeting 1 year criteria in 933(d) | | | | |
| | (B) Calculated failure pressure ratio less than 1.25 for .80 design factor | | | x | |
| | (C) Calculated failure pressure ratio less than 1.50 for .67 design factor | | | x | |
| | (D) Calculated failure pressure ratio less than 1.80 for .56 design factor | | | x | |
| | (iv) Evaluate defect growth rate for anomalies with > 1 year repair interval and set repair interval | | | x | |
| .620(e) | (1) Provide overpressure protection to a max of 104% MAOP | | | x | |
| | (2) Procedure for establishing and maintaining set points for SCADA | | | x | |

Comments:

Utilities and Transportation Commission
Standard Inspection Report for Intrastate Gas Systems
Operations and Maintenance Procedures and Plan Review

S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
 If an item is marked U, N/A, or N/C, an explanation must be included in this report.

Recent PHMSA Advisory Bulletins (Last 2 years)

| <u>Number</u> | <u>Date</u> | <u>Subject</u> |
|----------------------|--------------------|--|
| ADB-09-01 | May 21, 2009 | Potential Low and Variable Yield and Tensile Strength and Chemical Composition Properties in High Strength Line Pipe |
| ADB-09-02 | Sept 30, 2009 | Weldable Compression Coupling Installation |
| ADB-09-03 | Dec 7, 2009 | Operator Qualification Program Modifications |
| ADB-09-04 | Jan 14, 2010 | Reporting Drug and Alcohol Test Results for Contractors and Multiple Operator Identification Numbers |
| ADB-10-02 | Feb 3, 2010 | Implementation of Revised Incident/Accident Report Forms for Distribution Systems, Gas Transmission and Gathering Systems, and Hazardous Liquid Systems |
| ADB-10-03 | March 24, 2010 | Girth Weld Quality Issues Due to Improper Transitioning, Misalignment, and Welding Practices of Large Diameter Line Pipe |
| ADB-10-04 | April 29, 2010 | Pipeline Safety: Implementation of Electronic Filing for Recently Revised Incident/Accident Report Forms for Distribution Systems, Gas Transmission and Gathering Systems, and Hazardous Liquid Systems |
| ADB-10-05 | June 28, 2010 | Pipeline Safety: Updating Facility Response Plans in Light of Deepwater Horizon Oil Spill |
| ADB-10-06 | August 3, 2010 | Pipeline Safety: Personal Electronic Device Related Distractions |
| ADB-10-07 | August 31, 2010 | Liquefied Natural Gas Facilities: Obtaining Approval of Alternative Vapor-Gas Dispersion Models |
| ADB-10-08 | November 3, 2010 | Pipeline Safety: Emergency Preparedness Communications |
| ADB-11-01 | January 4, 2011 | Pipeline Safety: Establishing Maximum Allowable Operating Pressure or Maximum Operating Pressure Using Record Evidence, and Integrity Management Risk Identification, Assessment, Prevention, and Mitigation |
| ADB-11-02 | February 9, 2011 | Dangers of Abnormal Snow and Ice Build-up on Gas Distribution Systems |

For more PHMSA Advisory Bulletins, go to <http://phmsa.dot.gov/pipeline/regs/advisory-bulletin>