



STATE OF WASHINGTON

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

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Ref. No. Docket PG-100044

CERTIFIED MAIL

January 31, 2012

Eric Martuscelli
Vice President, Operations
Cascade Natural Gas Corporation
8113 W. Grandridge Blvd
Kennewick, WA 99336

Dear Mr. Martuscelli:

RE: 2010 Natural Gas Standard Inspection – Yakima/Sunnyside District

The Washington Utilities and Transportation Commission (UTC) staff conducted a natural gas safety standard inspection on August 23-27, 30 & 31, September 1-3 & 13-16, 2010, of Cascade Natural Gas (CNG) – Yakima/Sunnyside District pipeline system. The inspection included a review of records, procedures and pipeline facilities.

Our inspection indicated 19 probable violations as noted in the enclosed report. Staff also noted 6 areas of concern, which unless corrected, could lead to future violations of state or federal pipeline safety rules.

We have decided not to take additional enforcement action at this time due to the extreme time lag in issuing this findings letter. Although not part of the original complaint, it is my assumption that many of these items can be remediated under programs established as part of the commission approved settlement under docket PG-110443. We advise you however to take any steps necessary to correct the deficiencies noted.

Docket number PG-100044 will be closed as of January 31, 2012.



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If you have any questions, please contact Stephanie Zuehlke, Pipeline Safety Engineer at (360) 664-1318. Please refer to docket number PG-100044 in any future correspondence regarding this inspection.

Thank you for your attention to this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Lykken', with a long horizontal flourish extending to the right.

David D. Lykken
Pipeline Safety Director

Enclosure

cc. Steve Kessie, Manager-Operations Services

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION
2010 Natural Gas Pipeline Safety Inspection
Cascade Natural Gas – Yakima/Sunnyside Districts
Docket PG-100044

The following probable violation (s) and areas of concern of Title 49 CFR Part 192 and WAC 480-93 were noted as a result of the inspection of Cascade Natural Gas (CNG) – Yakima/Sunnyside Districts. The inspection included a random selection of records, operation and maintenance, emergency response, inventory and field inspection of the pipeline facilities.

PROBABLE VIOLATIONS

1. **WAC 480-93-018 Records.**

- (2) *Each gas pipeline company must give the commission access to records for review during an inspection and must provide the commission copies of records upon request.*
- (4) *Each gas pipeline company must record and maintain records of the actual value of any required reads, tests, surveys or inspections performed. The records must include the name of the person who performed the work and the date the work was performed. The records must also contain information sufficient to determine the location and facilities involved. Examples of the values to be recorded include, but are not limited to, pipe to soil potential reads, rectifier reads, pressure test levels, and combustible gas indicator reads. A gas pipeline company may not record a range of values unless the measuring device being used provides only a range of values.*
- (5) *Each gas pipeline company must update its records within six months of when it completes any construction activity and make such records available to appropriate company operations personnel.*

1. **Finding(s):**

CNG failed to update mapping records within six months of completion of the construction activity for:

- a. 2340 Scoon Rd., Sunnyside. Completed 12.08.09 not mapped as of 09.15.10.
- b. 8” Yakima HP Line No. 1 Formerly 8” Yakima Lateral (dated 11.05.70) – Sheet No. 1.
- c. 8” Yakima HP Line (dated 11.05.70) – Sheet No. 2, 3, 4 and 5.
- d. Yakima HP Distribution System Line No. 3 Formerly 8” Yakima Lateral (dated 11.05.70) No Sheet number. Only difference btwn. this map and a. above is a notation in lower left-hand corner which identifies the name a customer “Superior Asphalt and Paving Co.” (undated)
- e. 1017 Chestnut St., Yakima – map shows HP dbl. cut regulator but service is a single cut IM pressure.
- f. Fair Ave. from East End of E. Spruce St. W. to 7th St. and from Pitcher Maple, Yakima. Maps do not match newly completed CNG locates.

- g. HP map records identify services running to 1315, 1307, 1301-1/2, and 1202 E. Spruce St., Yakima but structures have been raised and are no longer served.
- h. Records show HP dbl. cut regulation to 1301 and 1206 E. Spruce St., Yakima but observed IM single cut.
- i. New locate marks for Maple St. main mid-block btwn. 9th and 8th Sts., Yakima. Main is not on HP maps.
- j. 5905 Beauchene Rd., Moxee is not on HP maps.
- k. R-13 Bell Rd. SLR – Gamache, Moxee is not on HP maps.
- l. 6303 Bell Rd., Moxee is not on HP maps.
- m. 7101 Bell Rd., Moxee – FT is not mapped.
- n. 7120 Bell Rd., Moxee – FT is not mapped.
- o. Service for Meter #657304 is IM single cut identified on maps as HP service w/dbl. cut.
- p. 7511 Postma Rd., Moxee – FT HP service not on maps.
- q. 7525 Postma Rd., Moxee – FT HP service not on maps.
- r. R-41 for 601 Postma Rd. SLR Farwest Fabrication (Marquee: Farwest Fabricators Inc.) – Regulator Station not on HP maps.

2. **Finding(s):**

CNG failed to accurately record the working and standby run regulators spring ranges during annual regulator station inspections conducted at R-26, Meyers and Track Rds., Toppenish. The system outlet MAOP = 12psig. CNG Facility Maintenance and Inspection forms show both Sprague regulators with a spring range of 20-40psig on 12.12.07, 12.09.08, 10.21.09, 09.01.10.

3. **Finding(s):**

CNG failed to update mapping records within six months of completing construction activity for the following:

- a. 1043 Desmarais Rd., Moxee.
- b. 2340 Scoon Rd., Sunnyside (Constr. completed 12.08.09 not mapped as of 09.15.10).
- c. WO 165834, Zillah (Constr. completed 12.02.09 not mapped until 08.08.10).

4. **Finding(s):**

CNG failed to provide staff with requested records. Prior to inspection, CNG provided staff with antiquated HP maps which were very different than the versions staff found in-use during inspection.

