

STANDARD INSPECTION REPORT OF A GAS TRANSMISSION PIPELINE

A completed **Standard Inspection Report** is to be submitted to the Director within 60 days from completion of the inspection. A **Post Inspection Memorandum (PIM)** is to be completed and submitted to the Director within 30 days from the completion of the inspection, or series of inspections, and is to be filed as part of the **Standard Inspection Report**.

Inspection Report		Post Inspection Memorandum	
Inspector/Submit Date: Lex Vinsel, 01/11/2012		Inspector/Submit Date: Lex Vinsel, 1/11/2012	Peer Review/Date:
		Director Approval/Date:	
POST INSPECTION MEMORANDUM (PIM)			
Name of Operator:	Puget Sound Energy	OPID #:	22189
Name of Unit(s):	Sumas Interstate Transmission Pipeline	Unit #(s):	74999
Records Location:	Bellevue WA	Activity #	WUTC #PG-110047
Unit Type & Commodity:	Natural Gas		
Inspection Type:	Standard	Inspection Date(s):	March 22, July 26-28, August 2-4, 2011
PHMSA Representative(s):	Lex Vinsel	AFO Days:	7

Company System Maps (copies for Region Files):	
Validate SMART Data (components, miles, etc): <input type="checkbox"/>	Acquisition(s), Sale or New Construction (submit SMART update): <input type="checkbox"/>
Validate Additional Requirements Resulting From Waiver(s) or Special Permit(s):	

<p>Summary: No probable violations were found during the inspection. The O&M Manual was reviewed last year during a detailed O&M review.</p>
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<p>Findings: No probable violations were found during the inspection.</p>

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Name of Operator: Puget Sound Energy		Unit ID No. ⁽¹⁾ 74999	
OP ID No. ⁽¹⁾ 22189		System/Unit Name & Address: ⁽¹⁾	
HQ Address: PO Box 90868 M/S PSE-12N Bellevue, WA 98007		1340 Thompson Lane Sumas, WA	
Co. Official:	Sue McLain, Senior VP Operations	Activity Record ID No.:	WUTC Docket PG-110047
Phone No.:	(425) 452-1234	Phone No.:	(360) 766-5523
Fax No.:		Fax No.:	(360) 988-2463
Emergency Phone No.:	(800) 552-7171	Emergency Phone No.:	(800) 552-7171
Persons Interviewed		Title	
Darryl Hong		Compliance Program Manager	
Cheryl McGrath		Manager, Gas Compliance & Regulatory Audits	
Scott Sammons		Damage Prevention Coordinator	
Rick Elkin		Contract manager, Contractor Management	
Steve Schueneman		Consulting Engineer	
Stephanie Silva		Consulting Engineer	
Dorothy C. Bracken		Customer Communications Manager	
Abigail J. Elliott		Public Relations Analyst	
Joe Graham		Senior Construction Manager	
Carol Wallace		Gas Operations Director	
Signe Lippert		Supervisor Maintenance Programs	
Gary Swanson		Program Coordinator	
PHMSA Representative(s) ⁽¹⁾ Lex Vinsel		Inspection Date(s) ⁽¹⁾ March 22, July 26-28, April 2-4, 2011	
Company System Maps (Copies for Region Files):			

Unit Description:

Pipeline Description – The Sumas Pipeline facilities consist of (1) the border crossing facility, i.e., an interconnection with Westcoast Energy, Inc., at the international border between Canada and the United States, and (2) an 8-inch diameter pipeline located directly south of the Sumas gas meter station that crosses the Canada-United States border near or within the City of Sumas in Whatcom County, extending a distance of approximately 3.79 miles. The 8-inch diameter pipeline interconnects with the Sumas tie-in station at the 125-megawatt gas-fired Sumas cogeneration power plant owned by Sumas Cogeneration Company, L.P. (SCCLP).

Portion of Unit Inspected: ⁽¹⁾

Unit inspection covered 3.79 miles of pipe from the border crossing to the Sumas Cogeneration plant.

¹ Information not required if included on page 1.

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For gas transmission pipeline inspections, the attached evaluation form should be used in conjunction with 49 CFR 191 and 192 during PHMSA inspections. For those operators, procedures do not have to be evaluated for content unless: 1) new or amended regulations have been placed in force after the team inspection, or 2) procedures have changed since the team inspection. Items in the procedures sections of this form identified with "*" reflect applicable and more restrictive new or amended regulations that became effective between 03/16/06 and 03/17/2011.

