



STATE OF WASHINGTON

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

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Ref. No. Docket PG-090002

CERTIFIED MAIL

November 3, 2009

Eldon N. Book
Executive Vice President
Chief Operating Officer
Cascade Natural Gas
555 South Cole Road
PO Box 7608
Boise, ID 83707

Dear Mr. Book:

RE: 2009 Natural Gas Standard Inspection – Whatcom County

The Washington Utilities and Transportation Commission (UTC) staff conducted a natural gas safety standard inspection from September 21 through September 25, 2009, of Cascade Natural Gas (CNG) – Whatcom County District pipeline system. The inspection included a review of records, procedures and pipeline facilities. Staff conducted an informal exit interview with CNG General Manager (GM) on September 25, 2009, and a formal exit interview on October 30, 2009, during which time CNG reviewed the inspection findings.

Our inspection indicates a series of 10 probable state and federal safety code violations, as noted in the enclosed report. Staff also noted seven areas of concern, which left uncorrected, could lead to future violations of state or federal pipeline safety rules if not addressed by CNG.

Your response needed

Please review the attached report and respond in writing by December 7, 2009. The response should include how and when you plan to bring the probable violations into full compliance. We also request your response to our areas of concern.

What happens after you respond to this letter?

The attached report presents staff's decisions regarding probable violations and does not constitute a finding of violation by the commission at this time.



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

- 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, or
- Consider the matter resolved without further commission action.

Staff would like to commend CNG Whatcom County for their high level of cooperation and organization during this inspection. This level of region-wide awareness allowed for a very timely yet thorough review.

If you have any questions, please contact Stephanie Zuehlke, Pipeline Safety Engineer at (360) 664-1318. Please refer to docket number PG-090002 in any future correspondence regarding this inspection.

Thank you for your attention to this matter.

Sincerely,



Anne F. Soiza
Pipeline Safety Director

Enclosures

cc. Dan Meredith, MDU Utilities Group
Keith Meissner, Cascade Natural Gas Corp.

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION
2009 Natural Gas Pipeline Safety Inspection
Cascade Natural Gas – Whatcom County
Docket PG-090002

The following areas of concern and probable violation(s) of Title 49, CFR Part 192, WAC 480-90 and WAC 480-93 were noted as a result of the inspection of Cascade Natural Gas (CNG) – Whatcom County. 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 480-90-328 Meter identification

Gas utilities must identify each meter by a unique series of serial numbers, letters, or combination of both, placed in a conspicuous position on the meter, along with the utility's name or initials. Utilities must update the name or initials on its meters within three years of a name change.

Charge(s):

CNG did not identify meters in accordance with this rule.

Finding (s):

CNG did not identify meters in accordance with this rule. Examples follow:

1. Judson St. Alley S. of Front St. E. of 511 Front St., Lynden (2 meter manifold)
 - a. No unique number on either meter
 - b. No company identification label on either meter
2. Judson St. Alley S. of Front St., Lynden
 - a. No unique number on meter with magic marker written 415
 - b. No company identification label on meter with magic marker written 415
3. Judson St. Alley S. of Front St. Meter W. of Meter #255793, Lynden
 - a. No unique number on meter
 - b. No company identification label on meter
4. Judson St. Alley S. of Front St., Lynden (Remote skew #02 28858387)
 - a. No company identification label on meter
5. Alley N. of Front St., Lynden (3 meter manifold)
 - a. No company identification label on Meter #406262

2. 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.

Charge(s):

CNG did not grade leaks in accordance with the rule.

Finding(s):

Leaks have not been assigned a grade at the scene by personnel completing the leak evaluation. Leaks have been graded by the General Manager (GM). Leak investigation is a covered task: field personnel are not grading their found leaks. The practice of field staff contacting the GM to grade found leaks is inconsistent with this training.

3. **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;*
- (2) Location of the leak (sufficiently described to allow ready location by other qualified personnel);*
- (3) Leak grade;*
- (4) Pipeline classification (e.g., distribution, transmission, service);*
- (5) If reported by an outside party, the name and address of the reporting party;*
- (6) Component that leaked (e.g., pipe, tee, flange, valve);*
- (7) Size and material that leaked (e.g., steel, plastic, cast iron);*
- (8) Pipe condition;*
- (9) Type of repair;*
- (10) Leak cause;*
- (11) Date pipe installed (if known);*
- (12) Magnitude and location of CGI readings left; and*
- (13) Unique identification numbers (such as serial numbers) of leak detection equipment.*

Charge(s):

Gas leak records are inadequate in that they do not contain all information required under this rule.

