STATE OF WASHINGTON
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION
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Ref. No. Docket PG-110006

CERTIFIED MAIL

January 27, 2012

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

Dear Mr. Martuscelli:

RE: 2011 Natural Gas Standard Inspection –Tri-Cities and Walla Walla Districts

The Washington Utilities and Transportation Commission (UTC) staff conducted a natural gas safety standard inspection during the weeks of November 28 and December 14, 2011, of Cascade Natural Gas (CNG) – Tri-Cities and Walla Walla districts. The inspection included a review of records, procedures and pipeline facilities.

Staff documented 13 probable violations of state and federal pipeline safety codes and 5 areas of concern. The areas of concern could also potentially lead to future violations of state or federal pipeline safety rules if not addressed by CNG.

The attached report presents staff's decisions regarding probable violations and does not constitute a finding of violation by the commission at this time. The report is not necessarily the position or opinion of the commission should it be called upon to rule on these issues in an appropriate proceeding.

Your response needed
Please review the attached report and respond in writing by March 1, 2012. The response should include how and when you plan to bring the probable violations into full compliance.

What happens after you respond to this letter?
The attached report presents staff's decision on probable violations and does not constitute a finding of violation by the commission at this time.

After you respond in writing to this letter, there are several possible actions the commission, at its discretion, may take with respect to this matter. For example, the commission may:

- Consider the matter resolved without further commission action, or
- Assess an administrative penalty under RCW 81.88.040, or
- Issue a complaint, seeking monetary penalties, changes in the company's practices, or other relief authorized by law, and justified by the circumstances.

We have not yet decided whether to pursue a complaint or penalty in this matter. Should an administrative law judge decide to pursue a complaint or penalty, your company will have an opportunity to present its position directly to the commissioners.

We would like to note that during this inspection, we reviewed documents back to 2008 and it was clear that each subsequent year CNG's records and compliance improved over the prior year. We expect CNG to continue on this course and would like to thank CNG's personnel for their cooperation and assistance during this inspection.

If you have any questions, please contact Scott Rukke, Pipeline Safety Engineer at (360) 664-1241. Please refer to docket number PG-110006 in any future correspondence regarding this inspection.

Thank you for your cooperation and interest in pipeline safety.

Sincerely,

David D. Lykken
Pipeline Safety Director

cc. Steve Kessie, Manager-Operations Services, Cascade Natural Gas Corp.

Enclosure

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION
2011 Standard Natural Gas Safety Inspection
Cascade Natural Gas, Tri-Cities and Walla Walla Districts
Docket PG-110006

The following probable violations of Title 49, CFR Part 192 and WAC 480-93 were noted as a result of staff's standard natural gas safety inspection of CNG's Tri-Cities and Walla Walla district records, plans, procedures and pipeline facilities.

PROBABLE VIOLATIONS

1. **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.

(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.

Finding(s):
To meet the requirements of WAC 480-93-110(5)(b), CNG procedure 755.063 requires any casing pipe-to-soil potential that is more negative than -0.73v to be investigated for a potential short to the carrier pipe. Records indicate that the following casings had pipe to soil potentials (PSP) that were more negative than -0.73v but CNG was unable to provide records indicating that the potentially shorted conditions were investigated within 90 days as required:

a. Pasco, casing no. 3, Lewis E. of Rd 28. PSP of -0.751v recorded on 04/21/2009. No record was provided indicating that a shorted casing test was performed.

b. Burbank, casing no. 2, 2nd Ave (RR). PSP of -1.301v recorded on 03/18/2010. The next survey was on 03/28/2011 (between 3/28-3/31/2011) and a shorted casing test was performed at this time which indicated that the casing was not shorted to the carrier pipe.

c. Finley, casing no. 3, Cochrane and Finley Rd #7. PSP of -1.170v recorded on 03/18/2010. Records indicate that a shorted casing test was not performed until 10/29/2010 and that the casing was shorted to the carrier pipe. (Replaced in 2011)

d. Finley, Casing no. 7, Main St & Finley Rd #3. PSP of -1.185v recorded on 03/18/2010. Records indicate that a shorted casing test was not performed until 10/29/2010 and that the casing was shorted to the carrier pipe.