NPMS INFORMATION and UPDATE

	Yes	No
Did the operator submit their pipeline information to NPMS and did they submit any updates or changes? <u>49 U.S.C. 60132</u> and ADB-08-07	X	

49 CFR PART 191

REPORTING PROCEDURES

		S	U	N/A	N/C
.605(b)(4)	Procedures for gathering data for incident reporting				
*	191.5 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).	x			
*	191.7 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).	x			
*	191.15(a) 30-day follow-up written report (Form 7100-2) Submittal must be electronically to http://pipelineonlinereporting.phmsa.dot.gov (Amdt. 192-115, 75 FR 72878, November 26, 2010, eff. 1/1/2011).	x			
	191.15(c) Supplemental report (to 30-day follow-up)	x			
.605(a)	191.17 Complete and submit DOT Form PHMSA F 7100-2.1 by March 15 of each calendar year for the preceding year. (<i>NOTE: June 15, 2011 for the year 2010</i>). (Amdt. 192-115, 75 FR 72878, November 26, 2010).	x			
*	191.22 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).	x			
	191.23 Reporting safety-related condition (SRCR)	x			
	191.25 Filing the SRCR within 5 days of determination, but not later than 10 days after discovery	x			
	191.27 Offshore pipeline condition reports – filed within 60 days after the inspections	x			
.605(d)	Instructions to enable operation and maintenance personnel to recognize potential	x			

Comments:

49 CFR PART 192

CUSTOMER NOTIFICATION PROCEDURES

		S	U	N/A	N/C
.13(c)	.16 Procedures for notifying new customers, within 90 days , of their responsibility for those selections of service lines not maintained by the operator.	x			

CONVERSION OF SERVICE PROCEDURES

		S	U	N/A	N/C
.14	A steel pipeline previously used in service not subject to this part qualifies for use under this part if the operator prepares and follows a written procedure to carry out the following requirements:				
	.14(a)(1) Review of the design, construction operation and maintenance history.	x			
	.14(a)(2) Visual Right-of-way and pipeline inspection for physical defects and operating conditions.	x			
	.14(a)(3) Correction of known unsafe defects and conditions.	x			
	.14(a)(4) Pipeline tested in accordance with Subpart J.	x			

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 If an item is marked U, N/A, or N/C, an explanation must be included in this report.

	NORMAL OPERATING and MAINTENANCE PROCEDURES	S	U	N/A	N/C
.605(a)	.605(a) O&M Plan review and update procedure (1 per year/15 months)	x			
	.605(b)(3) Making construction records, maps, and operating history available to appropriate operating personnel	x			
	.605(b)(5) Start up and shut down of the pipeline to assure operation within MAOP plus allowable buildup	x			
	.605(b)(8) Periodically reviewing the work done by operator's personnel to determine the effectiveness and adequacy of the procedures used in normal operation and maintenance and modifying the procedures when deficiencies are found	x			
	.605(b)(9) Taking adequate precautions in excavated trenches to protect personnel from the hazards of 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	x			
	.605(b)(10) Routine inspection and testing of pipe-type or bottle-type holders	x			
	.605(b)(11) Responding promptly to a report of a gas odor inside or near a building, unless the operator's emergency procedure under §192.615(a)(3) specifically apply to these reports.	x			
*	.605(b)(12) Implementing the applicable control room management procedures required by 192.631. (Amdt. 192-112, 74 FR 63310, December 3, 2009, eff. 2/1/2010).	x			

Comments:

	ABNORMAL OPERATING PROCEDURES	S	U	N/A	N/C
.605(a)	.605(c)(1) Procedures for responding to, investigating, and correcting the cause of:				
	(i) Unintended closure of valves or shut downs	x			
	(ii) Increase or decrease in pressure or flow rate outside of normal operating limits	x			
	(iii) Loss of communications	x			
	(iv) The operation of any safety device	x			
	(v) Malfunction of a component, deviation from normal operations or personnel error	x			
	.605(c)(2) Checking variations from normal operation after abnormal operations ended at sufficient critical locations	x			
	.605(c)(3) Notifying the responsible operating personnel when notice of an abnormal operation is received	x			
	.605(c)(4) Periodically reviewing the response of operating personnel to determine the effectiveness of the procedures and taking corrective action where deficiencies are found	x			

