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December 18, 2013

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RECEIVED
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State of Washington
UTC
Pipeline Safety Program

Subject: Response to 2013 Natural Gas Standard Inspection – Tri-Cities and Walla Walla Districts

Dear Mr. Lykken,

This letter responds to your letter dated November 5, 2013 addressing the Washington Utilities and Transportation Commission Staff ("Staff") inspection conducted October 14-18 in Kennewick, Washington. In your letter you report that Staff identified areas involving probable violations of WAC 480-93-185 (gas leak investigation), WAC 480-93-186 (leak evaluation), WAC 480-93-188 (gas leak surveys), WAC 480-93-180 (plans and procedures), and noted "areas of concern and recommendations". For ease of reference, we have copied Staff's Probable Violations, below, followed by Cascade's response to the alleged probable violations and areas of concern:

STAFF'S IDENTIFIED PROBABLE VIOLATIONS

1. WAC 480-93-185 Gas leak investigation:

- (1) *Each gas pipeline company must investigate any odor, leak, explosion, or fire, which may involve its gas pipelines, promptly after receiving notification. Where the investigation reveals a leak, the gas pipeline company must grade the leak in accordance with WAC 480-93-186, and take appropriate action. The gas pipeline company must retain the leak investigation record for the life of the pipeline.*

Finding(s):

CNG failed to grade 3 leaks as noted below. All three of these leaks were severed lines:

- a. Kennewick W0#197180, 10/25/12---contractor who struck line had pinched off broken end so gas was not "blowing", however, the line was severed and not graded per CNG CP 750.
- b. Kennewick W0#20064, 3/14/13-form noted: "blowing gas". Leak grade was not graded per CNG CP 750.
- c. Kennewick W0#200503, 3/16/13-landscaper cut the service which had an EFV which prevented gas from blowing. However, line as severed and not graded per CNG CP 750.

CNGC Response

Although a leak grade was not identified on the paperwork, a leak repair priority was established for each leak. In all cases cited by the UTC, this priority for repair was consistent with the leak grades defined in WAC 480-93-18601 and established in CP750. An employee meeting was held November 13th, Post Audit Review, clearly stating all leaks need a written grade.

2. WAC 480-93-186 Leak evaluation:

- (3) *The gas pipeline company must check the perimeter of the leak area with a combustible gas indicator. The gas pipeline company must perform a follow-up inspection on all leak repairs with residual gas remaining in the ground as soon as practical, but not later than thirty days following the repair.*

Finding(s):

Two instances were found where CNG failed to follow up the initial leak response within the required 30 days:

- a. Kennewick W0#194048, 6/27/12-651 Oklahoma St., First response was 6/27/12; follow up was 8/30/12.
- b. Kennewick W0#202022, 9/5/13-679 S. Oklahoma St., First response was 9/5/13; follow up was on 10/8/13.

CNGC Response

Kennewick District Management determined that they did not have an established workflow for leak investigation paperwork which led to the missed compliance dates. The district has now established a workflow that will be followed and has reviewed the practice with district employees.

3. **WAC 480-93-188 Gas leak surveys:**

- (1) *Each gas pipeline company must perform gas leak surveys using a gas detection instrument covering the following areas and circumstances:*
- (a) *Over all mains, services, and transmission lines including the testing of the atmosphere near other utility (gas, electric, telephone, sewer, or water) boxes or manholes, and other underground structures;*

Finding(s):

CNG uses printouts from its GIS mapping system to allow field crews the ability to "highlight" the pipelines they survey on a real time basis. In reviewing these leak survey records, several pipeline segments, stubs or services in both Tri Cities and Walla Walla were not highlighted. In some instances there was an issue, such as a locked gate, preventing access. CNG's procedure requires this to be noted on a separate "AOC" sheet (CNG 297) so it can be surveyed at a later date. Several non-highlighted pipeline facilities did not appear on AOC sheets and therefore, it could not be determined if the line had actually been surveyed. See attached sheets for locations

CNGC Response

CNGC field staff identified when they documented field work if the highlighter touched or covered most of the service they had surveyed the entire line. CNGC reviewed all locations identified by WUTC staff. The services that were not highlighted completely are believed to have been surveyed by CNGC staff. As demonstrated during the audit, CNGC was able to produce documented work orders generated as a result of the survey for services and stubs that were not entirely highlighted. All pipelines identified in UTC Staff's probable violation have been re-surveyed to ensure that a clear record of the survey exists.