1. **Finding(s):**

CNG gas leak forms/records identify the magnitude of CGI reads as a % only and do not include a unit label. It is unclear whether the % read on the form identified on their records indicates LEL or gas to air.

2. **Finding(s):**
Records indicate that special leak surveys do not contain documentation of all required information. Examples follow:

- a. 08.23.07 Vista/Washington, Ferndale
- b. 09.14.07 Grover & 1st up Drayton, Lynden
- c. 09.25.07 Mountain View Rd. & Douglas Rd., Ferndale

4. **WAC 480-93-188(1) 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;*
 - (b) *Through cracks in paving and sidewalks;*
 - (c) *On all above ground piping (may be checked with either a gas detection instrument or with a soap solution);*
 - (d) *Where a gas service line exists, the gas pipeline company must conduct a leak survey at the building wall at the point of entrance, using a bar hole if necessary; and*
 - (e) *Within all buildings where gas leakage has been detected at the outside wall, at locations where escaping gas could potentially migrate into and accumulate inside the building.*

Charge(s):

Records and documentation do not contain sufficient leak survey information to demonstrate compliance.

1. **Finding(s):**

Leak survey records lack sufficient documentation to verify that leak surveys occurred over the pipeline. Leak surveys have been completed utilizing maps which contain errors. The following services were either 1) mapped but not marked as having been leak surveyed, or 2) not mapped and not marked as having been leak surveyed. Examples follow:

- a. 2007 Leak Survey - Section 6 in Ferndale
- b. 2008 Leak Survey in Lynden
 - 1. 300 Stremler Dr.
 - 2. 205 British Columbia Ave.
 - 3. 411 17th St
 - 4. 412 17th St.
- c. 2009 Leak Survey in Lynden
 - 1. 300 Stremler Dr.
 - 2. 305 Stremler Dr.

3. 1729 D St.
4. 205 British Columbia Ave.
5. 411 17th St.

2. **Finding(s):**

Records do not indicate that leak surveys were completed for aboveground piping sections of all CNG elevated/raised services between the service valve and customer piping, such as the service located at 108 Front St., Lynden.

5. **WAC 480-93-188(6) Gas leak surveys**

(6) *Each gas pipeline company must perform self audits of the effectiveness of its leak detection and recordkeeping programs. Each gas pipeline company must maintain records of the self audits for five years. Self audits must be performed as frequently as necessary, but not to exceed three years between audits. At a minimum, self audits should ensure that:*

- (a) *Leak survey schedules meet the minimum federal and state safety requirements for gas pipelines;*
- (b) *Consistent evaluations of leaks are being made throughout the system;*
- (c) *Repairs are made within the time frame allowed;*
- (d) *Repairs are effective; and*
- (e) *Records are accurate and complete.*

Charge(s):

CNG has not performed effective self audits of its leak detection and recordkeeping programs.

Finding(s):

CNG's self audits have not effectively ensured that their leak survey mapping records are accurate and complete. CNG leak survey maps are missing mains/services.

6. **WAC 480-93-200(7) Reporting requirements**

(7) *Each gas pipeline company must file with the commission the following annual reports no later than March 15 for the preceeding calendar year:*

- (a) *A copy of every Pipeline and Hazardous Materials Safety Administration (PHMSA) F-7100.1-1 and F-7100.2-1 annual report required by U.S. Department of Transportation, Office of Pipeline Safety.*
- (b) *A report titled, "Damage Prevention Statistics." The Damage Prevention Statistics report must include in detail the following information: ...*
- (c) *A report detailing all construction defects and material failure resulting in leakage. Each gas pipeline company must categorize the different types of construction defects and material failures anticipated for their system.*

Charge(s):

CNG did not file annual reports with the commission in a timely manner.

1. **Finding(s):**
CNG exceeded the filing deadline for their annual report in accordance with WAC 480-93-200(7)(a).

