

## Utilities and Transportation Commission Standard Inspection Report for Intrastate Gas Distribution Systems Records Review and Field Inspection

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

Inspection Report			
<b>Docket Number</b>	110020		
<b>Inspector Name &amp; Submit Date</b>	Stephanie Zuehlke / June 2, 2011		
<b>Chief Eng Name &amp; Review/Date</b>	Joe Subsits / June 3, 2011		
Operator Information			
<b>Name of Operator:</b>	Cascade Natural Gas Corporation	<b>OP ID #:</b>	2128
<b>Name of Unit(s):</b>	Whatcom County		
<b>Records Location:</b>	CNG Bellingham Office		
<b>Date(s) of Last (unit) Inspection:</b>	September 21-25, 2009. Formal exit 10.30.09.	<b>Inspection Date(s):</b>	April 4-6 & 12-14, 18-21, & 26, 2011 Formal exit 04.21.11

**Inspection Summary:**

CNG Natural Gas Transmission and Distribution for Whatcom County – Std. incl. PA, D/A, IMP, & OQ.  
03.25.11 phone conversation w/Tina: requested: 1) Annual capacity/reg review 2) Farm taps 3) Rick is providing Ferndale origination docs.

<b>HQ Address:</b> 8113 W. Grandridge Blvd. Kennewick, WA 99336	<b>System/Unit Name &amp; Address:</b> Bellingham District – Whatcom County 910 Racine St., Bellingham, WA 98229	
<b>Co. Official:</b> Tim Clark <b>Phone No.:</b> 509.734.4586 <b>Fax No.:</b> 509.737.9803 <b>Emergency Phone No.:</b> 888.522.1130	<b>Phone No.:</b> 360.733.5981 <b>Fax No.:</b> 360.733.1416 <b>Emergency Phone No.:</b> 888.522.1130	
<b>Persons Interviewed</b>	<b>Title</b>	<b>Phone No.</b>
Rick Kelln	GM – District Operations	360.201.4440
Tina Beach	Regulatory Compliance Mgr.	(509) 734-4576 office & (206) 445-4121 cell
Mark Wolfe	Operations Programs Administrator	509.438.4223
Kathy Bergner	District Manager	360.788.2345 office & 360.201.0671 cell
Mike Eutsey	Pipeline Safety Specialist	509.438.5179
Patti Chartrey	Pipeline Safety Specialist	206.225.8510
Joel Johnstone	(Division Welding)	

**WUTC staff conducted an abbreviated procedures inspection on 192 O&M and WAC items that changed since the last inspection. This checklist focuses on Records and Field items per a routine standard inspection.**

(check one below and enter appropriate date)

<input type="checkbox"/>	Team inspection was performed (Within the past five years.) or,	<b>Date:</b>	
x	Other WUTC Inspector reviewed the O & M Manual (Since the last yearly review of the manual by the operator.)	<b>Date:</b>	01.22 - 25.09

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**GAS SYSTEM OPERATIONS**

<b>Gas Supplier</b>		Williams and West Coast Energy			
<b>Services:</b>					
<b>2009:</b>		<i>Residential</i> 40,483	<i>Commercial</i> 4975	<i>Industrial</i> 219	<i>Other</i> = 45 K Total
<b>2011:</b>		<i>Residential</i> 45532	<i>Commercial</i> 4860	<i>Industrial</i> 57(per Emergency shut-down manual)	<i>Other</i> 0 = 50449 Total Svcs.
Number of reportable safety related conditions last year 0 in 2009 / 0 in 2010		Number of deferred leaks in system 4 in 2009 / 3 new deferred in 2011 No carry over into 2011 from prior years.			
Number of <u>non-reportable</u> safety related conditions last year 0 in 2009 / 0 in 2010		Number of third party hits last year Calendar Yr. 2009 Inspection =57 2010 = 16			
<p><b>Miles of transmission pipeline</b> within unit (total miles and miles in class 3 &amp; 4 areas) <u>2009 Total = 44Miles Class 3&amp;4 = 0 miles ; 2011 Total = 43.94 Miles Class 3 &amp; 4 = 0 miles.</u> If no Class 3 or 4 then must be Class 1 and/or Class 2. Review class location maps for 2009 , 2010, and 2011 and <u>required study showing changes in class location per 192.609 &amp; 192.611</u> <u>Tina requesting from Mike Hardesty in Engineering:</u> <u>IMP Plan and Class loction maps are to identify Class locations.</u></p>		<p><b>Miles of main</b> within inspection unit(total miles and miles in class 3 &amp; 4 areas) <u>2009 Total Miles in Whatcom Co = 1500 Miles Dist. Per CNG, all Designed to Class 4;</u> 2011 Total Miles in Whatcom Co = 1554 Class 3 &amp; 4 = 831miles Class location identification completed? CNG again stated that systems are designed to Class 4 requirements: Designed to Class 4 but operated at requirements of Class 1, 2, 3. <u>Tina providing class location map information:</u></p>			
<p align="center"><b>Operating Pressure(s):</b></p> <ol style="list-style-type: none"> <li>REVIEW ZONEs/CLASS for below lines in 2011</li> <li>Any moving or lowering or location change of any of the below since establishing MAOP? Rick identified no moving or lowering of lines listed below regarding location for at least the last 12 years and not since they were installed.             <ol style="list-style-type: none"> <li>Change study completed per 192.609 &amp; 192.611?</li> </ol> </li> <li>Any depth of transmission monitoring since last write up? Rick is providing copies of records.</li> </ol>		<b>MAOP (Within last year)</b>		<b>Actual Operating Pressure (At time of Inspection)</b>	
<b>Feeder:</b>	16" North Whatcom Transmission Line 10- 43,907'	600	527 – R-116	Outlet	
<b>2009</b>	8" Kickerville Transmission Line 11- 17,266'	600	515 – R-26	Inlet	
	12" Grandview Road Transmission Line 13- 7,636'	600	522 – R-137	Inlet	
	4" West Lynden Transmission Line 16- 1,315'	600	494 – R-82	Inlet	
	20" Ferndale Transmission Line 18- 27,904'	600	527 – Tap Line 10		
	20" Sumas Transmission Line 19- 17,121'	800	613 – R-116	Inlet	
	8" South Kickerville Transmission Line 20- 7,108'	600	510 – R26	Outlet	
<b>2011</b>	16" North Whatcom Transmission Line 10- 43,907'	600 (inlet is 520 – 500 low psig Depot Rd @ R-65)	520 – R116	Outlet (04.11.11)	
	8" Kickerville Transmission Line 11- 17,266'	600 R-26 high 520psig low 480 at inlet.	xxx – R26	Inlet	
	12" Grandview Road Transmission Line 13- 7,636'	600	xxx – R137	Inlet	
	4" West Lynden Transmission Line 16- 1,315'	600	xxx – R82	Inlet	
	20" Ferndale Transmission Line 18- 27,904'	600	xxx – Tap Line 10 (Tap off 16" line #10)		
	20" Sumas Transmission Line 19- 17,121'	800	xxx – R116	Inlet	
	8" South Kickerville Transmission Line 20- 7,108'	600	xxx – R26	Outlet	