The Kennewick district review of CP 715 was conducted on September 24, 2013. Additional training on expectations regarding highlighting of field maps was held during Monday morning meeting conducted on October 21, 2013. All employees who completed the survey areas noted were present. Walla Walla had follow up meetings October 28th and November 20th, 2013 related to CP 715 as well.

4. **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.*

Finding(s):

CNG CP 754.033 states, "Personnel shall grade each meter set and service riser listed in the shutdown section using the inspection criteria in section .02. If a meter set or riser is noted as "Needs Paint", or "Needs Repair", a description of the condition should be taken of the condition in the space provided. An individual completing a set of meters shall indicate by signing and dating the page of the report they completed."

During atmospheric corrosion control records review in Walla Walla, it was noted that there were pages of records which did not have a signature or name, just a date (see below). Additionally, it was noted the many different ways that CNG field personnel "signed" the forms: initials, first name, last name, or a combination of all three. The practice should be consistent for all personnel.

- 2012 Walla Walla Book 1, Shutdown section 26-1008, pg 11/451
- 2013 Walla Walla Book 1, Shutdown section 26-1001, pgs 17-22/1382
- 2013 Walla Walla Book?, Shutdown section 26-1004, pgs 113-122/1382

CNGC Response

CNGC identified one page of 451 pages that was missing a signature, although the date of the survey was documented. The preceding and successive pages contained signatures and dates, and therefore it is clear to CNGC who had completed the work despite this documentation oversight.

In regard to the 2013 atmospheric corrosion survey documentation, the WUTC auditors specifically requested the current survey. In an effort to meet this request, CNGC provided the 2013 documentation which had not yet undergone Quality Control review. There were specific work orders assigned and conditions in the field were documented showing the survey was completed on those particular pages. Thus CNGC has confirmed that surveys were completed; however, the documentation had not yet been Quality Control checked by the manager and finalized for 2013 when the WUTC auditors reviewed the documentation.