2. **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.

Finding(s):

Records indicate that electrical isolation tests were not conducted annually, not to exceed 15 months, on the following two casings as required:

a. Walla Walla, casing no. 43, Wash. St. Pen. – N 13th Ave. During the 03/12/2010 casing survey this casing was listed as "removed" even though it was still in service.

b. Walla Walla, casing no. 43, Wash. St. Pen. – N 13th Ave. During the 03/11/2011 casing survey this casing was listed as "gone" even though it was still in service.

c. Walla Walla, casing no. 53, Woodland 600' N of Abadie. During the 03/12/2010 casing survey this casing was listed as "removed" even though it was still in service. This casing was Tinker Rasor tested during the 03/11/2011 survey.

3. **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. Each gas pipeline company must be able to provide documentation to the commission indicating that remedial action was started in a timely manner and that all efforts were made to complete remedial action within ninety days. (Examples of circumstances allowing each gas pipeline company to exceed the ninety-day time frame include right of way permitting issues, availability of repair materials, or unusually long investigation or repair requirements).

Finding(s):

Records indicate that cathodic protection reads were found to be below the minimum required levels during the March 2009 annual survey and CNG was unable to provide any records indicating that remedial action was completed within 90 days as required. Documentation indicates that the following low CP reads found during the March 2009 annual survey were not remediated until March 2010:

Less than -0.850v:

a. Walla Walla, test site no. 35, 1036 Pamona. March 2009 read -0.742v.
b. Walla Walla, test site no. 49, 404 Boyer Ave. March 2009 read -0.820v.
c. Walla Walla, test site no. 50, 171 S Park Apt A. March 2009 read -0.775v.
d. Walla Walla, test site no. 105, 980 Reser Rd. March 2009 read -0.849v.
e. Walla Walla, test site no. 106, 2419 Kendall Rd. March 2009 read -0.848v.
f. Walla Walla, test site no. 111, 1650 School. March 2009 read -0.816v.
g. Walla Walla, test site no. 112, 1456 Tawny Lane. March 2009 read -0.835v.
h. Walla Walla, test site no. 114, 1453 Durant. March 2009 read -0.843v.
i. Walla Walla, test site no. 115, 1348 Strum. March 2009 read -0.839v.
j. Walla Walla, test site no. 116, 1006 Chestnut. March 2009 read -0.823v.
k. Walla Walla, test site no. 130, 1259 Pleasant. March 2009 read -0.782v.
l. Walla Walla, test site no. 131, 1111 Strum. March 2009 read -0.820v.
m. Walla Walla, test site no. 132, 1411 Monroe. March 2009 read -0.780v.
n. Walla Walla, test site no. 133, 1456 Tull Drive. March 2009 read -0.801v.
o. Walla Walla, test site no. 134, 1131 School. March 2009 read -0.799v.
p. Walla Walla, test site no. 135, 817 School Ave. March 2009 read -0.736v.
q. Walla Walla, test site no. 136, 1935 Carl. March 2009 read -0.760v.
r. Walla Walla, test site no. 137, 725 Gladys. March 2009 read -0.760v.
s. Walla Walla, test site no. 138, 2013 Delmont. March 2009 read -0.764v.
t. Walla Walla, test site no. 139, 506 Ankeny. March 2009 read -0.658v.
u. Walla Walla, test site no. 141, 1830 E Alder. March 2009 read -0.790v.
v. Walla Walla, test site no. 142, 118 Green. March 2009 read -0.v.
w. Walla Walla, test site no. 143, 142 Commercial. March 2009 read -0.786v.
x. Walla Walla, test site no. 144, 253 Merrill. March 2009 read -0.785v.