2. **Finding(s):**
CNG exceeded the filing deadline for their annual report in accordance with WAC 480-93-200(7)(b).

3. **Finding(s):**
CNG has not provided incident and hazardous failure and defect information for preventative and self audit purposes. Examples follow:

- a. CNG exceeded the filing deadline for their annual report in accordance with WAC 480-93-200(7)(c).
- b. CNG's data reporting on this form is inconsistent with data provided to PHMSA on Form PHMSA F7100.1-1.

7. **49 CFR CFR §192.161 Supports and anchors.**

(b) *Each exposed pipeline must have enough supports or anchors to protect the exposed pipe joints from the maximum end force caused by internal pressure and any additional forces caused by temperature expansion or contraction or by the weight of the pipe and its contents.*

Charge(s):

CNG did not provide required support or anchors for exposed pipeline.

1. **Finding(s):**

A 4-branch 12-meter manifold made up of 2" steel appears to be entirely supported by an unsupported ¾" riser. The manifold is located on Judson St. in the alley S. of Front St., Lynden with one of the meters identified in black magic marker as 415, is not independently supported and appears to require customer piping for support of the pipe and equipment.

2. **Finding(s):**

Alley N. of Front St., Bellingham Meter #592972: riser has bend and is extended without support.

8. **49 CFR CFR §192.365 Service lines: Location of valves**

(b) *Outside valves. Each service line must have a shutoff valve in a readily accessible location that, if feasible, is outside of the building.*

Charge(s):

Service line shutoff valves were not readily accessible.

Finding(s):

The following service line shutoff valves were buried or partially buried.

1. Meter #572694, Bellingham
2. 411 W. Holly St., Bellingham
3. Judson St. Alley S. of Front St., Lynden (Home Furnishings) Remote number 02 28858387

9. **49 CFR §192.491 Corrosion control records**

(c) *Each operator shall maintain a record of each test, survey, or inspection required by this subpart in sufficient detail to demonstrate the adequacy of corrosion control measures or that a corrosive condition does not exist. These records must be retained for at least 5 years, except that records related to §§192.465 (a) and (e) and 192.475 (b) must be retained for as long as the pipeline remains in service.*

Charge(s):

CNG did not provide protection for their pipe in accordance with this section.

1. **Finding(s):**

CNG exceeded the frequency interval for gas pipeline atmospheric corrosion control monitoring inspection. No records are available for the Bellingham shut-down Section I009 (install approx. 1957-60) of approximately 2,570 services. This Section was inadvertently excluded from atmospheric corrosion control monitoring since installation.

2. **Finding(s):**

Pipe-to-soil interface issues were noted during inspection at the following locations:

1. 3219 Meridian St., Bellingham
2. 2731 Meridian & W. Illinois (SW Corner – Premier Wireless), Bellingham
3. Meter #218495 (Alley) Bellingham
4. Meter #654225 (Alley) Bellingham
5. SE Corner Champion St. & Prospect (in alcove) Bellingham
6. Meter #285394, Bellingham
7. 411 W. Holly St., Bellingham
8. Meter #631409, Bellingham to Ferndale line
9. Aldrich Rd. & Larrabee Rd., Bellingham
10. 5744 Ferndale, Ferndale (Ferndale Grain)
11. Meter #255793, Lynden (Alley N. of Front St.)
12. Meter #288723, Lynden (Alley N. of Front St.)
13. Judson St. Alley S. of Front St. Meter W. of Meter #255793, Lynden
14. Judson St. Alley S. of Front St., Lynden (Home Furnishings)
15. Judson St. Alley S. of Front St., Lynden Meter #186095

3. **Finding(s):**

Atmospheric corrosion was noted at the following locations and/or records do not indicate that CNG has inspected pipeline for atmospheric corrosion of pipeline on the inside of welded or tack-welded pipe support slippers. Examples follow:

1. 2500 Meridian, Bellingham

2. 1411 Girard, Bellingham (Kentucky Fried Chicken)
3. 901 Dupont St., Bellingham (Dupont Cleaners)
4. 5744 Ferndale, Ferndale (Ferndale Grain)
5. Alley N. of Front St., Lynden W. of Meter #179841
6. Judson St. Alley S. of Front St. E. of 511 Front St., Lynden (2 meter manifold)
7. Judson St. Alley S. of Front St., Lynden (Meter 648163)
8. Judson St. Alley S. of Front St., Lynden (11-12 meter manifold)
9. Aldrich Rd. & Larrabee Rd., Bellingham to Ferndale line
10. 3219 Meridian St., Bellingham
11. 2801 Meridian & W. Illinois NW Corner (Assoc. Implant & Cosmetic Dentistry), Bellingham
12. Meter #572694, Bellingham
13. 2615 Meridian, Bellingham
14. 2710 Meridian, Bellingham
15. Meter #616227, Bellingham
16. Meter 631409, Bellingham to Ferndale line
17. Aldrich Rd. & Larrabee Rd., Bellingham to Ferndale
18. Judson St. Alley S. of Front St. W. of Meter #255793, Lynden
19. 523 Front St., Lynden Meter #585429
 - a. Tack-welded slipper for pipe support
20. Judson St. Alley S. of Front St., Lynden Meter #186095
 - a. Tack-welded slipper for pipe support
21. Judson St. Alley S. of Front St. W. of Meter #255793, Lynden
 - a. Welded slipper for pipe support

10. **49 CFR §192.616 Public Awareness.**

- (e) *The program must include activities to advise affected municipalities, school districts, businesses, and residents of pipeline facility locations.*
- (f) *The program and the media used must be as comprehensive as necessary to reach all areas in which the operator transports gas.*

Charge(s):

CNG did not have or did not provide evidence of their public awareness program.

1. **Finding(s):**

CNG personnel did not have or did not provide PA documentation as follows:

- a. One-call center Baseline message Frequency evidence.
- b. Emergency Official Baseline message evidence for 2008 & 2009.
- c. Public Officials evidence for the last 2 intervals/cycles.
- d. Excavator & Contractor evidence of mailing for Whatcom County only for 2007, 2008 and 2009.

2. **Finding(s):**
CNG did not have or did not provide PA documentation for the Transmission stake holders audience as follows:
 - a. Residents along route – provide evidence/documentation of last 2 intervals/cycles and how update/verify property owner changes.
 - b. One-call center.
 - c. Emergency Official – evidence of last three annual PA messages.
 - d. Public Officials – evidence of last two PA intervals/cycles.
 - e. Excavator and Contractor – evidence of the last 3 PA intervals/cycles.

3. **Finding(s):**
CNG did not have or did not provide PA documentation identifying how CNG evaluates their present PA program.

AREAS OF CONCERN OR FIELD OBSERVATIONS

1. **WAC 480-93-015 Odorization of gas**
CNG's procedures do not clearly identify an engineering based method for choosing the location to conduct sniff tests.
Documentation indicates that monthly sniff tests are conducted at 48 rotational locations in the Whatcom County systems served by 8 odorizers. However, it is unclear whether these test locations adequately represent those locations where odorant levels are most likely to be the weakest or are continually reviewed and adjusted for factors such as system growth, etc.

2. **WAC 480-93-180(1) Plans and procedures**
CNG does not appear to have detailed knowledge for gaining timely access to their transmission pipeline within the BP Refinery.
Staff notes that CNG presently has 2 employees that complete leak survey on this line that have completed the Refinery's safety orientation.

3. **WAC 480-93-180(1) Plans and procedures**
Records do not indicate that prior to the commencement of their present year leak survey's that CNG had reviewed the previous year's leak survey maps for inconsistencies.

4. **WAC 480-93-188(3) Gas leak surveys**
A couple of High Occupancy structures were removed from the HO list for acceptable reasons but were not placed back on the list when the structure again met the HO structure definition.

5. **WAC 480-93-188(3) Gas leak surveys**
The Bellingham Section 1 Business District leak survey conducted in the field does not match the Business District identified on the Bellingham zone map for Section 1.

6. **49 CFR §192.615 Emergency plans**

CNG provided documentation which identified that some manner of liaison with local officials had occurred however, no frequency regarding the exchange of that information and the updating of required contact information has been established.

7. **49 CFR §192.709 Transmission lines: Record Keeping**

CNG patrols did not note/monitor terrain change (regarding depth of cover) over their transmission line due to excavation by others in public roadway ditch-line on west side of Irongate Rd., Bellingham – west of Haines Lawn Care.