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**GAS SYSTEM OPERATIONS**

Town:	Acme	60	23
2009	Bellingham – 4 distr. systems pressures	60	55
		58	55
		34	31
		27	14
	Blaine	60	57
	Deming	60	29
	Everson – 2 distr. systems pressures	60	26
		44	41
	Ferndale	58	55
	Lawrence	60	36
	Lynden	60	57
	Nooksack	60	41
	Sumas	40	32
2011	Acme	60	xx
	Bellingham – 4 distr. systems pressures	60	xx
		58	xx
		34	xx
		27	xx
	Blaine	60	xx
	Deming	60	xx
	Everson – 2 distr. systems pressures	60	xx
		44	xx
	Ferndale	58	xx
	Lawrence	60	xx
	Lynden	60	xx
	Nooksack	60	xx
	Sumas	40	xx
Other:	Distribution Lines see above towns (multiple stations) – Ranges	60psig – 27psig	14psig – 57psig
Does the operator have any transmission pipelines?		Yes see above.	
Compressor stations? Use Attachment I.		None in Whatcom County	

**Pipe Specifications:**

Year Installed (Range)	Pre-1955-2011	Pipe Diameters (Range)	5/8"-20"
Material Type	Steel PE	Line Pipe Specification Used	API 5L & ASTM 2513
Mileage	1544 miles Total-unverified	SMYS %	40% Class 2 location - 20" Sumas Transmission line 19 and Operating at its MAOP. - 780psi (Further detailed actual operating press reported at time of inspection = 613psig for Sumas.)

**Operator Qualification Field Validation**

**Important:** Per OPS, the OQ Field Inspection Protocol Form (Rev 3, Feb 08) shall be used by the inspector as part of this standard inspection. When completed, the inspector will upload this information into the PHMSA OQ Database (OQDB) located at <http://primis.phmsa.dot.gov/oqdb/home.oq> **Date Completed** 06.08.11

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**Integrity Management Field Validation**

**Important:** Per PHMSA, IMP Field Verification Form (Rev 3, March 09) shall be used by the inspector as part of this standard inspection. When completed, the inspector will upload this information into the PHMSA IM Database (IMDB) located at <http://primis.phmsa.dot.gov/gasimp/home.gim>    **Date Completed:** 06.08.11