The following reads did not meet the minimum level of -0.90v as detailed in CNG procedure 755.061(d). This is CNG's method of taking IR drop into account as required. Any read less than -0.90v is assumed to not meet the minimum level of -0.85v once IR drop is taken into account.

a. Walla Walla, test site no. 42, 227 Cascade Dr. March 2009 read -0.886v
b. Walla Walla, test site no. 44, 322 Blue. March 2009 read -0.886v
c. Walla Walla, test site no. 46, 217 N Madison. March 2009 read -0.860v
d. Walla Walla, test site no. 47, 232 Stanton. March 2009 read -0.897v
e. Walla Walla, test site no. 97, 921 Woodlawn. March 2009 read -0.892v
f. Walla Walla, test site no. 98, 855 Bryant. March 2009 read -0.866v
g. Walla Walla, test site no. 99, 1609 Fern. March 2009 read -0.869v
h. Walla Walla, test site no. 103, Walla Walla HS Abbot Rd. March 2009 read- 0.856v
i. Walla Walla, test site no. 104, 2231 Walt Lane. March 2009 read -0.871v
j. Walla Walla, test site no. 107, 2339 S Wilbur. March 2009 read -0.862v
k. Walla Walla, test site no. 108, 1457 Kannisku Loop. March 2009 read -0.856v
l. Walla Walla, test site no. 109, 2198 Depping Rd. March 2009 read -0.866v
m. Walla Walla, test site no. 110, 1853 Pike Pl. March 2009 read -0.857v
n. Walla Walla, test site no. 113, 1884 Crestline. March 2009 read -0.853v
o. Walla Walla, test site no. 125, 1703 Evergreen. March 2009 read -0.894v
p. Walla Walla, test site no. 127, 1409 Boyer. March 2009 read -0.885v
q. Walla Walla, test site no. 128, 1305 E Alder. March 2009 read -0.870v

r. Walla Walla, test site no. 129, 521 Bridge. March 2009 read -0.887v
s. Walla Walla, test site no. 140, 335 Wilber. March 2009 read -0.870v
t. Walla Walla, test site no. 145, 1433 Hobson. March 2009 read -0.890v

4. **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.

Finding(s):

CNG was unable to provide annual business district leak survey records for the following areas and dates:

a. Walla Walla, 2008
b. Walla Walla, 2009
c. College Place, 2008
d. College Place, 2009

Note:

CNG personnel confirmed that the leak surveys were conducted and records indicate that leak survey instruments were calibrated for use during the period the surveys would have been conducted. For this reason, we decided to cite WAC 480-93-188(5) which is the record retention code, instead of WAC 480 93-188(3)(a) which is the requirement to conduct business district surveys annually. We believe that the surveys were conducted but that the records were lost.

5. **WAC 480-93-015 Odorization of gas.**

(1) Each gas pipeline company must odorize the gas in its pipeline at a concentration in air of at least one-fifth of the lower explosive limit, so that the gas is readily detectable by a person with a normal sense of smell.

Finding(s):

Records indicate that odorizer O-7, located at AGRI NW in Plymouth, ran out of odorant during January 2011. Sniff tests conducted on 1/5/2011 indicated that the gas had no readily detectible odor due to the fact that the odorant tank ran dry of odorant.

Note:

It appears that the tank for odorant station O-7 may be too small for the pipeline it supplies odorant to. It appears that if the tank is not filled prior to the pipeline running at peak demand, the odorant may run out before the next monthly check.

CNG should either install a larger tank or amend procedures to require at least, bi-weekly checks for this system.