- a. Yakima HP Maps (dated 11.05.70).
- b. Selah HP Maps (undated).
- c. 4" Moxee HP Maps (undated).

2. **WAC 480-93-110 Corrosion control.**

- (2) *Each gas pipeline company must complete remedial action within ninety days to correct any cathodic protection deficiencies known and indicated by any test, survey, or inspection. An additional thirty days may be allowed for remedial action if due to circumstances beyond the gas pipeline company's control the company cannot complete remedial action within ninety days.*

Finding(s):

CNG failed to provide records that remedial action was completed within 90 days for the following low CP reads:

- a. 618 N. 20th Ave., Yakima – read -0.675 taken by CNG 07.20.09.
- b. 16th Ave. & Nob Hill (Yakima Valley Community College) – read -0.783 taken by CNG approx. 06.10.08.

3. **WAC 480-93-110 Corrosion control.**

- (5) *Each gas pipeline company must conduct inspections or tests for electrical isolation between metallic pipeline casings and metallic pipelines at least once annually, but not to exceed fifteen months between inspections or tests. The test or inspection must also determine whether the pipeline has adequate levels of cathodic protection at the casing to pipeline interface. These requirements do not apply to unprotected copper inserted in ferrous pipe.*
- (a) *For each casing installed prior to September 5, 1992, that does not have test leads, the gas pipeline company must be able to demonstrate that other test or inspection methods are acceptable and that test lead wires are not necessary to monitor for electrical isolation and adequate cathodic protection levels.*
 - (b) *Whenever electrical isolation tests or inspections indicate that a possible shorted condition exists between a casing and a pipeline, the gas pipeline company must conduct a follow-up test within ninety days to determine whether an actual short exists. The gas pipeline company's procedures manual must have a level or threshold that would indicate a potential shorted condition and must also detail the method of determining whether the casing is actually shorted to the pipeline.*
 - (c) *The gas pipeline company must clear the shorted condition where practical.*
 - (d) *Whenever a short exists between a line pipe and casing, the gas pipeline company must perform a leak survey within ninety days of discovery and at least twice annually thereafter, but not to exceed seven and one-half months between leak surveys until the shorted condition is eliminated.*

1. **Finding(s):**

CNG records indicate a failure to conduct follow-up tests within ninety days to determine whether an actual short existed when electrical isolation tests indicated that possible shorted condition existed.

- a. TKK RD CHNEI crossing between Cutoff, Granger – No Tinker-Razor completed for casing read of -1.136mV and carrier read of -1.153mV on 05.21.07. No follow-up/remediation documented.
- b. Hwy 241 and Factory Rd., Sunnyside - No Tinker-Razor completed for casing read of -0.796mV and carrier read of -0.976mV on 05.29.08. No follow-up/remediation documented.
- c. Emerald Rd. E. of Wells Rd., Sunnyside - Tinker-Razor test failed. No casing and carrier reads taken on 07.13.09. No follow-up/remediation documented.
- d. S. 11th St S of Yakima Valley Hwy. Sunnyside – No Tinker-Razor completed for casing read of -0.809mV and carrier read of -0.969mV on 03.29.09. No follow-up/remediation documented.
- e. Parton Rd. & Wapanish Rd., Granger – No Tinker-Razor completed. No casing read, carrier read -0.969mV taken on 03.30.10. No follow-up/remediation documented.
- f. 14 E. Washington Ave., Yakima – No Tinker-Razor completed for casing read of -1.036 mV and carrier read of -1.242mV in 2010 exact read date unknown but occurred between 03.04.10 and 04.14.10. No follow-up/remediation documented.
- g. W. Washington Ave. at B.N.R.R., Yakima – No Tinker-Razor completed for casing read of -0.917mV and carrier read of -1.036mV in 2009. No follow-up/remediation documented.
- h. W. Washington Ave. at B.N.R.R., Yakima – No Tinker-Razor completed for casing read of -0.883mV and carrier read of -1.140mV in 2010 exact read date unknown but occurred between 03.04.10 and 04.14.10. No follow-up/remediation documented.
- i. S. 11th St. South of Yakima Valley Hwy, Sunnyside – No Tinker-Razor completed for casing read of -0.809mV and carrier read of -0.969mV in 2010 Annual casing survey and summary dated 03.29.10. No follow-up/remediation documented.

2. **Finding(s):**

CNG records indicate a failure to conduct inspections or tests for electrical isolation between metallic pipeline casings and metallic pipelines at least once annually not to exceed 15 months for the following:

- a. Hwy 223 & West Blvd., Granger for 2007.
- b. Emerald Rd. E. of Wells Rd., Sunnyside for 2007.
- c. Yakima Valley Hwy. N. of Factory Rd., Sunnyside for 2007.
- d. S. 11th St. S. of Yakima Valley Hwy., Sunnyside for 2008.
- e. N. 4th St. S. of Hickenbottom Plant, Sunnyside for 2009.

3. **Finding (s):**

CNG records indicate a failure to provide test data to support pass/fail conclusion for casing tests. See Table A below.

TABLE A

Casing Location & Date	Casing Read (mV)	Carrier Read (mV)	Tinker-Razor Test P/F	Leak Survey & instrument SN/ID No.	Remediation of Short/Leak
05.21.2007					
TKK RD CHNEI crossing btwn cutoff	1.136	1.153	No data recorded	No data recorded	No data recorded
Hwy 223 & West Blvd	No data recorded	No data recorded	No data recorded	No data recorded	No data recorded
S 4 th St. between E "C" & E "D"	No data recorded	No data recorded	P	No data recorded	No data recorded
Hwy 241 & Factory Rd	No data recorded	No data recorded	P	No data recorded	No data recorded
Eastway Dr & Yakima Valley Hwy RD	No data recorded	No data recorded	P	No data recorded	No data recorded
Lincoln Ave & S. 4 th St	No data recorded	No data recorded	P	No data recorded	No data recorded
S 13 th St. S of Yakima Valley Hwy	No data recorded	No data recorded	P	No data recorded	No data recorded
Emerald R E of Wells Rd	No data recorded	No data recorded	No data recorded	No data recorded	No data recorded
Emerald R S of S Emerald RD	No data recorded	No data recorded	P	No data recorded	No data recorded
Yakima Valley Hwy N of Factory Rd	No data recorded	No data recorded	No data recorded	No data recorded	No data recorded
5.30.2008					
S 11 th St S of Yakima Valley Hwy	No data recorded	No data recorded	No data recorded	No data recorded	No data recorded
05.29.2008					
Hwy 241 & Factory Rd	.796	.976	No data recorded	No data recorded	No data recorded
Eastway Dr & Yakima Valley Hwy (road)	No vent	.985	P		
Lincoln Ave & S 4 th St	No data recorded	.973	P		
S 13 th St S of Yakima Valley Hwy	No data recorded	.973	P		