Comments:

	CHANGE in CLASS LOCATION PROCEDURES	S	U	N/A	N/C
.605(a)	.609 Class location study	x			
*	.611 Confirmation or revision of MAOP. Final Rule Pub. 10/17/08, eff. 12/22/08.	x			

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Comments:

.613	CONTINUING SURVEILLANCE PROCEDURES	S	U	N/A	N/C
.613(a)	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	x			
.613(b)	Procedures requiring MAOP to be reduced, or other actions to be taken, if a segment of pipeline is in unsatisfactory condition	x			

Comments:

.605(a)	DAMAGE PREVENTION PROGRAM PROCEDURES	S	U	N/A	N/C
.614	Participation in a qualified one-call program, or if available, a company program that complies with the following:				
	(1) Identify persons who engage in excavating	x			
	(2) Provide notification to the public in the One Call area	x			
	(3) Provide means for receiving and recording notifications of pending excavations	x			
	(4) Provide notification of pending excavations to the members	x			
	(5) Provide means of temporary marking for the pipeline in the vicinity of the excavations	x			
	(6) Provides for follow-up inspection of the pipeline where there is reason to believe the pipeline could be damaged	x			
	(i) Inspection must be done to verify integrity of the pipeline	x			
	(ii) After blasting, a leak survey must be conducted as part of the inspection by the operator	x			

Comments:

.615	EMERGENCY PROCEDURES	S	U	N/A	N/C
.615(a)(1)	Receiving, identifying, and classifying notices of events which require immediate response by the operator	x			
.615(a)(2)	Establish and maintain communication with appropriate public officials regarding possible emergency	x			
.615(a)(3)	Prompt response to each of the following emergencies:				
	(i) Gas detected inside a building	x			
	(ii) Fire located near a pipeline	x			
	(iii) Explosion near a pipeline	x			
	(iv) Natural disaster	x			

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	.615(a)(4)	Availability of personnel, equipment, instruments, tools, and material required at the scene of an emergency	x			
	.615(a)(5)	Actions directed towards protecting people first, then property	x			
	.615(a)(6)	Emergency shutdown or pressure reduction to minimize hazards to life or property	x			
	.615(a)(7)	Making safe any actual or potential hazard to life or property	x			
	.615(a)(8)	Notifying appropriate public officials required at the emergency scene and coordinating planned and actual responses with these officials	x			
	.615(a)(9)	Instructions for restoring service outages after the emergency has been rendered safe	x			
	.615(a)(10)	Investigating accidents and failures as soon as possible after the emergency	x			
*	.615(a)(11)	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).	x			
	.615(b)(1)	Furnishing applicable portions of the emergency plan to supervisory personnel who are responsible for emergency action	x			
	.615(b)(2)	Training appropriate employees as to the requirements of the emergency plan and verifying effectiveness of training	x			
	.615(b)(3)	Reviewing activities following emergencies to determine if the procedures were effective	x			
	.615(c)	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	x			

Comments:

PUBLIC AWARENESS PROGRAM PROCEDURES			S	U	N/A	N/C
(Also in accordance with API RP 1162)						
.605(a)	.616	Public Awareness Program also in accordance with API RP 1162.				
	.616(d)	The operator's program must specifically include provisions to educate the public, appropriate government organizations, and persons engaged in excavation related activities on:				
	(1)	Use of a one-call notification system prior to excavation and other damage prevention activities;	x			
	(2)	Possible hazards associated with unintended releases from a gas pipeline facility;	x			
	(3)	Physical indications of a possible release;	x			
	(4)	Steps to be taken for public safety in the event of a gas pipeline release; and	x			
	(5)	Procedures to report such an event (to the operator).	x			
	.616(e)	The operator's program must include activities to advise affected municipalities, school districts, businesses, and residents of pipeline facility locations.	x			
	.616(f)	The operator's program and the media used must be comprehensive enough to reach all areas in which the operator transports gas.	x			
	.616(g)	The program conducted in English and any other languages commonly understood by a significant number of the population in the operator's area?	x			
	.616(h)	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. For operators in existence on June 20, 2005, who must have completed their written programs no later than June 20, 2006, the first evaluation is due no later than June 20, 2010 .	x			