REPORTING RECORDS			S	U	N/A	N/C
1.	49 U.S.C. 60132, Subsection (b)	<b>For Gas Transmission Pipelines and LNG Plants. Submission of Data to the National Pipeline Mapping System Under the Pipeline Safety Improvement Act of 2002</b> Updates to NMPS: Operators are required to make update submissions every 12 months if any system modifications have occurred. <u>If no modifications have occurred since the last complete submission (including operator contact information), send an email to <a href="mailto:opsgis@rspa.dot.gov">opsgis@rspa.dot.gov</a> stating that fact.</u> Include operator contact information with all updates.	x			
2.	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?	x			
3.	191.5	Any incidents requiring telephonic reporting to the NRC (800-424-8802) SZ 965387 AJ 967072	x			
4.	191.15	Written reports; supplemental reports to PHMSA (Form F7100.2)				
5.	191.23	Filing the <b>Safety Related Condition Report</b> within 5 days of determination, but not later than 10 days after discovery None	x			
6.	192.727(g)	Abandoned facilities offshore, onshore crossing commercially navigable waterways reports	x			
7.	480-93-200(1)	Telephonic Reports to <b>UTC Pipeline Safety Incident Notification 1-888-321-9146 (Within 2 hours)</b> for events which results in;				
8.	480-93-200(1)(a)	A fatality or personal injury requiring hospitalization;	x			
9.	480-93-200(1)(b)	Damage to property of the operator and others of a combined total exceeding fifty thousand dollars; 2 in Whatcom County	x			
10.	480-93-200(1)(c)	The evacuation of a building, or high occupancy structures or areas;	x			
11.	480-93-200(1)(d)	The unintentional ignition of gas;	x			
12.	480-93-200(1)(e)	The unscheduled interruption of service furnished by any operator to twenty five or more distribution customers;	x			
13.	480-93-200(1)(f)	A pipeline pressure exceeding the MAOP plus ten percent or the maximum pressure allowed by proximity considerations outlined in WAC 480-93-020; 2010 & 2011 R-19 Telegraph Rd. and James St. in Whatcom County. Mooney's on order for this location.	x			
14.	480-93-200(1)(g)	Is significant, in the judgment of the operator, even though it does not meet the criteria of (a) through (f) of this subsection;	x			
15.	480-93-200(2)	Telephonic Reports to <b>UTC Pipeline Safety Incident Notification 1-888-321-9146 (Within 24 hours)</b> for;				
16.	480-93-200(2)(a)	The uncontrolled release of gas for more than two hours;	x			
17.	480-93-200(2)(b)	The taking of a high pressure supply or transmission pipeline or a major distribution supply gas pipeline out of service;	x			
18.	480-93-200(2)(c)	A gas pipeline operating at low pressure dropping below the safe operating conditions of attached appliances and gas equipment; or	x			
19.	480-93-200(2)(d)	A gas pipeline pressure exceeding the MAOP	x			
	480-93-200(3)	(3) Routine or planned maintenance and operational activities of the gas pipeline company that result in operator-controlled plant and equipment shut downs, reduction in system pressures, flaring or venting of gas, and normal leak repairs are not reportable items under this section.				
20.	480-93-200(4)	Did written incident reports (within 30 days of telephonic notice) include the following				

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REPORTING RECORDS			S	U	N/A	N/C
21.	480-93-200(4)(a)	Name(s) and address(es) of any person or persons injured or killed, or whose property was damaged;	x			
22.	480-93-200(4)(b)	The extent of injuries and damage;	x			
23.	480-93-200(4)(c)	A description of the incident or hazardous condition including the date, time, and place, and reason why the incident occurred. If more than one reportable condition arises from a single incident, each must be included in the report;	x			
24.	480-93-200(4)(d)	A description of the gas pipeline involved in the incident or hazardous condition, the system operating pressure at that time, and the MAOP of the facilities involved;	x			
25.	480-93-200(4)(e)	The date and time the gas pipeline company was first notified of the incident;	x			
26.	480-93-200(4)(f)	The date and time the ((operators')) gas pipeline company's first responders arrived on-site;	x			
27.	480-93-200(4)(g)	The date and time the gas ((facility)) pipeline was made safe;	x			
28.	480-93-200(4)(h)	The date, time, and type of any temporary or permanent repair that was made;	x			
29.	480-93-200(4)(i)	The cost of the incident to the ((operator)) gas pipeline company;	x			
30.	480-93-200(4)(j)	Line type;	x			
31.	480-93-200(4)(k)	City and county of incident; and	x			
32.	480-93-200(4)(l)	Any other information deemed necessary by the commission.	x			
33.	480-93-200(5)	Supplemental report if required information becomes available after 30 day report submitted	x			
34.	480-93-200(6)	Written report within 5 days of receiving the <b>failure analysis</b> of any incident or hazardous condition due to <b>construction defects or material failure</b> None	x			
35.	480-93-200(7)	<b>Annual Reports</b> filed with the commission no later than <b>March 15</b> for the proceeding calendar year				
36.	480-93-200(7)(a) PV	A copy of PHMSA F-7100.1-1 and F-7100.2-1 annual report required by U.S. Department of Transportation, PHMSA/Office of Pipeline Safety Provided late 04.01.11		x		
37.	480-93-200(7)(b)	Damage Prevention Statistics Report including the following;				
38.	480-93-200(7)(b)(i) PV	Number of gas-related one-call locate requests completed in the field; Provided late 04.01.11		x		
39.	480-93-200(7)(b)(ii) PV	Number of third-party damages incurred; and (Provided late 04.01.11)		x		
40.	480-93-200(7)(b)(iii) PV	Cause of damage, where cause of damage is classified as one of the following: (A) Inaccurate locate; (B) Failure to use reasonable care; (C) Excavated prior to a locate being conducted; or (D) Other. Provided late 04.01.11		x		
41.	480-93-200(7)(c) PV	Reports detailing all construction defects and material failures resulting in leakage. Categorizing the different types of construction defects and material failures. The report must include the following: (i) Types and numbers of construction defects; and (ii) Types and numbers of material failures. Rick identified zero construction defects and material failures in Whatcom. Provided late 04.01.11		x		
42.	480-93-200(8)	Providing updated emergency contact information to the commission and appropriate officials of all municipalities where gas pipeline companies have facilities jRecieved a copy of Rick's 01.2011 contact list. Tina providing contact update sent via email.	x			
43.	480-93-200(9)	Providing by email, reports of daily construction and repair activities no later than 10:00 a.m.	x			
44.	480-93-200(10)	Submitting copy of DOT Drug and Alcohol Testing MIS Data Collection Form when required	x			