Emerald R E of Wells Rd	No data recorded	.937	P		
Emerald R S of S Emerald Rd	No data recorded	1.078	P		
Yakima Valley Hwy N of Factory Rd	No data recorded	1.091	P		
Between 1 st Ave & Railroad St E of 7 th	No data recorded	.985	P		
Hwy 241 & Factory Rd	No data recorded	.907	P		
Eastway Dr. & Yakima Valley Hwy Rd	No vent	.985	P		
Lincoln Ave & S 4 th St	No data recorded	.973	P		
S 13 th St S of Yakima Valley Hwy	No data recorded	.973	P		
Emerald R E of Wells RD	No data recorded	.937	p		
Emerald R S of S Emerald Rd	No data recorded	1.078	P		
Yakima Valley Hwy N of Factory Rd	No data recorded	1.091	P		
Between 1 st Ave & Railroad St E of 7 th	No data recorded	.985	P		
07.13.2009					
Hwy 223 & West Blvd	No data recorded	No data recorded	P		
S 4th St between E "c" and E "D"	No data recorded	No data recorded	P		
Hwy 241 & Factory Rd	No data recorded	No data recorded	P		
Eastway Dr & Yakima Valley Hwy Rd	No data recorded	No data recorded	P		
Lincoln Ave & S 4 th St	No data recorded	No data recorded	P		
S 13 th St S of Yakima Valley Hwy	No data recorded	No data recorded	P		

Emerald R E of Wells Rd	No data recorded	No data recorded	F	No data recorded	No data recorded
Yakima Valley Hwy N of Factory RD	No data recorded	No data recorded	P	No data recorded	No data recorded
Parton Rd & Wapanish RD	No data recorded	No data recorded	P	No data recorded	No data recorded
Hwy 223 & West Blvd	No data recorded	No data recorded	P	No data recorded	No data recorded
S 4 th St between E "C" and "E":	No data recorded	No data recorded	P	No data recorded	No data recorded
N 4 th St S of Hickenbottom Plant	No data recorded	No data recorded	P	No data recorded	No data recorded
Hwy 241 & Factory Rd	No data recorded	No data recorded	No data recorded	No data recorded	No data recorded –THERE is a note stating "It's all blacktop can't get read"
Eastway Dr & Yakima Valley Hwy (road)	No data recorded	No data recorded	P	No data recorded	No data recorded
Lincoln Ave & S 4 th St	No data recorded	No data recorded	P	No data recorded	No data recorded
S 13 th St S of Yakima Valley Hwy	No data recorded	No data recorded	P	No data recorded	No data recorded
Yakima Valley Hwy N of Factory RD	No data recorded	No data recorded	P	No data recorded	No data recorded
03.29.2010					
S 11 th St S of Yakima Valley Hwy	0.809	0.969	No data recorded	No data recorded	No data recorded
03.30.2010					
Division St and Old Prosser HWY	No data recorded	No data recorded	P	No data recorded	No data recorded
Parton Rd & Wapanish RD	No data recorded	No data recorded	P	No data recorded	
Hwy 223 & West Blvd	No data recorded	No data recorded	P	No data recorded	No data recorded
S4th St between E "C" and E "D"	No data recorded	No data recorded	P	No data recorded	No data recorded

Parton Rd & Wapanish Rd	No data recorded	.969	No data recorded	No data recorded	No data recorded
HWY 223 & West Blvd	No data recorded	No data recorded	P	No data recorded	No data recorded
S 4 th St between E "C" and "D"	No data recorded	No data recorded	P	No data recorded	No data recorded
03.10.2010					
Division St & Old Prosser Rd	No data recorded	No data recorded	P	No data recorded	No data recorded
Emerald Rd E of S Emerald Rd	No data recorded	No data recorded	P	No data recorded	No data recorded
Hwy 241 & Factory Rd	No data recorded	No data recorded	P	No data recorded	No data recorded
Eastway Dr and Yakima Valley Hwy Rd	No data recorded	No data recorded	P	No data recorded	No data recorded
Lincoln Ave & S 4 th St	No data recorded	No data recorded	P	No data recorded	No data recorded
Emerald R E of Wells RD	No data recorded	No data recorded	P	No data recorded	No data recorded
Emerald R S of Emerald Rd	No data recorded	No data recorded	P	No data recorded	No data recorded

4. **WAC 480-93-155 Increasing maximum allowable operating pressure.**

- (1) *If a gas pipeline company wants to uprate to a MAOP greater than sixty psig, the company must submit to the commission for review, at least forty-five days before uprating, a written plan of procedures including all applicable specifications with drawings of the affected pipeline systems. At a minimum, the plan must include the following:*
- (a) *A list of all affected gas pipeline facilities, including pipes, fittings, valves, and other affected equipment, with the manufacturer's specified maximum operating pressure limits, their specified minimum yield strength (SMYS) at the intended MAOP, and any other applicable specifications or limitations;*
 - (b) *Original design and construction standards;*
 - (c) *Original pressure test records;*
 - (d) *Previous operating pressures identifying the dates and lengths of time at that pressure;*
 - (e) *Records of all leaks, regardless of cause, and the dates and methods of repair;*
 - (f) *Where the pipeline is being uprated to a MAOP that produces a hoop stress of twenty percent or more of the SMYS, records of the original welding standards and welders;*
 - (g) *Maintenance records of all affected regulator stations and system relief valves for the past three years or three most recent inspections, whichever is longer;*