Comments:

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Comments:	
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.617	FAILURE INVESTIGATION PROCEDURES	S	U	N/A	N/C
	.617 Analyzing accidents and failures including laboratory analysis where appropriate to determine cause and prevention of recurrence	x			

Comments:	
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.605(a)	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 special conditions of the Special Permit, Waiver or refer to Attachment 1 for additional .620 requirements.																			
	.619 Establishing MAOP so that it is commensurate with the class location	x																		
	MAOP cannot exceed the lowest of the following:																			
*	(a)(1) Design pressure of the weakest element, Amdt. 192-103 pub. 06/09/06, eff. 07/10/06	x																		
*	(a)(2) Test pressure divided by applicable factor	x																		
*	(a)(3) 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 uprated according to subpart K. Amdt 192-102 pub. 3/15/06, eff. 04/14/06. For gathering line related compliance deadlines and additional gathering line requirements, refer to Part 192 including this amendment.	x																		
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Pipeline segment</th> <th style="width: 20%;">Pressure date</th> <th style="width: 30%;">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.</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>-- Onshore transmission line that was a gathering line not subject to this part before March 15, 2006.</td> <td></td> <td></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.	March 15, 2006, or date line becomes subject to this part, whichever is later.	5 years preceding applicable date in second column.	-- Onshore transmission line that was a gathering line not subject to this part before March 15, 2006.			Offshore gathering lines.	July 1, 1976.	July 1, 1971.	All other pipelines.	July 1, 1970.	July 1, 1965.	x			
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All other pipelines.	July 1, 1970.	July 1, 1965.																		
	(a)(4) Maximum safe pressure determined by operator.	x																		
	(b) Overpressure protective devices must be installed if .619(a)(4) is applicable	x																		
*	(c) 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. For gathering line related compliance deadlines and additional gathering line requirements, refer to Part 192 including this amendment.	x																		
*	.620 Refer to Attachment 1 for additional Alternative MAOP requirements. (Amdt. 192- 107, 73 FR 62147, October 17, 2008, eff. 11/17/2008).																			

Comments:	
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Comments:

.13(c)	PRESSURE TEST PROCEDURES	S	U	N/A	N/C
	.503 Pressure testing	x			

Comments:

.13(c)	UPRATING PROCEDURES	S	U	N/A	N/C
	.553 Uprating	x			

Comments:

.605(a)	ODORIZATION of GAS PROCEDURES	S	U	N/A	N/C
	.625(b) Odorized gas in Class 3 or 4 locations (if applicable) – must be readily detectable by person with normal sense of smell at $1/5$ of the LEL.	x			
	.625(f) Periodic gas sampling, using an instrument capable of determining the percentage of gas in air at which the odor becomes readily detectable.	x			

Comments:

.605(a)	TAPPING PIPELINES UNDER PRESSURE PROCEDURES	S	U	N/A	N/C
	.627 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 .	x			

.605(a)	PIPELINE PURGING PROCEDURES	S	U	N/A	N/C
	.629 Purging of pipelines must be done to prevent entrapment of an explosive mixture in the pipeline				
	(a) Lines containing air must be properly purged.	x			
	(b) Lines containing gas must be properly purged	x			

Comments:

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* 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(b)					.605(b)(12) Each operator must have and follow written control room management procedures. NOTE: An operator must develop the procedures no later than August 1, 2011 and implement the procedures no later than February 1, 2013.
.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.				x
	(2)	Controller's role when an abnormal operating condition is detected.				x
	(3)	Controller's role during an emergency				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.				x
	(2)	Conduct point-to-point verification between SCADA displays and related equipment when changes that affect pipeline safety are made.				x
	(3)	Test and verify any internal communications plan – at least once a year NTE 15 months.				x
	(4)	Test any backup SCADA system at least once each year but NTE 15 months.				x
.631(d)	Establish and implement procedures for when a different controller assumes responsibility.					
	(1)	Establishing shift lengths and schedule rotations that provide time sufficient to achieve eight hours of continuous sleep.				x
	(2)	Educating controllers and supervisors in fatigue mitigation strategies.				x
	(3)	Training of controllers and supervisors to recognize the effects of fatigue.				x
	(4)	Establishing a maximum limit on controller hours-of-service.				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.				x
	(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.				x
	(3)	Verifying the alarm set-point values and alarm descriptions once each year NTE 15 months.				x
	(4)	Reviewing the alarm management plan at least once every calendar year NTE 15 months.				x
	(5)	Monitoring the content and volume of activity being directed to and required of each controller once each year NTE 15 months.				x
.631(f)	Addressing deficiencies identified through implementation of 1-5 of this section.					
	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.				x
	(2)	Requiring field personnel to contact the control room when emergency conditions exist and when field changes could affect control room operations.				x