AREAS OF CONCERN AND RECOMMENDATIONS

1.	<p><u>49 CFR §192.517(a) Records</u></p> <p>(a) <i>Each operator shall make, and retain for the useful life of the pipeline, a record of each test performed under §§ 192.505 and 192.507. The record must contain at least the following information:</i></p> <ul style="list-style-type: none"> (1) <i>The operator's name: the name of the operator's employee responsible for making the test, and the name of any test company used.</i> (2) <i>Test medium used</i> (3) <i>Test pressure.</i> (4) <i>Test duration.</i> (5) <i>Pressure recording charts, or other record of pressure readings.</i> (6) <i>Elevation variations, whenever significant for the particular test.</i> (7) <i>Leaks and failures noted and their disposition.</i> 																								
2.	<p><u>49 CFR §192.6.19 Maximum Allowable Operating Pressure Steel or plastic pipelines:</u></p> <p>(a) <i>No person may operate a segment of steel or plastic pipeline at a pressure that exceeds a maximum allowable operating pressure determined under paragraph</i></p> <p><i>(c) or (d) of this section, or the lowest of the following:</i></p> <ul style="list-style-type: none"> (1) <i>The design pressure of the weakest element in the segment, determined in accordance with subparts C and D of this part. However, for steel pipe in pipelines being converted under §192.14 or updated under subpart K of this part, if any variable necessary to determine the design pressure under the design formula (§192.105) is unknown, one of the following pressures is to be used as design pressure:</i> <ul style="list-style-type: none"> (i) <i>Eighty percent of the first test pressure that produces yield under section N5 of Appendix N of ASME B31.8 (incorporated by reference, see §192.7), reduced by the appropriate factor in paragraph (a)(2)(ii) of this section; or</i> (ii) <i>If the pipe is 12 inches (324 mm) or less in outside diameter and is not tested to yield under this paragraph, 200 p.s.i. (1379 kPa) gage.</i> (2) <i>The pressure obtained by dividing the pressure to which the segment was tested after construction as follows:</i> <ul style="list-style-type: none"> (i) <i>For plastic pipe in all locations, the test pressure is divided by a factor of 1.5.</i> (ii) <i>For steel pipe operated at 100 p.s.i. (689 kPa) gage or more, the test pressure is divided by a factor determined in accordance with the following table:</i> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Class Location</th> <th colspan="3" style="text-align: left;">Factors¹, segment-</th> </tr> <tr> <th></th> <th style="text-align: center;">Installed before (Nov. 12, 1970)</th> <th style="text-align: center;">Installed after (Nov. 11, 1970)</th> <th style="text-align: center;">Converted under §192.14</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">1.1</td> <td style="text-align: center;">1.1</td> <td style="text-align: center;">1.25</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">1.25</td> <td style="text-align: center;">1.25</td> <td style="text-align: center;">1.25</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">1.4</td> <td style="text-align: center;">1.5</td> <td style="text-align: center;">1.5</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">1.4</td> <td style="text-align: center;">1.5</td> <td style="text-align: center;">1.5</td> </tr> </tbody> </table> <p><i>Note: For offshore segments installed, or updated, or converted after July 31, 1977, that are not located on an</i></p>	Class Location	Factors ¹ , segment-				Installed before (Nov. 12, 1970)	Installed after (Nov. 11, 1970)	Converted under §192.14	1	1.1	1.1	1.25	2	1.25	1.25	1.25	3	1.4	1.5	1.5	4	1.4	1.5	1.5
Class Location	Factors ¹ , segment-																								
	Installed before (Nov. 12, 1970)	Installed after (Nov. 11, 1970)	Converted under §192.14																						
1	1.1	1.1	1.25																						
2	1.25	1.25	1.25																						
3	1.4	1.5	1.5																						
4	1.4	1.5	1.5																						

offshore platform, the factor is 1.25. For segments installed, updated, or converted after July 31, 1977 that are located on an offshore platform or on a platform in inland navigable waters (including a pipe riser), the factor is 1.5

- (3) The highest actual operating pressure to which the segment was subjected during the 5 years preceding the applicable date in the second column.
This pressure restriction applies unless the segment was tested according to the requirements in paragraph(a)(2) of this section after the applicable date in the third column or the segment was updated according to the requirements in subpart K of this part:

Pipeline segment	Pressure date	Test date
Onshore gathering line that first became subject to this part (other than §192.612) after April 13, 2006	March 15, 2006, or date line becomes subject to this part, whichever is later	5 years preceding applicable date in second column.
Onshore transmission line that was a gathering line not subject to this part before March 15, 2006		
Offshore gathering lines	July 1, 1976	July 1, 1971.
All other pipelines	July 1, 1970	July 1, 1965.

- 4) The pressure determined by the operator to be the maximum safe pressure after considering the history of the segment, particularly known corrosion and the actual operating pressure.
- (b) No person may operate a segment to which paragraph (a)(4) of this section is applicable, unless overpressure protective devices are installed on the segment in a manner that will prevent the maximum allowable operating pressure from being exceeded, in accordance with §192.195.
- (c) The requirements on pressure restrictions in this section do not apply in the following instance. An operator may operate a segment of pipeline found to be in satisfactory condition, considering its operating and maintenance history, at the highest actual operating pressure to which the segment was subjected during the 5 years preceding the applicable date in the second column of the table in paragraph (a)(3) of this section. An operator must still comply with §192.611

Findings:

Based on findings from previous CNG inspections completed this year, CNG has reviewed all of its high pressure pipelines in all units looking for missing data used to confirm MAOP including this unit. CNG has formulated a program to obtain all missing data and Pipeline Safety is currently reviewing it. However, pressure test records for the 8" Attalia Line were asked for during this inspection. CNG did not have complete pressure test records (per Kathleen Chirgwin, GO).