- (h) *Where applicable, relief valve capacities at the proposed MAOP compared to regulator flow capacities, with calculations;*
 - (i) *Cathodic protection readings of the affected gas pipeline and facilities, including rectifier readings, for the past three years or three most recent inspections, whichever is longer; and*
 - (j) *Any additional information that the commission may deem necessary to evaluate the pressure increase.*
- (2) *Uprates must be based on a previous or current pressure test that will substantiate the intended MAOP.*

1. **Finding(s):**

CNG failed to submit their uprate plan to the commission at least 45 days before the uprating of the 4" Grandview pipeline. The project was an uprate of their 4" HP main from 175psi to 250psi on Euclid Rd. from N. of I-82 to S. of Bonnieview Rd. in NW Grandview.

2. **Finding(s):**

CNG's uprate plan failed to include original records/evidence required by this rule. The following data is not in the plan:

- a. A list of all affected gas pipeline facilities, including pipes, fittings, valves, and other affected equipment, with the manufacturer's specified maximum operating pressure limits, their specified minimum yield strength (SMYS) at the intended MAOP, and any other applicable specifications or limitations;
- b. Original design and construction standards;
- c. Original pressure test records;
- d. Previous operating pressures identifying the dates and lengths of time at that pressure;
- e. Records of all leaks, regardless of cause, and the dates and methods of repair;
- f. Where the pipeline is being uprated to a MAOP that produces a hoop stress of twenty percent or more of the SMYS, records of the original welding standards and welders;
- g. Maintenance records of all affected regulator stations and system relief valves for the past three years or three most recent inspections, whichever is longer;
- h. Cathodic protection readings of the affected gas pipeline and facilities, including rectifier readings, for the past three years or three most recent inspections, whichever is longer;
- i. Uprates must be based on a previous or current pressure test that will substantiate the intended MAOP.

5. **WAC 480-93-124 Pipeline markers.**

- (5) *Each gas pipeline company must replace markers that are reported damaged or missing within forty-five days.*

Finding(s):

CNG failed to provide records showing repair/replacement of damaged or missing pipeline markers within 45 days of notification for each of the following:

- a. System surveillance records for Grandview
 - i. 1st quarterly patrol dated 03.19.08 marker/vent marker as damaged at E. Lincoln Ave. & Yakima Valley HWY RR xing.
 - ii. 2nd quarterly patrol dated 06.18.08 marker/vent marker as damaged at E. Lincoln Ave. & Yakima Valley HWY RR xing.
 - iii. 3rd quarterly patrol dated 09.15.08 marker/vent marker as damaged at N. Birch St. N of Wine country Rd.
 - iv. 1ST quarterly patrol dated 04.06.09 marker/vent marker as damaged at N. Birch St. N of Wine Country Rd.
- b. System surveillance record for Granger
 - i. 1st quarterly patrol dated 04.06.09 marker/vent marker as missing at Bridge Ave @ Yakima River.
 - ii. 4th quarterly patrol dated 12.09.09 marker vent marker as missing at Bridge Ave @ Yakima River.
 - iii. 2nd quarterly patrol dated 04.07.10 marker/vent marker as missing at 2nd St East of Ave "G"; Ave "B" N. of Main St.; N. Birch St. N of Wine Country Road; and Ave "B" S. of 2nd St. - No WO# and patrol log does not indicate whether markers were replaced.
 - iv. 3rd quarterly patrol dated 07.12.10 marker/vent marker as damaged at Ave "B" S. of 2nd St.
 - v. WO # 1966293459 created 08.17.10 to repair but no documentation that this repair was completed.

6. **WAC 480-93-170 Tests and reports for pipelines.**

- (1) *Each gas pipeline company must notify the commission in writing at least three business days prior to the commencement of any pressure test of a gas pipeline that will have a MAOP that produces a hoop stress of twenty percent or more of the specified minimum yield strength of the pipe used. Pressure test procedures must be on file with the commission or submitted at the time of notification.*
 - (a) *The pressure tests of any such gas pipeline built 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.*
 - (b) *When the test medium is to be a gas or compressible fluid, each gas pipeline company must notify the appropriate public officials so that adequate public protection can be provided for during the test.*
 - (c) *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) of this section may be waived by notifying the commission by calling the emergency notification line (see WAC 480-93-005(8)) prior to performing the test.*

1. **Finding(s):**
CNG failed to notify the commission that their 4" Grandview upgrade Phase 5 – Fourth Pressure Increase NTE 425 psig could produce a hoop stress \geq 20% of the specified minimum yield strength. Pressure test procedures were not on file with the commission or submitted at the time of notification. This uprate was not an emergency.
2. **Finding(s):**
CNG failed to notify public officials that natural gas was being used as a test medium which could produce a hoop stress \geq 20% of the specified minimum yield strength so that adequate public protection could be provided during the uprate pressure tests.

7. **WAC 480-93-170 Tests and reports for pipelines.**

- (7) *Each gas pipeline company must keep records of all pressure tests performed for the life of the pipeline and must document the following information:*
- (a) *Gas pipeline company's name;*
 - (b) *Employee's name;*
 - (c) *Test medium used;*
 - (d) *Test pressure;*
 - (e) *Test duration;*
 - (f) *Line pipe size and length;*
 - (g) *Dates and times; and*
 - (h) *Test results.*

Finding(s):

CNG failed to accurately document pressure test results for their 4" Granger River Bore on 02.27.10. CNG exceeded the allowable pressure test loss. Staff calculated a maximum allowable loss of 4.49 psi based upon data contained in CNG uprate records. CNG's 24 hr. pressure test records identify a pressure loss of 5 psig with a pressure of 710psig at the test start and 705psig at the test end.