**Comments:**

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CUSTOMER and EXCESS FLOW VALVE INSTALLATION NOTIFICATION			S	U	N/A	N/C
45.	192.16 AOC	<b>Customer notification</b> - Customers notified, within <b>90 days</b> , of their responsibility for those service lines not maintained by the operator CNG states that they send but still no way to track and no records to prove they were provided. New plan is to notify all customers in April of 2011 (sent out) of their responsibility re: piping. They are presently considering sending out notification in <u>all</u> future bills as either a stuffer or on the bill itself but no final decision yet.		x		
46.	192.381	Does the excess flow valve meet the performance standards prescribed under §192.381?	x			
47.	192.383	Does the operator have an installation and reporting program for excess flow valves and does the program meet the requirements outlined in §192.383? Are records adequate?	x			

**Comments:**

AOC: 192.225: No procedure for: Which NDT procedures followed for use prior to transmission branch/fitting/etc. I asked for the procedure for this process. Mike Eutsey is checking with division. Division Construction Services completes NDT prior to welding but no Procedure in manual which identifies NDT. Mike Eutsey stated, "yes, I think we are doing it but No we don't have a procedure to describe it." All per Bill Danko.

Procedures correction needed: CP 760.071 – Under welding procedures refers to "Figure 11". But "Figure 11" is for a Guided Bend Test Specimen not welding procedures.

Procedure clarification: Welding Cycle test requirements on page 42 Figure B: There is an asterisk in Table but no note associated w/\* to ID the meaning. Mike E. identified it is included in the language of Note 2 but he also identified that they will clarify this procedure.

CONSTRUCTION RECORDS			S	U	N/A	N/C
48.	480-93-013	OQ records for personnel performing New Construction covered tasks 1. 2008 records unavailable for Gordon Van Corbach Field Facilitator, Ed White Division Supt, Dale Savard comb. Welder, and Steve Vance Backhoe operator. (Requested these records due to State & Franklin leak work) 2. 2011 records provided do not indicate dates of qualification/tests, etc. only that they are qualified and what they are qualified for. Rick is looking for other records that show dates. Next set of Energy World records provided show OQ expirations for employees.	x			

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CONSTRUCTION RECORDS		S	U	N/A	N/C
49.	<p>Test Results to Qualify Welding Procedures CNG provided a coupon &amp; boot/seal Any new welding procedures? They identified no new procedures. 192.471(a)-(c). External corrosion control: test leads. Don't find a Procedure for attachment of coupons with CP test leads to pipe? How do you attach? Does the procedure minimize stress concentration on the pipe? CP 610.033 states: .033                      Test Station Markers – CNG part H-105</p> <ol style="list-style-type: none"> <li>a. Refer to Pages 8 thru 10 for illustrations</li> <li>b. H-105 are to be buried with the depth line at grade, not driven into the ground. Use the same instructions as H-99 for offsetting and picking locations for the test station marker.</li> <li>c. Lead wires shall be brazed to the pipe or casing, or to a coupon welded to the pipe. Coupons shall be used for high pressure line attachments. Cad welding is not acceptable.</li> <li>d. For installations without casings, both wires shall be attached to the pipe. Do not attach them together. They should be separated by about 12". Prime and wrap.</li> <li>e. For casings, the black wire should be brazed to the casing pipe approximately 6" from the end of the casing, and then primed only. The white wire should be brazed to the carrier pipe approximately 12" from the casing, and then primed and wrapped.</li> <li>f. Wire attachments: Wires should be looped around the pipe before brazing, and there should be approximately 12" of slack in the wires. If wires need to be extended, use standard 14-gauge tracer wire (CNG part H-115) and standard direct burial splice kits. Before and after backfilling, test continuity.</li> </ol> <ul style="list-style-type: none"> <li>• No procedure for welding coupon/test leads;</li> <li>• No specification of coupon material. Bill Danko identified that they normally weld on when pipe is new (prior to commissioning?) Copy of coupon spec in folder.</li> <li>• No indication that the procedure they use (even though not written) minimizes stress concentration on the pipe. There is one welder in Whatcom that is certified to weld this coupon onto transmission &amp; HP pipe. Rick stated that Division is always here when this procedure is done.</li> <li>• However, there still is no procedure that identifies that NDT should be completed prior to installation of this coupon.</li> <li>• Asked which API version Bill Danko is using. – same as me. No inspection of coupon attachment prior to weld of pipe other than visual.</li> <li>• Joel (Division Welding) is not using adopted reference API 1104 dated October 2005 w/Errata's. He is using November 2005 version.</li> <li>• Received one dollar (coupon) and seal. No one has a copy of the materials specifications sheet. They called purchasing to get. Received a copy of Brian McConnell OQ sheet for welding on coupons to transmission. Mike E. stated that no NDT was conducted prior to fillet welding coupons on transmission line. Also have the other 3 welders OQ sheets.</li> <li>• No NDT after coupon welded on transmission lines.</li> <li>• Unknown which procedure the welder used since no information about pipe was identified and no engineering review/documentation re: pipe wall/type, temperatures, etc. Joel (Division Welding) identified that they always preheat before installing coupons on transmission piping.</li> <li>• <b>04.11.11 REQUESTED FORM 525 (Required prior to welding HP or future HP lines. Copies are to be kept in District per CP's) per CP 760</b> Figure 1 CNG 525 HP Construction – Filler Metal Record</li> <li>• CP 607.102 describes H-760 2" bare coupon. Procedure for attaching coupon but is under PE main/PE svc. to steel and describes must be full encirclement weld but then says it should be brazed. CNG definition for BRAZING states that brazing is soldering not welding.</li> <li>• <i>Form 525 is not in District and Brian McConnell (coupon welder) stated that no one identified the grade of pipe prior to his welding. He identified that he was not informed but assumed pipe grade due to date of install = he assumed x42 but then identified it could be Grade B pipe. Point is that no one reviewed this or completed prior to work being done. Per Tina this Form is used for training only. Division Welding was advised to use only as guide for training per Bill Danko. This form has not been used. Also procedures issue since not following.</i></li> </ul> <p align="center">192.225 PV &amp; AOC</p>		x		