6. **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):

The following CNG procedures were not followed or are not adequate to meet the requirements of WAC 480-93-180(1).

a. CNG procedure 747.012.056 requires that a special odorometer test be performed within 48 hours of an odorant rate change or remedial action of low reads to ensure that odorant levels are within the acceptable range. The odorant tank cited in no. 5 above was found to be empty on 1/5/2011. It was refilled on January 6, 2011, but a special odorometer test was not performed. A sniff test was not conducted until the next regularly scheduled monthly survey on 2/2/2011.

b. CNG procedure 925.072 does not include the *unintentional estimated gas loss of three million cubic feet or more* under the definition of an incident. CNG should revise this procedure to meet the definition of incident under CFR 191.3.

c. 49 CFR Part 192.383, defines a replaced service line as follows:

(a) Definitions. As used in this section:
Replaced service line means a gas service line where the fitting that connects the service line to the main is replaced or the piping connected to this fitting is replaced.

The language in CNG procedure CP #647.021 and in the Scope of CP #647 states that services must be "completely replaced" before an excess flow valve would be required. This does not meet the requirement CFR Part 192.383. CNG should review and revise this procedure to ensure it meets the intent of Part 192.383.

d. CNG procedure 665.037 requires the use of a pressure recorder for pressure tests longer than 2 hours in duration. CNG installed a new construction plat, W.O. no. 184695, and two tests were performed at 4 hours each. No records were produced that indicated a pressure recorder was used during these tests.
The use of pressure recorders for short duration pressure tests does not appear to be CNG's practice and this procedure should be revised or removed.

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

(9) When a gas pipeline company performs multiple pressure tests on a single installation, the gas pipeline company must maintain a record of each test. An example of a single installation with multiple tests would be any continuous on-going job or installation such as a new plat or long main installation where more than one pressure test was conducted during construction.

Finding(s):

In October 2011, CNG installed a new construction plat consisting of approximately 4,128' of 2-inch polyethylene main. Records indicate that the main was pressure tested in two sections but individual pressure test records were not recorded as required. This plat is W.O. no. 184695, Copperleaf Phase-2, located in Richland, WA.

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

(3) Each gas pipeline company must conduct gas leak surveys according to the following minimum frequencies:

(b) High occupancy structures or areas - at least once annually, but not to exceed fifteen months between surveys;

Finding(s):

CNG was unable to provide records indicating that a church located at 301 S. Washington in Kennewick was leak surveyed as a High Occupancy Structure (HOS) annually as required. This church does not have a gas service but does have main in the right of way adjoining the church property.
WAC 480-93-188(b) does not distinguish between a HOS with a gas service and those without.

Note:

We asked CNG personnel if leak surveys are conducted for HOS's where no service line exists but where main is in the adjoining RW. CNG personnel stated that leak surveys would only be conducted where a service line exists.
This is not consistent with the intent of WAC 480-93-188. In fact WAC 480-93-188 requires that operators take an additional step and survey up to the building wall "where a service line exists." This opinion is supported by the WA State AG's office.

We also asked CNG personnel if CNG procedures distinguish between different size churches when it comes to the definition of a HOS. CNG personnel stated that there is no differentiation between the size or capacity of a church, and that all churches regardless of size are surveyed where a service line exists.

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

(6) Each gas pipeline company must record the condition of all underground metallic facilities each time the facilities are exposed.

Finding(s):
CNG did not record the condition of the following underground metallic pipelines when they were exposed during the repair of third party damage.

a. College Place, 6 N College Ave, W.O. no. 186615. This WO notes that this ¾-inch coated steel service was damaged and repaired on 9/12/2011.

b. Walla Walla, N Clinton St/Bonsella St., W.O. no 184718. This WO notes that this 2-inch coated steel main was damaged and repaired on 6/23/2010.

Note:
For third party damage, CNG records the condition of underground steel on their leak investigation (293B) form. If no leak results from third party damage then there is no location or form to use to record pipe condition.
WAC 480-93-110(6) requires that the condition of all metallic pipe be recorded when it is exposed. This includes all third party damage, construction, maintenance or other activities where metallic pipe is exposed.