8. **WAC 480-93-180 Plans and procedures.**

- (1) *Each gas pipeline company must have and follow a gas pipeline plan and procedure manual (manual) for operation, maintenance, inspection, and emergency response activities that is specific to the gas pipeline company's system. The manual must include plans and procedures for meeting all applicable requirements of 49 CFR §§ 191, 192 and chapter 480-93 WAC, and any plans or procedures used by a gas pipeline company's associated contractors.*

1. **Finding(s):**
CNG does not have a procedure for setting chart boxes or for identifying a multiplier factor of gauges.

2. **Finding(s):**
CNG failed to follow procedure CP 755 by not performing a Tinker-Razor test when reads indicated a potential short in their system.

- a. 14 E. Washington Ave., Yakima – No Tinker-Rasor completed for casing read of -1.036 mV and carrier read of -1.242mV in 2010.
- b. W. Washington Ave. at B.N. RR, Yakima – No Tinker-Rasor completed for casing read of -0.917mV and carrier read of -1.036mV in 2009.
- c. W. Washington Ave. at B.N. RR, Yakima – No Tinker-Rasor completed for casing read of -0.883mV and carrier read of -1.140mV in 2010.
- d. S. 11th St. South of Yakima Valley Hwy, Sunnyside – No Tinker-Rasor completed for casing read of -0.809mV and carrier read of -0.969mV in 2010 Annual casing survey and summary dated 03.29.10.

3. **Finding(s):**

CNG records indicate a failure to follow procedure CP 755 by not recording complete electrical isolation test data between metallic pipeline casings and metallic pipelines and/or results.

- a. 05.21.07
 - i. TKK Rd. CHNEI Crossing between Cutoff, Granger
 - ii. Hwy 223 & West Blvd., Granger
 - iii. S. 4th St. between E. "C" & E. "D", Granger
 - iv. Hwy 241 & Factory Rd., Sunnyside
 - v. Eastway Dr. & Yakima Valley Hwy Rd., Sunnyside
 - vi. Lincoln Ave. & S. 4th St., Sunnyside
 - vii. S. 13th St. S. of Yakima Valley, Sunnyside
 - viii. Emerald Rd. E. of Wells Rd., Sunnyside
 - ix. Emerald Rd. S. of S. Emerald Rd., Sunnyside
 - x. Yakima Valley Hwy N. of Factory Rd., Sunnyside
- b. 05.29.08
 - i. Hwy 241 & Factory Rd., Sunnyside
 - ii. Eastway Dr. & Yakima Valley Hwy Rd., Sunnyside
 - iii. Lincoln Ave. & S. 4th St., Sunnyside
 - iv. S. 13th St. S. of Yakima Valley Hwy., Sunnyside
 - v. Emerald Rd. E. of Wells Rd., Sunnyside
 - vi. Emerald Rd. S. of S. Emerald Rd., Sunnyside
 - vii. Yakima Valley Hwy N. of Factory Rd., Sunnyside
 - viii. Between 1st Ave. & Railroad St. E. of 7th, Zillah
- c. 05.30.08
 - i. S. 11th St. S. of Yakima Valley Hwy., Sunnyside
 - ii. Hwy. 241 & Factory Rd., Sunnyside
 - iii. Eastway Dr. & Yakima Valley Hwy. Rd., Sunnyside
 - iv. Lincoln Ave. & S. 4th St., Sunnyside
 - v. S. 13th St. S. of Yakima Valley Hwy., Sunnyside
 - vi. Emerald Rd. E. of Wells Rd., Sunnyside
 - vii. Emerald Rd. S. of S. Emerald Rd., Sunnyside
 - viii. Yakima Valley Hwy N. of Factory Rd., Sunnyside
 - ix. Between 1st Ave. & Railroad St. E. of 7th, Zillah

- d. 07.13.09
 - i. Parton Rd. & Wapanish Rd., Granger
 - ii. Hwy 223 & West Blvd., Granger
 - iii. S. 4th St. between E. "C" & E. "D", Granger
 - iv. Hwy 241 & Factory Rd., Sunnyside
 - v. Eastway Dr. & Yakima Valley Hwy Rd., Sunnyside
 - vi. Lincoln Ave & S. 4th St., Sunnyside
 - vii. S. 13th St. S. of Yakima Valley Hwy., Sunnyside
 - viii. Emerald Rd. E. of Wells Rd., Sunnyside
 - ix. Yakima Valley Hwy. N. of Factory Rd., Sunnyside
 - x. N. 4th St. S. of Hickenbottom Plant, Sunnyside
- e. 03.10.10
 - i. Division St. & Old Prosser Rd., Grandview
 - ii. Emerald Rd. E. of S. Emerald Rd., Sunnyside
 - iii. Hwy 241 & Factory Rd., Sunnyside
 - iv. Eastway Dr. & Yakima Valley Hwy. Rd., Sunnyside
 - v. Lincoln Ave. & S. 4th St., Sunnyside
 - vi. Emerald Rd. E. of Wells Rd., Sunnyside
 - vii. Emerald Rd. S. of S. Emerald Rd., Sunnyside
- f. 03.30.10
 - i. Division St. & Old Prosser Hwy., Grandview
 - ii. Parton Rd. & Wapanish Rd., Granger
 - iii. Hwy 223 & West Blvd., Granger
 - iv. S. 4th St. between E. "C" and E. "D", Granger
 - v. S. 11th St. S. of Yakima Valley Hwy., Sunnyside
- g. 04.14-15.10
 - i. E. Selah Rd., Selah
 - ii. 9 E. Naches Ave., Selah
 - iii. N. Railroad Ave. (3-South), Selah
 - iv. W. Washington Ave. at B.N.R.R., Yakima
 - v. 14 E. Washington Ave., Yakima

4. **Finding(s):**
 CNG failed to test 2" steel main in accordance with procedures CP 665.03 Table 1 – Pressure Tests for Steel Intermediate Pressure Mains and Services. The test duration required for 2" steel main over 200' in length is 1-hour. CNG tested a 208' segment of 2" steel located at Valley Mall Blvd. & Rudkin Rd., Union Gap, for 30 minutes.
5. **Finding(s):**
 CNG failed to follow procedure CP 665 for testing on their 4" Granger River Bore on 02.27.10.
- a. CNG failed to provide records identifying Engineering approval and designation for the high pressure main tests at this location.
 - b. CNG's 24 hr. pressure test records identify a pressure loss of 5 psig with a pressure of 710psig at the test start and 705psig at the test end - no

analysis records of pressure test data approving or rejecting pressure test were provided.