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CONSTRUCTION RECORDS			S	U	N/A	N/C															
50.	192.227	Welder Qualification Any new welder qualification procedure completed? See #49.  192.503 Maximum hoop stress allowed as percentage of SMYS <table border="1"> <thead> <tr> <th>Class location</th> <th>Natural Gas</th> <th>Air or inert gas</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>80</td> <td>80</td> </tr> <tr> <td>2</td> <td>30</td> <td>75</td> </tr> <tr> <td>3</td> <td>30</td> <td>50</td> </tr> <tr> <td>4</td> <td>30</td> <td>40</td> </tr> </tbody> </table> (d) Each joint used to tie in a test segment of pipeline is excepted from the specific test requirements of this subpart, but each non-welded joint must be leak tested at not less than its operating pressure. Test reports in folder. Any non-welded joints in stl. HP distr. or in transmission system? No mech ftgs. per Rick No procedure for installation of Plidco Fittings Division welding identified they use an existing file procedure for attachment of test lead wire coupon.	Class location	Natural Gas	Air or inert gas	1	80	80	2	30	75	3	30	50	4	30	40	x			
Class location	Natural Gas	Air or inert gas																			
1	80	80																			
2	30	75																			
3	30	50																			
4	30	40																			
51.	480-93-080(1)(b)	Appendix C Welders re-qualified <b>2/Yr (7.5Months) No appendix C –API 1104</b>	x																		
52.	480-93-080(2)	Plastic pipe joiners re-qualified <b>1/Yr (15 Months)</b>	x																		
53.	480-93-080(2)(b)	Plastic pipe joiners re-qualified if no production joints made during any 12 month period	x																		
54.	480-93-080(2)(c)	Tracking Production Joints or Re-qualify joiners <b>1/Yr (12Months)</b>	x																		
55.	480-93-115(2)	Test leads on casings (without vents) installed after 9/05/1992 Always install vents on casings and attach test leads per CP 610. No install w/o casing per CNG CP's?	x																		
56.	480-93-115(3)	Sealing ends of casings or conduits on transmission lines and mains One Casing end on bridge at N. State at Whatcom Creek is not sealed and open to atmosphere. 03.11.11 -0.591 on casing (passed) and on 04.13.11 casing read was -0.965 failing because CNG CP's state that if read on casing is more negative than -0.73 then carrier read to be taken and then tinker-razor follows. Potential short to be documented at beginning within 90 days. Also listed in atmospheric corrosion requirements since open to atmosphere – listed under number #186. CNG corrosion identified above reads were not taken with equip. gr. on N. side of bridge – corrosion dept. completed new reads – acceptable. Copies of new reads in folder. A/C issue due to above grade casing termination unsealed and therefore must be inspected for A/C – Id'd under #186 below.	x																		
57.	480-93-115(4)	Sealing ends (nearest building wall) of casings or conduits on services	x																		
58.	192.241(a) PV	Visual Weld Inspector Training/Experience Requested that they change CP 760 to read per code and prior inspection PV's		x																	
59.	192.243(b)(2)	Nondestructive Technician Qualification. All contract employees.	x																		
60.	192.243(c) PV and AOC	NDT procedures NDT procedures for tie-ins? Yes and full wrap around. No documentation regarding engineering review of Hoop stress & % SMYS prior to weld work on transmission per CP 760.10 Procedures for coupon NDT. <b>REQUESTED ENGINEERING DESIGN INFO REGARDING ENGINEERING REVIEW OF HOOP STRESS/SMYS PRIOR TO WORK ON TRANSMISSION PER cp 760.10 Also requested NDT for Line #9 8" Lake Terrell Rd. Transmission line and Line #3 8" Central Whatcom HP line – 1 coupon(All Ferndale lines.)</b> <b>Provide copies of engineering review RE: NDT for 4 locations:</b> 1. Franklin & State, 2. 2 on transmission Line #9, and 3. 1 on HP Line #3 No NDT procedures for test lead wire coupon welding to dist./trans. mains			x																