In reviewing CNG's table of missing information submitted to the UTC as part of the above mentioned program, the 8" Attalia line was included, however, pressure testing records were not listed as missing; only "pipe grade" was listed as missing. This portion of the code is not retroactive and the 8" Attalia line was installed pre code. CNG still must confirm MAOP per 192.619, if the pressure testing documents are not complete. We will require CNG to submit its MAOP confirming documents for the 8-inch Attalia line to the UTC within 30 calendar days from the date of this letter.

CNGC Response

CNGC's Engineering Services Department is finalizing a document addressing the above finding in the request for more information made by Staff Dennis Ritter regarding MAOP records for all high pressure pipelines in Washington dated October 10th 2013.

2. WAC 480-93-140(1) Service regulators:

- (1) To ensure proper operation of service regulators, each gas pipeline company must install, operate, and maintain service regulators in accordance with federal and state regulations, and in accordance with the manufacturer's recommended installation and maintenance practices.

Findings:

A review of the annual regulator maintenance records indicated that regulators R31 Kennewick, R37 Pasco, R39 Finley, and R64 Kennewick, had springs installed which were outside the set pressures of the regulator or relief. While not necessarily a violation of the code, CNG should have some documentation as to why this practice is being used. CNG did not provide documentation during the inspection. It should be noted, this same issue occurred

in the Yakima/Sunnyside district inspection (9/27/13). At that time, CNG stated that GO Engineering establishes and approves all set points and spring ranges for regulators. CNG stated they would have justification "soon" and so it was not written into the report. As of the date of this report, CNG still has not provided justification. It should also be noted, that a regulator company Emerson (Fisher) was contacted to ask whether this situation was a safety concern. Emerson stated it was not a safety concern, but may be a reliability or accuracy issue. They recommend operators use springs (the lighter the better) with a range which encompasses the set point of the regulators/relief.

CNGC Response

CNGC has reviewed the regulator maintenance documentation for both Yakima and Kennewick districts. R31 Kennewick, R37 Pasco, and R64 Kennewick all have springs with a range which have been field verified to encompass the set pressure of the regulator. R39 Finley had an incorrect relief valve set pressure (35) identified on the 2012 regulator maintenance form. The relief valve is in fact a fracture disc with a range of 50 to 60. CNGC would concur a documentation error existed on the spring ranges identified on the regulator maintenance form for these 4 regulators in Kennewick District.

R6 Grandview, R27 Toppenish, R40 Granger had a set pressure of 42 and a spring range of 27-40 identified on the regulator maintenance form. CNGC verified that these regulators contain springs with a range of 27-40.

R31 Sunnyside, R32 Sunnyside and R33 Sunnyside had a set pressure of 53 and a spring range of 27-50 identified on the regulator maintenance form. CNGC verified that these regulators contain springs with a range of 27-50.

CNGC acknowledges regulators had set points slightly outside of the recommended spring range. CNGC has been able to verify these units lock-up properly during annual maintenance. CNGC maintains that these regulators have functioned properly. Although the units operate properly at the set spring range, CNGC will adjust the spring range to the range identified above.

3. WAC 480-93-188(5) 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.*

Findings:

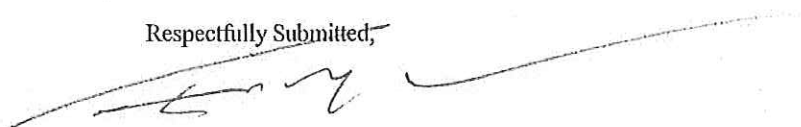
CNG performs quarterly patrolling on the Columbia Mall rooftop (meter's and regulators are on the roof). During the patrol they also do leak surveys, however, they do not write down the instrument number on the patrol form- there actually is not a place on the form to write it. The same form used in Walla Walla does have place holder for this information. CNG should consider using this version of the form for all patrolling to assist field crews in writing down information

CNGC Response

CNGC has a form that is to be utilized per CP which has a place holder for the above mentioned information. CNGC will adhere to the instructions on CNG 286 (Rev 09/10) System Surveillance Record and document instrument information during quarterly patrols in the comment section on the CNG 286.

Please contact Tina Beach (509) 734-4576 with questions or comments.

Respectfully Submitted,


Eric Martuscelli,
Vice President, Operations
Cascade Natural Gas Corporation