6. **Finding(s):**

CNG failed to follow procedure CP 745. During “Annual”, “Rebuild”, “New”, or “Special” regulator station inspections CNG employees are required to record and verify that the relief valve fully opens. The following inspection records fail to identify whether the relief valve fully opens:

- a. Reg. Sta. R-05 07.27.10
- b. Reg. Sta. R-13 02.03.10
- c. Reg. Sta. R-16 02.03.10
- d. Reg. Sta. R-19 02.26.08
- e. Reg. Sta. R-22 02.03.10
- f. Reg. Sta. R-24 02.02.10

7. **Finding(s):**

CNG failed to follow their 4” Grandview pipeline uprate procedures Page 7, #17, Phase 5 – Fourth Pressure Increase which requires all leaks to be repaired before any pressure increase, unless approved by Engineering or the GM. No records identifying approval for a Grade 3 Leak found at 1015 W. Wine Country Rd., Granger.

8. **Finding(s):**

CNG failed to follow their procedures CP 685 which requires their regulator vents to be installed vertically. The following locations have regulator vents installed in a horizontal orientation:

- a. 1010 East A, Yakima – Cedars Inn & Suites - Meter # 693410.
- b. 1001 East A, Yakima – Holiday Inn Express – Meter # 591382.
- c. Postma Rd., Moxee - Farwest Fabricators Inc. - Meter #591048 TC.
- d. 1014 Chestnut St., Yakima – No meter.
- e. 621 Butterfield, Yakima.
- f. 1206 N. 40th Ave., Yakima Meter # 248578.
- g. R-41.
- h. 309 Charron, Moxee.
- i. 314 Charron, Moxee.

9. **WAC 480-93-186 Leak evaluation.**

(1) *Based on an evaluation of the location and/or magnitude of a leak, the gas pipeline company must assign one of the leak grades defined in WAC 480-93-18601 to establish the leak repair priority. A gas pipeline company may use an alphabetical grade classification, i.e., Grade A for Grade 1, Grade B for Grade 2, and Grade C for Grade 3 if it has historically used such a grading designation.*

Each gas pipeline company must apply the same criteria used for initial leak grading when reevaluating leaks.

Finding(s):

CNG failed to assign leak grades for:

- a. Line walk Section #2 – Leak detected 03.20.09 at 1917 S. 14th St., Selah.
- b. Line walk Section #2 – Leak detected 03.09.09 at 404 Southern Ave/701 5th Ave., Selah 3.

10. **WAC 480-93-187 Gas leak records.**

Each gas pipeline company must prepare and maintain permanent gas leak records. The leak records must contain sufficient data and information to permit the commission to assess the adequacy of the gas pipeline company's leakage program. Gas leak records must contain, at a minimum, the following information:

- (1) *Date and time the leak was detected, investigated, reported, and repaired, and the name of the person conducting the investigation;*
- (13) *Unique identification numbers (such as serial numbers) of leak detection equipment.*

Finding(s):

CNG failed to record the serial number for their leak detection instrument and employee name for the follow-up leak investigations at 9003 Garden Ave., Yakima on the following 15 dates: 08.14.09; 08.17.09; 08.18.09; 08.19.09; 08.20.09; 08.21.09; 08.24.09; 08.25.09; 08.26.09; 08.27.09; 08.28.09; 08.31.09; 09.01.09; 09.02.09; 09.03.09.

11. **WAC 480-93-188 Gas leak surveys.**

- (3) *Each gas pipeline company must conduct gas leak surveys according to the following minimum frequencies:*
 - (a) *Business districts - at least once annually, but not to exceed fifteen months between surveys. All mains in the right of way adjoining a business district must be included in the survey;*
 - (b) *High occupancy structures or areas - at least once annually, but not to exceed fifteen months between surveys;*
 - (c) *Gas pipelines operating at or above two hundred fifty psig - at least once annually, but not to exceed fifteen months between surveys;*
 - (d) *Where the gas system has cast iron, wrought iron, copper, or noncathodically protected steel - at least twice annually, but not to exceed seven and one-half months between surveys; and*
 - (e) *Unodorized gas pipelines - at least monthly.*

Finding(s):

CNG failed to provide annual leak survey records for 2009 and 2010 leak surveys for the following Business District and High Occupancy areas:

- a. Chalmers St. to 18th St. from Terrace Heights Rd. to Riverside St., Yakima, which includes the following HO's:
 - i. W.L. Hanson Bldg. and
 - ii. The public park S. of W.L. Hanson Bldg.
- b. University Parkway & Iron Horse Ct. (100 & 200 Blks.), Yakima, which includes the following HO's:
 - i. Iron Horse Lodge
 - ii. Credit Union just S. and E. of Iron Horse Lodge
 - iii. Pacific NW University Bldg.
- c. Fair Ave. and Spruce St., Yakima. (A new multi-plex high-rise apartment complex.)

12. **WAC 480-93-188 Gas leak surveys.**

(5) *Each gas pipeline company must keep leak survey records for a minimum of five years. At a minimum, survey records must contain the following information:*

- (a) *Description of the system and area surveyed (including maps and leak survey logs);*
- (b) *Survey results;*
- (c) *Survey method;*
- (d) *Name of the person who performed the survey;*
- (e) *Survey dates; and*
- (f) *Instrument tracking or identification number.*

1. **Finding(s):**

CNG failed to include maps with their leak surveys prior to 2009. The effective date of this rule was June 2, 2005.