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CONSTRUCTION RECORDS			S	U	N/A	N/C	
61.	192.243(f) PV	Total Number of Girth Welds: State and Franklin intersection was NDT'd. 33 welds w/6 NDT out of 477 ft. Number of girth welds = 4 Miter joints total 21-22 degree and a 16 degree bend. Joe Johnstone computed/identified that the SMYS on this miter location was 16% SMYS (he figured on computer during inspection) based upon x52 pipe. The construction documents identify that the weak link was Grade B with a SMYS of 24.57% on existing tie-in piping. API 1104 procedures define testing percentage. Adopted reference is API 1104 October 2005 & Errata's but API 1104 version in Division Welding is November 2005. New pipe installed=X-52.  REQUEST ENGINEERING DESIGN INFO REGARDING MITERS ON THIS SECTION OF PIPE AT State and Franklin. Looks like no NDT on miters – verify. That meets 192.233 miter requirements. Note – no violation of 192 but is a <u>procedures violation</u> – CP's identify miters are not allowed per Kevin – engineering manager.					
62.	192.243(f)	Number of Welds Inspected by NDT – 6 out of 477 ft.	x				
63.	192.243(f)	Number of Welds Rejected None	x				
64.	192.243(f)	Disposition of each Weld Rejected None	x				
65.	192.303 PV	Construction Specifications		x			
66.	192.325 AOC	Underground Clearance CP 605.022 "Should" is to be changed to read "Shall" per 192.325. CNG agrees with language change and will address promptly.		x			
67.	192.327	Amount, location, cover of each size of pipe installed Okay per CP 605.493	x				
68.	480-93-160(1)	Report filed <b>45 days</b> prior to construction or replacement of transmission pipelines <b>≥ 100</b> feet in length None	x				
69.	480-93-160(2)	Did report describe the proposed route and the specifications for the pipeline and must include, but is not limited to the following items:	x				
70.	480-93-160(2)(a)	Description and purpose of the proposed pipeline;	x				
71.	480-93-160(2)(b)	Route map showing the type of construction to be used throughout the length of the line, and delineation of class location as defined in 49 CFR Part 192.5, and incorporated boundaries along the route.	x				
72.	480-93-160(2)(c)	Location and specification of principal valves, regulators, and other auxiliary equipment to be installed as a part of the pipeline system to be constructed	x				
73.	480-93-160(2)(d)	MAOP for the gas pipeline being constructed;	x				
74.	480-93-160(2)(e)	Location and construction details of all river crossings or other unusual construction requirements encountered en route.	x				
75.	480-93-160(2)(f)	Proposed corrosion control program to be followed inc specs for coating and wrapping, and method to ensure the integrity of the coating using holiday detection equipment;	x				
76.	480-93-160(2)(g)	Welding specifications; and	x				
77.	480-93-160(2)(h)	Bending procedures to be followed if needed. Franklin & State: See above #61. I have questions on miters used: 192.233: (a) A miter joint on steel pipe to be operated at a pressure that produces a hoop stress of 30 percent or more of SMYS may not deflect the pipe more than 3°. (b) A miter joint on steel pipe to be operated at a pressure that produces a hoop stress of less than 30 percent, but more than 10 percent of SMYS may not deflect the pipe more than 12 1/2° and must be a distance equal to one pipe diameter or more away from any other miter joint, as measured from the crotch of each joint. (c) A miter joint on steel pipe to be operated at a pressure that produces a hoop stress of 10 percent or less of SMYS may not deflect the pipe more than 90°.  Copies of Franklin and State construction job in folder. Requested engineering stress info.		x			
78.	480-93-170(1)	Commission notified 2 days prior to pressure testing pipelines with an MAOP producing a hoop stress <b>≥ 20% SMYS?</b>	x				

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CONSTRUCTION RECORDS			S	U	N/A	N/C
79.	480-93-170(7)  JOE	Pressure tests records at a minimum include required information listed under 480-93-170(a-h) Reviewed records for July 2010 construction. Reviewed records for State and Franklin copies in folder. Loss of 2psi – review with Subsits. No pipe temp. taken but dew pts were taken. Received test records but they are lacking required information to determine acceptable test. REQUEST RECORDS FOR PRESSURE TESTS AT FERNDALE 20" – Test records provided show loss of 20 psi and do not include engineering info required to determine successful test. Request engineering review of pressure loss during test for determination of acceptable loss. Reviewed Whatcom County July 2010 installation pressure test records - okay all info included. 1. HP Line 18 – 20" Ferndale 08.23.93-08.24.93 Was this project reviewed by engineering for this 10psi loss in pressure – Determined acceptable by CNG engineering. 2. State and Franklin Bellingham 10" 11.1910-11.20.10 loss of 2psi.	x			
80.	480-93-170(9)	Individual pressure test records maintained for single installations where multiple pressure tests were performed? None	x			
81.	480-93-170(10)	Pressure Testing Equipment checked for accuracy/intervals (Manufacturers Rec or Operators schedule) Reviewed 2009 and 2010 for Pyrometer, dial gauges, half-cells okay Asked for chart box calibration records. R-116 staff found a dial gauge that is attached at outlet piping – this gauge is not calibrated but is not used – Rick is removing this gauge. Rick identified that their procedures do not mention the use of this dial gauge.	x			
82.	480-93-175(2)	Study prepared and approved prior to moving and lowering of metallic pipelines > 60 psig None	x			
83.	480-93-175(4)	Leak survey within <b>30 days</b> of moving or lowering pipelines ≤ 60 psig 2009: Reviewed Cordata Pkwy 4" lowering of 4" wsc main. Job completed and leak surveyed same day – okay. (See #65) WAC 480-93-175(3) study for lowering see elsewhere in form – okay under leak surveys. (3) Before moving or lowering a gas pipeline other than the line pipe described in subsection (2) of this section, each gas pipeline company must prepare a study to determine whether moving or lowering will cause an unsafe condition. The gas pipeline company's <u>engineering department must review, approve, and retain</u> the study for the life of the pipeline. The <u>study must analyze the following factors</u> : (a) The required deflection of the pipe; Not given (b) The diameter, wall thickness, and grade of pipe; (c) The characteristics of the pipeline; (d) The terrain and class location; (e) The present condition of the pipeline; (f) The anticipated stresses of the pipeline including the safe allowable stress limits; and (g) The toughness of the steel.	x			