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CONTROL ROOM MANAGEMENT PROCEDURES (Amdt. 192-112, 74 FR 63310, December 3, 2009, eff. 2/1/2010)		S	U	N/A	N/C
*	(3) Seeking control room or management participation in planning prior to implementation of significant pipeline changes.				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.				x
	(2) Including lessons learned from the operator's training program required by this section.				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:				x
	(1) Responding to abnormal operating conditions (AOCs).				x
	(2) Using a computerized simulator or other method for training controllers to recognize AOCs				x
	(3) Training controllers on their responsibilities for communication under the operator's emergency response procedures.				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.				x

Comments:
CRM inspection is scheduled for 2012

.605(a)	MAINTENANCE PROCEDURES	S	U	N/A	N/C
.703(b)	Each segment of pipeline that becomes unsafe must be replaced, repaired, or removed from service	x			
(c)	Hazardous leaks must be repaired promptly	x			

Comments:

.605(b)	TRANSMISSION LINES - PATROLLING & LEAKAGE SURVEY PROCEDURES	S	U	N/A	N/C												
.705(a)	Patrolling ROW conditions	x															
(b)	Maximum interval between patrols of lines:																
	<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)	x			
	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)															
.706	Leakage surveys – 1 year/15 months	x															
	Leak detector equipment survey requirements for lines transporting un-odorized gas																
	(a) Class 3 locations - 7½ months but at least twice each calendar year	x															
	(b) Class 4 locations - 4½ months but at least 4 times each calendar year	x															

STANDARD INSPECTION REPORT OF A GAS TRANSMISSION PIPELINE

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Comments:	
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.605(b)	LINE MARKER PROCEDURES	S	U	N/A	N/C
.707	Line markers installed and labeled as required	x			

Comments:	
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.605(b)	RECORD KEEPING PROCEDURES	S	U	N/A	N/C
.709	Records must be maintained:				
	(a) Repairs to the pipe – life of system	x			
	(b) Repairs to “other than pipe” – 5 years	x			
	(c) Operation (Sub L) and Maintenance (Sub M) patrols, surveys, tests – 5 years or until next one	x			

Comments:	
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.605(b)	FIELD REPAIR PROCEDURES	S	U	N/A	N/C
	Imperfections and Damages				
.713(a)	Repairs of imperfections and damages on pipelines operating above 40% SMYS				
	(1) Cut out a cylindrical piece of pipe and replace with pipe of \geq design strength	x			
	(2) Use of a reliable engineering method	x			
.713(b)	Reduce operating pressure to a safe level during the repair	x			
	Permanent Field Repair of Welds				
.715	Welds found to be unacceptable under §192.241(c) must be repaired by:				
	(a) If feasible, taking the line out of service and repairing the weld in accordance with the applicable requirements of §192.245 .	x			
	(b) If the line remains in service, the weld may be repaired in accordance with §192.245 if:				
	(1) The weld is not leaking	x			
	(2) The pressure is reduced to produce a stress that is 20% of SMYS or less	x			
	(3) Grinding is limited so that 1/8 inch of pipe weld remains	x			
	(c) If the weld cannot be repaired in accordance with (a) or (b) above, a full encirclement welded split sleeve must be installed	x			
	Permanent Field Repairs of Leaks				
.717	Field repairs of leaks must be made as follows:				
	(a) Replace by cutting out a cylinder and replace with pipe similar or of greater design	x			
	(b)(1) 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	x			
	(b)(2) A leak due to a corrosion pit may be repaired by installing a bolt on leak clamp	x			