2. **Finding(s):**

CNG failed to provide leak survey maps and leak survey logs for the following 4" Grandview upgrade/pressure increases:

- a. Phase 2 – 09.10.09 at 8:15A
- b. Phase 3 – 09.10.09 at 8:45A
- c. Phase 4 – 09.10.09 at 9:16A
- d. Phase 5 – 09.10.09 at 9:52A

3. **Finding(s):**

CNG failed to provide 2009 and 2010 5-year interval leak survey records for Moxee Sections #1 and #2 for all services, including those services downstream of the farm taps. CNG failed to provide records of the previous survey to demonstrate compliance. (CNG indicated they do not have leak survey records for 2004 and 2005 showing these services were leak surveyed).

13. **49 CFR §192.107 Yield strength (S) for steel pipe.**

- (a) *For pipe that is manufactured in accordance with a specification listed in section I of Appendix B of this part, the yield strength to be used in the design formula in §192.105 is the SMYS stated in the listed specification, if that value is known.*
- (b) *For pipe that is manufactured in accordance with a specification not listed in section I of Appendix B to this part or whose specification or tensile properties are unknown, the yield strength to be used in the design formula in §192.105 is one of the following:*
 - (1) *If the pipe is tensile tested in accordance with section II-D of Appendix B to this part, the lower of the following:*
 - (i) *80 percent of the average yield strength determined by the tensile tests.*
 - (ii) *The lowest yield strength determined by the tensile tests.*
 - (2) *If the pipe is not tensile tested as provided in paragraph (b)(1) of this section, 24,000 psi (165 MPa).*

Finding(s):

CNG failed to provide records supporting the calculations used to determine yield strength of their 1957 4" steel pipe for their Grandview uprate project. Without records supporting the stated strength of 35,000psig Grade B, CNG shall recalculate using one of the above described methods.

14. **49 CFR §192.503 General requirements.**

- (a) *No person may operate a new segment of pipeline, or return to service a segment of pipeline that has been relocated or replaced, until-*
 - (1) *It has been tested in accordance with this subpart and §192.619 to substantiate the maximum allowable operating pressure; and*
 - (2) *Each potentially hazardous leak has been located and eliminated.*
- (b) *The test medium must be liquid, air, natural gas, or inert gas that is-*
 - (1) *Compatible with the material of which the pipeline is constructed;*
 - (2) *Relatively free of sedimentary materials; and,*
 - (3) *Except for natural gas, nonflammable.*

- (c) *Except as provided in §192.505(a), if air, natural gas, or inert gas is used as the test medium, the following maximum hoop stress limitations apply:*

<i>Class location</i>	<i>Maximum hoop stress allowed as percentage of SMYS</i>	
	<i>Natural Gas</i>	<i>Air or inert gas</i>
<i>1</i>	<i>80</i>	<i>80</i>
<i>2</i>	<i>30</i>	<i>75</i>
<i>3</i>	<i>30</i>	<i>50</i>
<i>4</i>	<i>30</i>	<i>40</i>

Finding(s):

CNG failed to apply maximum hoop stress limitations when testing their steel main using natural gas as a test medium for their 2009 4" Grandview uprate project.

15. **49 CFR §192.553 General requirements.**

- (a) *Pressure increases. Whenever the requirements of this subpart require that an increase in operating pressure be made in increments, the pressure must be increased gradually, at a rate that can be controlled, and in accordance with the following:*
- (1) *At the end of each incremental increase, the pressure must be held constant while the entire segment of the pipeline that is affected is checked for leaks.*
 - (2) *Each leak detected must be repaired before a further pressure increase is made, except that a leak determined not to be potentially hazardous need not be repaired, if it is monitored during the pressure increase and it does not become potentially hazardous.*

Finding(s):

CNG failed to provide records indicating compliance with CFR Part 192.553 by repairing and/or monitoring a Grade 3 leak during the uprate of their 4" Grandview pipeline in 2009. CNG identified the leak was discovered on 08.17.09, repaired on 08.18.09 (WO# 0097655), but deferred on 08.20.09 (WO# 0097671) at 1015 W. Wine Country Rd., Grandview.

16. **49 CFR §192.619 Maximum allowable operating pressure - Steel or plastic pipelines.**

- (a) *No person may operate a segment of steel or plastic pipeline at a pressure that exceeds a maximum allowable operating pressure determined under paragraph (c) or (d) of this section, or the lowest of the following: . . .*

Finding(s):

CNG failed to provide records establishing and/or substantiating the MAOP of their 4" Grandview HP pipeline. Uprate procedures Pg. 2, Table 1 - Pipe Specifications, states test pressure is unknown, certification records are unknown, and highest operating pressure is 175psig.

17. **49 CFR §192.707 Line markers for main and transmission lines.**

- (a) *Buried pipelines. Except as provided in paragraph (b) of this section, a line marker must be placed and maintained as close as practical over each buried main and transmission line:*
 - (1) *At each crossing of a public road and railroad; and*
 - (2) *Wherever necessary to identify the location of the transmission line or main to reduce the possibility of damage or interference.*
- (b) *Exceptions for buried pipelines. Line markers are not required for the following pipelines:*
 - (1) *Mains and transmission lines located offshore, or at crossings of or under waterways and other bodies of water.*
 - (2) *Mains in Class 3 or Class 4 locations where a damage prevention program is in effect under §192.614.*
 - (3) *Transmission lines in Class 3 or 4 locations until March 20, 1996.*
 - (4) *Transmission lines in Class 3 or 4 locations where placement of a line marker is impractical.*
- (c) *Pipelines above ground. Line markers must be placed and maintained along each section of a main and transmission line that is located above ground in an area accessible to the public.*
- (d) *Marker warning. The following must be written legibly on a background of sharply contrasting color on each line marker:*
 - (1) *The word "Warning," "Caution," or "Danger" followed by the words "Gas (or name of gas transported) Pipeline" all of which, except for markers in heavily developed urban areas, must be in letters at least 1 inch (25 millimeters) high with 1/4 inch (6.4 millimeters) stroke.*
 - (2) *The name of the operator and telephone number (including area code) where the operator can be reached at all times.*

1. **Finding(s):**

CNG markers failed to include the required cautionary language at the following locations:

- a. FT at 503 Prospect Pl. – Weaver Flower Co.
- b. 202 Rivard Rd., Moxee – does not include correct language.
- c. E of 1420 Faucher Rd., Moxee.