**Comments:**

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**PV - 192.703(b):** CNG did not take action to correct or evaluate unsafe conditions. On 03.04.08 CNG employees reported abnormal operating conditions (AOC's) existed identifying "no supports, sagging, exposed" for two services spanning a creek at three separate locations. On 03.06.08 CNG employees again reported "lots of sagging on 2". Each service is ¾" steel installed in 2" coated steel casing. a) 1601 Main St., Lynden (two locations), b) 1647 Main St., Lynden (one location).  
**PV – WAC 480-93-175(2)** Except for the pipe referenced in subsection (1) of this section, a gas pipeline company may move or lower metallic line pipe with an MAOP of sixty psig or less, which has a nominal diameter of two inches or less, if the gas pipeline company can certify that no undue stresses will be placed on the pipeline and that it can be moved or lowered in a safe manner. The gas pipeline company must consider factors such as the type of materials, proximity to fittings, joints, and welds, and any other factors that could place undue stress on the gas pipeline or create an unsafe condition. Requested from Tina/Patti/Mike E. re: weld in #49/imp/origination/test docs. Requested info on lowering of metallic main – No vertical information in design plans for lowering of pipe for Cordata Pkwy. See # 83. Also, in reviewing information on this lowering I found that the Clerk had adjusted the lowering records by adding a vertical dimension to one of the drawings indicating at the toe the depth of main was lowered to 71" when the advised lowering of pipe was identified as 5'-9". Rick is checking with Clerk. Clerk added info onto as-builts to indicate the actual lowering of the pipe rather than from top of pavement of 38" rather than 71". Lowering that occurred was identified by engineering to have been 125' in each direction – records do not show that the 125' in each direction was met. Copies of as-builts in folder.

OPERATIONS and MAINTENANCE RECORDS			S	U	N/A	N/C
84.	192.517(a)	Pressure Testing (operates at or above 100 psig) – <b>useful life of pipeline</b> <b>See #79</b>	x			
85.	192.517(b)	Pressure Testing (operates below 100 psig, service lines, plastic lines) – <b>5 years</b> <b>See #79 for franklin and state test.</b>	x			
86.	192.605(a) PV	<p>Procedural Manual Review – Operations and Maintenance (<b>1 per yr/15 months</b>)  <b>Note:</b> Including review of OQ procedures as <u>suggested</u> by PHMSA - ADB-09-03 dated 2/7/09</p> <p>192.613 (a) Each operator shall have a procedure for continuing surveillance of its facilities to determine and take appropriate action concerning changes in class location, failures, leakage history, corrosion, substantial changes in cathodic protection requirements, and other unusual operating and maintenance conditions.</p> <p>(b) If a segment of pipeline is determined to be in unsatisfactory condition but no immediate hazard exists, the operator shall initiate a program to recondition or phase out the segment involved, or, if the segment cannot be reconditioned or phased out, reduce the maximum allowable operating pressure in accordance with §192.619 (a) and (b). Rick identified that the transmission vault problems with regard to bringing valves above grade due to sight visit and added to his 5-year plan. Rick has determined that this is an unsatisfactory condition and has identified it but they have not initiated a program to recondition or phase out. Rick is providing documentation showing. See yellow email copy from Rick to Dave Grunhurd dated 04.09.11</p> <p>Did CNG address vault full. No- employees identified to GM that vaults were inaccessible or full of water. This is a training issue that needs to be addressed. This has been discussed by with Regional Director David Grunhurd who is forwarding to Tim Clark for addition of above vault issue to 5 year plan.</p> <p>Emergency plan addresses shut areas that would be needed in cases such as unable to access valves such as with these vault issues to use valves such as R-12 and R-11. This is a training issue but now also falls into the 740.09 Valve and Vault maintenance issues.  <b>CHECK VAULT MAINTENANCE RECORDS. Provide mfg submerged valves allowed. All Cameron Valves.</b></p> <p>Reviewed procedure training/update/review takes place in safety meetings but also procedure changes and subsequent training occurs in special meeting as required. Rick and Kathy track these. Tina identified work in progress. Staff sees improvement but more needed.</p> <p>Continuing surveillance issue at Mt. Baker Hwy with approx. 40' of fill over top of pipeline – should have been monitored under 192.613. This pipeline was installed in 1993. This is line 17 – 10" Squalicum line.</p>		x		