10. **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):
Documents indicate that the following leaks were not assigned grades as required.

a. Leak W.O. 180801, No legible address, Pasco. 1/3/2011
b. Leak W.O. 187246, 4504 Cathedral Dr., Pasco. 10/11/11
c. Leak W.O. 187183, 4207 Sahara, Pasco. 10/06/2011
d. Leak W.O. 172626, 1st and Einstein. Richland. 1/19/2010. This was a broken and blowing 2-inch PE main. Documents indicate that it was graded as a grade 3 leak, the lowest priority. Any broken and blowing pipeline is a grade 1 leak.
e. Unknown leak W.O. number at W. Court St and 10th Ave, Pasco. This leak was first reported and investigated on 11/9/2009. At this time no leak grade was assigned due to the belief that it may not be natural gas. At the time of this inspection this leak was still active, ungraded and no ethane test has been conducted to determine if it is natural gas. All leaks indicated on a CGI should be graded until it is determined that natural gas is not involved.

11. **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:
(12) Magnitude and location of CGI readings left;

Finding(s):
Leak W.O. 184966, Newcomer and Catskill, Richland, was reported and investigated on 7/12/11. On CNG's leak investigation form for this address, there are no CGI reads recorded for 7/12/2011. There are reads recorded for a reevaluation conducted on 10/3/2011 and a follow-up on 10/7/2011.

12. **49 CFR Part 192.475 Internal corrosion control: General.**

(b) Whenever any pipe is removed from a pipeline for any reason, the internal surface must be inspected for evidence of corrosion.....

Finding(s):
In 2011, CNG replaced a section of 4-inch high pressure pipeline located at Cochrane and Finley in Finley, WA. The pipeline was replaced due to a shorted casing and external corrosion. CNG was unable to produce any documentation indicating that the internal pipe surface was inspected for internal corrosion.

Note:
CNG procedures also require inspection of internal pipe surfaces.

CP 755.033 - Internal pipe surfaces must be examined if exposed as a result of damage, repair, replacement, etc. Check for any evidence of corrosion on steel pipe. Check for any signs of scratches or gouges in PE pipe.

49 CFR Part192.491(c) requires that a record of every test, survey or inspection be kept for 5 years.

13. **WAC 480-93-100 Valves.**

(3) All service valves selected for inspection in the program required in subsection (2) of this section must be operated and maintained at least once annually, but not to exceed fifteen months between operation and maintenance.

Finding(s):
The following service valves were not operated annually as required.

a. Kennewick V-61, not operated in 2011
b. Kennewick V-65, not operated in 2011
c. Kennewick V-66, not operated in 2011
d. Kennewick V-67, not operated in 2010
e. Kennewick V-82, not operated since 2008
f. Kennewick V-83, not operated since 2008
g. Kennewick V-130, not operated in 2010

AREAS OF CONCERN AND RECOMMENDATIONS

1. CNG procedure CP 747.012 (2) and (3) both reference .046 but should reference .056 for follow up on unacceptable reads.

2. CNG's policy is to connect polyethylene tracer wires to their steel pipelines. We reviewed documentation that indicated reads taken on some wires indicated cathodic protection may be below that required for proper cathodic protection of CNG's steel pipelines. CNG does not have a requirement to follow up when a low read is indicated on a tracer wire as tracer wires are not required to be cathodically protected. But since low reads on wires may be indicative of inadequate CP on the steel lines they are attached to, CNG should initiate a process or procedure to follow up on low tracer wire reads.

3. CNG is using a laser for leak surveys but no procedures are in CNG's manual. Many of the same existing leak survey procedures may also apply to the use of a laser but CNG should address the unique characteristics of using laser leak detection such as coverage, distance, line of sight issues, calibration etc.

4. CNG procedure CP 925.073 needs to be changed to 5 days from 45 days to meet the requirements of WAC 480-93-200(6).

5. CNG procedure 760.02 mentions appendix C qualified welders. CNG does not use appendix C welders and should consider removing this reference.