2. **Finding(s):**

CNG failed to maintain the following markers:

- a. First marker S of 8100 Postma Rd., Moxee – overgrown vegetation.

- b. 250 HP main running N/S in easement past 8100 Postma Rd., Moxee – R/W is overgrown.
- c. E. of R-39 does not have CNG name.
- d. 6303 Bell Rd., Moxee markers are illegible.
- e. NE corner of Beaudry & Bell Rds., Moxee.
- f. 2801 Beaudry Rd., Moxee marker language is illegible.
- g. Postma Rd., Moxee, marker N of 8100 Postma Rd. – illegible.
- h. 1st marker S of 8100 Postma Rd. is illegible – illegible.
- i. W. casing vent sign for RR spur at 301 W. Charron Rd., Moxee (Bay Zinc) damaged 08.04.10.

3. **Finding(s):**

Markers were not found at the following required locations:

- a. 503 Prospect Pl. (Weaver Flower Co.) E to easement at 301 W. Charron Rd. (Bay Zinc) in Moxee
- b. HP main crossing at RR spur W. of 503 Prospect Pl., Moxee
- c. W. of Intersection Hillcrest Dr. & Terrace Hts. Dr., Yakima – W. of 4807 Terrace Hts. Dr.
- d. S. of Intersection Butterfield Rd. & Cutoff Rd., Yakima – N. of 2408 Butterfield Rd.
- e. Bell Rd. Drainage Ditch No. 11, Moxee
- f. No marker at W. Charron Rd. & Moxee Rd., Moxee, per CNG marker map location
- g. R-12.

18. **49 CFR §192.723 Distribution systems: Leakage surveys.**

- (a) *Each operator of a distribution system shall conduct periodic leakage surveys in accordance with this section.*
- (b) *The type and scope of the leakage control program must be determined by the nature of the operations and the local conditions, but it must meet the following minimum requirements:*
 - (2) *A leakage survey with leak detector equipment must be conducted outside business districts as frequently as necessary, but at least once every 5 calendar years at intervals not exceeding 63 months.*

1. **Finding(s):**

CNG failed to provide leak survey records for services located downstream of farm taps in Moxee, Sections #1 and #2 in 2009 and/or 2010. CNG failed to provide records of the previous survey to demonstrate compliance.

2. **Finding(s):**

CNG failed to provide leak survey records for services located downstream of farm taps in Selah, Section #6 in 2009 and/or 2010. CNG failed to provide records of the previous survey to demonstrate compliance.

19. **49 CFR §192.739 Pressure limiting and regulating stations: Inspection and testing.**
- (a) *Each pressure limiting station, relief device (except rupture discs), and pressure regulating station and its equipment must be subjected at intervals not exceeding 15 months, but at least once each calendar year, to inspections and tests to determine that it is-*
- (1) *In good mechanical condition;*
 - (2) *Adequate from the standpoint of capacity and reliability of operation for the service in which it is employed;*
 - (3) *Except as provided in paragraph (b) of this section, set to control or relieve at the correct pressure consistent with the pressure limits of §192.201(a); and*
 - (4) *Properly installed and protected from dirt, liquids, or other conditions that might prevent proper operation.*

1. **Finding(s):**

CNG failed to conduct annual (NTE 15 months) inspections in 2009 for regulator station R-01, Yakima.

- a. CNG failed to conduct an inspection in 2009.
- b. CNG exceeded the 15 month time interval between annual inspections occurring on 09.08.06 and 09.05.08.

2. **Finding(s):**

CNG failed to maintain regulator(s) R-01 at Terrace Hits. Rd. in Yakima from the entry of compressor oil which contributed or might contribute to improper operation.

- a. August 30, 2000 – Regulators dirty and full of compressor oil.
- b. August 29, 2005 – Regulators full of compressor oil.
- c. November 11, 2005 – Regulators full of compressor oil.
- d. November 28, 2007 – Overpressurization incident – Regulators full of compressor oil.
- e. September 2, 2010 – OQ inspection – Pilot filters full of oil.

AREAS OF CONCERN OR FIELD OBSERVATIONS

1. **WAC 480-93-180 Plans and procedures.**

CNG failed to follow their calibration procedures by not completing their internal calibration record forms on 10.21.09 for Heath Odorator SN# 705637 by identifying the condition of the returned instrument as satisfactory/unsatisfactory.

2. **WAC 480-93-180 Plans and procedures.**
CNG's plans and procedures identify in multiple locations, such as CP 720, that field personnel are to reference their Emergency Plan as part of the procedure. The Emergency Plan is not part of the field personnel manual. CNG identified they will update their manual accordingly.
3. **49 CFR §192.16 Customer notification.**
Although CNG provided some documentation of customer notification, CNG was unable to provide records identifying that notices had been sent to customers within 90 days.
4. **49 CFR §192.481 Atmospheric corrosion control: Monitoring.**
CNG to verify completion of atmospheric corrosion inspection at pipe hangers for bridge span at W. of Intersection Hillcrest Dr. & Terrace Hts. Dr., Yakima – W. of 4807 Terrace hits. Dr.
5. **49 CFR §192.616 Public Awareness.**
CNG did not maintain complete records documenting their advertisement frequency for 2008 to September 2010.
6. **49 CFR §192.361 Service lines: Installation.**
Service for Meter #657304 has less than the required 12" of cover at the riser and the equipment is no longer supported due to what appears to be customer alterations.