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.605(b)	FIELD REPAIR PROCEDURES	S	U	N/A	N/C
	(b)(3) 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	x			
	(b)(4) Submerged offshore pipe or pipe in inland navigable waterways may be repaired with a mechanically applied full encirclement split sleeve of appropriate design	x			
	(b)(5) Apply reliable engineering method	x			
	Testing of Repairs				
.719(a)	Replacement pipe must be pressure tested to meet the requirements of a new pipeline	x			
(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)	x			

Comments:

.605(b)	ABANDONMENT or DEACTIVATION of FACILITIES PROCEDURES	S	U	N/A	N/C
.727(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	x			
(c)	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.	x			
(d)	Whenever service to a customer is discontinued, do the procedures indicate one of the following:				
	(1) 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	x			
	(2) A mechanical device or fitting that will prevent the flow of gas must be installed in the service line or in the meter assembly	x			
	(3) The customer's piping must be physically disconnected from the gas supply and the open pipe ends sealed	x			
(e)	If air is used for purging, the operator shall ensure that a combustible mixture is not present after purging	x			
*	.727 (g) Operator must file reports upon abandoning underwater facilities crossing navigable waterways, including offshore facilities. Amdt. 192-103 corr. pub 02/01/07, eff. 03/05/07.	x			

Comments:

.605(b)	COMPRESSOR STATION PROCEDURES	S	U	N/A	N/C
.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	

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*	.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	
		<ul style="list-style-type: none"> ▪ 50% of the upright side areas are permanently open, or ▪ It is an unattended field compressor station of 1000 hp or less 			X	

Comments:
No compressor in Sumas pipeline.

.605(b)	PRESSURE LIMITING and REGULATING STATION PROCEDURES	S	U	N/A	N/C						
.739(a)	Inspection and testing procedures for pressure limiting stations, relief devices, pressure regulating stations and equipment (1 per yr/15 months)	x									
	(1) In good mechanical condition	x									
	(2) Adequate from the standpoint of capacity and reliability of operation for the service in which it is employed	x									
.739(a)	(3) Set to control or relieve at correct pressures consistent with .201(a), except for .739(b).	x									
	(4) Properly installed and protected from dirt, liquids, other conditions that may prevent proper oper.	x									
.739(b)	For steel lines if MAOP is determined per .619(c) and the MAOP is 60 psi (414 kPa) gage or more . . .										
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">If MAOP produces hoop stress that</td> <td style="width: 50%;">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										
.743	Testing of Relief Devices										
.743	(a) Capacity must be consistent with .201(a) except for .739(b), and be determined 1 per yr/15 mo.	x									
.743	(b) If calculated, capacities must be compared; annual review and documentation are required.	x									
.743	(c) If insufficient capacity, new or additional devices must be installed to provide required capacity.	x									

Comments:

.605(b)	VALVE MAINTENANCE PROCEDURES	S	U	N/A	N/C
.745	(a) Inspect and partially operate each transmission valve that might be required during an emergency (1 per yr/15 months)	x			
.745	(b) Prompt remedial action required, or designate alternative valve.	x			

.605(b)	VAULT INSPECTION PROCEDURES	S	U	N/A	N/C
.749	Inspection of vaults greater than 200 cubic feet and housing pressure regulating or limiting devices (1 per yr NTE 15 months).				

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Comments:
 No vaults in Sumas pipeline.

.605(b)	PREVENTION of ACCIDENTAL IGNITION PROCEDURES	S	U	N/A	N/C
.751	Reduce the hazard of fire or explosion by:				
	(a) Removal of ignition sources in presence of gas and providing for a fire extinguisher	x			
	(b) Prevent welding or cutting on a pipeline containing a combustible mixture	x			
	(c) Post warning signs	x			

Comments:

.13(c)	WELDING AND WELD DEFECT REPAIR/REMOVAL PROCEDURES	S	U	N/A	N/C
*	.225 (a) Welding procedures must be qualified under Section 5 of API 1104 or Section IX of ASME Boiler and Pressure Code by destructive test. Amdt. 192-103 pub 06/09/06, eff. 07/10/06.	x			
	(b) Retention of welding procedure – details and test	x			
	Note: Alternate welding procedures criteria are addressed in API 1104 Appendix A, section A.3.				
*	.227 (a) 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).	x			
	(b) Welders may be qualified under section I of Appendix C to weld on lines that operate at < 20% SMYS .	x			
	.229 (a) To weld on compressor station piping and components, a welder must successfully complete a destructive test	x			
	(b) Welder must have used welding process within the preceding 6 months	x			
	(c) A welder qualified under .227(a) –				
	.229(c) (1) 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.	x			
	(2) May not weld on pipe that operates at $< 20\%$ SMYS unless is tested in accordance with .229(c)(1) or requalifies under .229(d)(1) or (d)(2).	x			
	(d) Welders qualified under .227(b) may not weld unless:				
	(1) Requalified within 1 year/15 months , or	x			
	(2) Within 7½ months but at least twice per year had a production weld pass a qualifying test	x			
	.231 Welding operation must be protected from weather	x			
	.233 Miter joints (consider pipe alignment)	x			
	.235 Welding preparation and joint alignment Alert Notice 3/24/10: Do operator's procedures give consideration to girth weld bevels being properly transitioned and aligned, girth weld pipe ends meeting API 5L pipe end diameter and diameter out-of-roundness specifications, and API 1104 alignment and allowable "high-low" criteria, particularly in large diameter pipe ($> 20"$ diameter)?	x			
	.241 (a) Visual inspection must be conducted by an individual qualified by appropriate training and experience to ensure:	x			

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.13(c)	WELDING AND WELD DEFECT REPAIR/REMOVAL PROCEDURES	S	U	N/A	N/C
	(1) Compliance with the welding procedure	x			
	(2) Weld is acceptable in accordance with Section 9 of API 1104	x			
	(b) Welds on pipelines to be operated at 20% or more of SMYS must be nondestructively tested in accordance with 192.243 except welds that are visually inspected and approved by a qualified welding inspector if:	x			
	(1) The nominal pipe diameter is less than 6 inches , or	x			
	(2) The pipeline is to operate at a pressure that produces a hoop stress of less than 40% of SMYS and the welds are so limited in number that nondestructive testing is impractical	x			
.241	(c) Acceptability based on visual inspection or NDT is determined according to Section 9 of API 1104 . If a girth weld is unacceptable under Section 9 for a reason other than a crack, and if Appendix A to API 1104 applies to the weld, the acceptability of the weld may be further determined under that appendix.	x			
Note: If the alternative acceptance criteria in API 1104 Appendix A are used, has the operator performed an Engineering Critical Assessment (ECA)?					
.245	Repair and Removal of Weld Defects				
	(a) Each weld that is unacceptable must be removed or repaired. Except for offshore pipelines, a weld must be removed if it has a crack that is more than 8% of the weld length	x			
	(b) Each weld that is repaired must have the defect removed down to sound metal, and the segment to be repaired must be preheated if conditions exist which would adversely affect the quality of the weld repair. After repair, the weld must be inspected and found acceptable.	x			
	(c) Repair of a crack or any other defect in a previously repaired area must be in accordance with a written weld repair procedure, qualified under §192.225	x			
Note: Sleeve Repairs – use low hydrogen rod (Best Practices –ref. API 1104 App. B, In Service Welding)					

Comments:

.13(c)	NONDESTRUCTIVE TESTING PROCEDURES	S	U	N/A	N/C
.243	(a) 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	x			
	(b) Nondestructive testing of welds must be performed:				
	(1) In accordance with a written procedure, and	x			
	(2) By persons trained and qualified in the established procedures and with the test equipment used	x			
	(c) Procedures established for proper interpretation of each nondestructive test of a weld to ensure acceptability of the weld under 192.241(c)	x			
	(d) When nondestructive testing is required under §192.241(b) , the following percentage of each day's field butt welds, selected at random by the operator, must be nondestructively tested over the entire circumference				
	(1) In Class 1 locations at least 10%	x			
	(2) In Class 2 locations at least 15%	x			
	(3) In Class 3 and 4 locations, at crossings of a major navigable river, offshore, and within railroad or public highway rights-of-way, including tunnels, bridges, and overhead road crossings, 100% unless impractical, then 90% . Nondestructive testing must be impractical for each girth weld not tested.	x			
	(4) At pipeline tie-ins, 100%	x			
	(e) Except for a welder whose work is isolated from the principal welding activity, a sample of each welder's work for each day must be nondestructively tested, when nondestructive testing is required under §192.241(b)	x			