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OPERATIONS and MAINTENANCE RECORDS			S	U	N/A	N/C
87.	192.605(b)(3)	Availability of construction records, maps, operating history to operating personnel No update of grid maps after June/July 2009 and transitioned to spread sheet to update GIS. Local maps are updated by Clerk Glen Swenson and Joe Wilkinson and Darlene Huntley are the Clerks. At present construction people do not have access to GIS but servicemen do. Construction people work off grid maps but next leak after this date they will be working off GIS format maps. Tina estimates transition to take an additional 2 years to complete. Tina identified that accuracy of conversion from grid to GIS re: coordinate locations of the actual property locations is approx. 70% or better of those that have been transferred. No data available regarding number of main and services actually installed or the assoc. % of accuracy.	x			
88.	480-93-018(5) PV	Records, including maps and drawings updated within <b>6 months</b> of completion of construction activity? <b>All of below are September 2009.</b> <u>Requested the following Casing grid/GIS/Service mapping records</u> <ol style="list-style-type: none"> <li>601 W. Chestnut (Grid map #17-N) – <b>not on Annual Casing Survey Report</b> (reported in #177) casing shows on grid and GIS.</li> <li>213 e. Champion (Grid map #18-N) – <b>not on Annual Casing Survey Report</b> (reported in #177) and is in GIS (<u>map indicates service line comes off casing</u>)</li> <li>Meador Ave @ Humbolt St. (Grid map # 18-N) <b>not on Annual Casing Survey Report.</b> (reported in #177)</li> </ol> <u>Requested the following New Services grid/GIS/Service mapping records:</u> <ol style="list-style-type: none"> <li>2214 “J” St. Drawn-in as new service on grid and shows in GIS</li> <li>1108 Irving St. Drawn-in as new service on grid and shows in GIS</li> </ol> <u>Requested the following Retirements noted on grid:</u> <ol style="list-style-type: none"> <li>1000 “C” St. – <b>did not appear on GIS but is entered on list now</b></li> <li>1001 #D “C” St. – did appear on GIS</li> <li>1001 #P “C” St. – did appear on GIS</li> <li>901 “C” St. – <b>shown in GIS but not as a retired service</b></li> </ol> <u>Requested the following main and service grid map and GIS records:</u> <ol style="list-style-type: none"> <li>Ellis and State streets intersection: identified on grid maps but not on GIS: 04.12.11 CNG identified on list for corrections. Okay.</li> <li>Mt. Baker Hwy:- 1286 Mt. Baker Hwy. svc was shown off wrong main but was already identified as an error and was on the correction list.</li> </ol>		x		
89.	192.605(b)(8) PV	Periodic review of personnel work – effectiveness of normal O&M procedures Primary focus of PL safety specialist in many areas is to do internal audits to determine effectiveness of personnel and AOC’s & improve/change procedures incl. quality control. Construction and svc manager breaks – Rick Kelln is District Ops Mgr. and Kathy Bergner is District Manager. Appears to be a possible training issue with regard to surveillance and the effectiveness of the surveillance e.g. fill over pipeline on Mt. Baker Hwy and another is no documentation by crews regarding water in vaults. Procedures appear to be fine.		x		
90.	192.605(c)(4) PV for R/W	Periodic review of personnel work – effectiveness of abnormal operation procedures See above #89 Requested surveillance records for Mt. Baker Hwy fill issue. Reviewed surveillance records 2010 & 2009 for Mt. Baker Hwy fill area 10” Squalicum HP Distr. Line at approx. <b>340psi. R/W issues were not noted in surveillance records reviewed - 2009 or 2010..</b>		x		
91.	192.609 PV	Class Location Study ( <b>If applicable</b> ) Do not have but are doing with GIS and Tina has defined as an engineering task on your maintenance reminder which is a compliance task list (identification of task completion dates, etc..)		x		
92.		<b>Damage Prevention (Operator Internal Performance Measures)</b>				
93.	192.614	Does the operator have a quality assurance program in place for monitoring the locating and marking of facilities? 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) 1 mis-locates in 2010, 2 in 2009. Rick has identified that he reviewed and their were mitigating factors that were beyond locators control. If locator negligence Rick would write up – none were written up.	x			
94.		Does operator including performance measures in facility locating services contracts with corresponding and meaningful incentives and penalties? N/A	x			

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95.	Do locate contractors address performance problems for persons performing locating services through mechanisms such as re-training, process change, or changes in staffing levels?	x			
96.	Does the operator periodically review the Operator Qualification plan criteria and methods used to qualify personnel to perform locates?	x			
97.	Review operator locating and excavation <u>procedures</u> for compliance with state law and regulations.	x			
98.	Are locates are being made within the timeframes required by state law and regulations? Examine record sample. Reviewed records for November 2010.	x			
99.	Are locating and excavating personnel properly <u>qualified</u> in accordance with the operator's Operator Qualification plan and with federal and state requirements?	x			
100.	Follow-up inspection performed on the pipeline where there is reason to believe the pipeline could be damaged .614(c) (6) 1. Is the inspection the done as frequently as necessary during and after the activities to verify the integrity of the pipeline? Reviewed 2010 and 2011 2. In the case of blasting, does the inspection include leakage surveys? None	x			
101.	<b>Informational purposes only. Not Required.</b> Does the pipeline operator voluntarily submit pipeline damage statistics into the UTC Damage Information Reporting Tool (DIRT)? Operator may register at <a href="https://identity.damagereporting.org/cgareg/control/login.do">https://identity.damagereporting.org/cgareg/control/login.do</a> Y x Registered N	x			

**Comments:**

Emergency Response Plans		S	U	N/A	N/C
103.	192.603(b) Prompt and effective response to each type of emergency .615(a)(3) <b>Note:</b> Review operator records of previous accidents and failures including third-party damage and leak response Reviewed 3 <sup>rd</sup> party damage/leak investigation for 2010/2011 Requested engineering review/approval of 9164 Trapline Rd. Transmission line # 10 16" North Whatcom Design press. 600 operating (520psi. 04.06.11) Info on whether long-seam issue from engineering. <b>Request NDT.</b> Copy of repair info in folder. Identified as IM issue.	x			
104.	192.615(b)(1) Location Specific Emergency Plan reviewed emergency shut-down plan dated 03.11.11.and Incident Command system manual (ICS) dated 03.28.11. Requested information from CNG re: manufacturers approval for valves to be located under water operation.	x			
105.	192.615(b)(2) Emergency Procedure training, verify effectiveness of training	x			
106.	192.615(b)(3) Employee Emergency activity review, determine if procedures were followed. CNG Form 234 was created to follow-up with incidents and are reviewed by Kathy, Rick, and Tina and 3 Regional Managers Klapp, Merick and Grunherd. Regional mgrs are only ones that sign off – Tina considering all that see sign off.	x			

