



STATE OF WASHINGTON

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

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Ref. No. Docket PG-110016

CERTIFIED MAIL

August 3, 2011

Grant M. Yoshihara
Vice President of Utility Operations
Northwest Natural
220 NW Second Avenue
One Pacific Square
Portland, OR 97209

Dear Mr. Yoshihara:

RE: 2011 Natural Gas Standard Inspection – Northwest Natural Gas Columbia Gorge

The Washington Utilities and Transportation Commission (UTC) staff conducted a natural gas safety standard inspection on June 13-16, 21 and 22, 2011, of Northwest Natural Gas (NWN) – Columbia Gorge District pipeline system. The inspection included a review of records, procedures and pipeline facilities. Staff conducted a formal exit interview with NWN on June 21, 2011, during which time NWN reviewed the inspection findings.

Staff documented 10 state and federal safety code violations and 4 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 NWN.

NWN is responsible for ensuring that it is in full compliance with all applicable state and federal pipeline safety regulations, and maintain and operate their pipeline system so that it is safe, reliable, and efficient.

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.



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Your response needed

Please review the attached report and respond in writing by September 7, 2011. 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.

Staff would like to thank NWN's personnel for their cooperation and assistance during this inspection. If you have any questions, please contact Stephanie Zuehlke, Pipeline Safety Engineer at (360) 664-1318. Please refer to docket number PG-110016 in any future correspondence regarding this inspection.

Thank you for your cooperation and interest in pipeline safety.

Sincerely,



David D. Lykken
Pipeline Safety Director

Enclosure

cc. Kerry F. Shampine, Code Compliance Manager, NWN

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION
2011 Natural Gas Pipeline Safety Inspection
Northwest Natural Gas – Columbia Gorge
Docket PG-110016

The following probable violations and areas of concern of Title 49, CFR Part 192, 199, WAC 480-90 and WAC 480-93 were noted as a result of the inspection of Northwest Natural Gas (NWN) – Columbia Gorge. 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.**

(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.*

1. **Finding(s):**

NWN failed to record the actual value of CGI reads taken during an investigation (by first responder employee D.W.) of a below ground leak on 12.23.10 at 541 El Camino Real, White Salmon.

2. **Finding(s):**

NWN did not have or did not provide records indicating the actual value of the residual gas reads taken on 04.14.09 after completion of a leak repair at 600 Washington St., White Salmon.

2. **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.*

(2) *The manual must be filed with the commission forty-five days prior to the operation of any gas pipeline. Each gas pipeline company must file revisions to the manual with the commission annually. The commission may, after notice and opportunity for hearing, require that a manual be revised or amended. Applicable portions of the manual related to a procedure being performed on the pipeline must be retained on-site where the activity is being performed.*

- (3) *The manual must be written in detail sufficient for a person with adequate training to perform the tasks described. For example, a manual should contain specific, detailed, step-by-step instructions on how to maintain a regulator or rectifier, conduct a leak survey or conduct a pressure test.*

Finding(s):

NWN's Plan and Procedures language do not match NWN field practices. WAC 480-93-185, 186, and 18601 require leaks to be graded based upon location and/or magnitude of the leak. The following manual sections require responders to grade leaks as Class A, B, or C with no mention of a leakage inspector:

- a. SPW 603 (11.10.10),
- b. SPW 709 (11.10.10), and
- c. CFM 613-1 (03.04.11)

However, the following Plan and Procedure and other documentation language state that responders other than the leakage inspector will document their non-hazardous leak findings but a leakage inspector will classify the leaks:

- a. Operating procedure (OQ procedure) OP-C-501-01 (10.27.10) 4.4, and
- b. NWN memo dated 9.29.08 to the Manager of Gas Operations from the Leakage Supervisor on the subject of Leak Detection and Recordkeeping Programs Self Audit which states, in March of 2006, NWN made a change to its leak classification criteria, allowing only NWN leakage inspectors to grade leaks (A, B, C). NWN's OQ program was amended to reflect these changes. According to NWN's OQ Program, all other field personnel responding to leaks no classify leakage as hazardous or non-hazardous

3. **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.*

1. **Finding(s):**

NWN failed to assign a grade to a leak until 12 days after discovery. A below ground leak revealed during a leak investigation on 12.23.10 at 541 El Camino Real, White Salmon, was not graded until the leakage inspector visited the site on 01.04.11. The leakage inspector determined the leak to be a Grade B leak.

NWN practice and procedures appear to identify that unless the first responder is their "leakage inspector" all leaks are classified as hazardous or non-hazardous. Staff finds NWN's hazardous leak classification is equivalent to a Grade A leak. However, their non-hazardous leak classification can be either a Grade B or a Grade C leak.

2. **Finding(s):**
 NWN did not retain or did not provide leak investigation records for:

<u>Leak Location</u>	<u>Leak Detected</u>	<u>Grade</u>	<u>Active Leak as of 05.20.11</u>
a. 185 W. Jewett, White Salmon	2003	C	Yes
b. 7 th St. & Oak St., White Salmon	1983	C	Yes
c. Franklin & Ash, Bingen	1997	C	Yes

4. **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.*
- (2) *Each gas pipeline company must establish a procedure for evaluating the concentration and extent of gas leakage. When evaluating any leak, the gas pipeline company must determine and document the perimeter of the leak area. If the perimeter of the leak extends to a building wall, the gas pipeline company must extend the investigation inside the building. Where the reading is in an unvented, enclosed space, the gas pipeline company must consider the rate of dissipation when the space is ventilated and the rate of accumulation when the space is resealed.*
- (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.*
- (4) *Grade 1 and 2 leaks can only be downgraded once to a Grade 3 leak without a physical repair. After a leak has been downgraded once, the maximum repair time for that leak is twenty-one months.*

1. **Finding(s):**
 NWN failed to determine and document the perimeter of a leak area for the following leaks:

- a. 185 W. Jewett, White Salmon
- b. 541 El Camino Real, White Salmon
- c. 600 Washington St. #1, White Salmon (2 separate investigations by same employee on 03.31.09 neither leak map document a 360° perimeter.)

2. **Finding(s):**
NWN did not have or did not provide records which identified a CGI had been used to determine the perimeter of a leak area for the following leaks:

- a. 185 W. Jewett, White Salmon
- b. 541 El Camino Real, White Salmon

5. **WAC 480-93-18601 Leak classification and action criteria--Grade--Definition--Priority of leak repair.**

- (3) *A "Grade 3 leak" is a leak that is not hazardous at the time of detection and can reasonably be expected to remain not hazardous.*
- (a) *Each gas pipeline company should re-evaluate Grade 3 leaks during the next scheduled survey, or within fifteen months of the reporting date, whichever occurs first, until the leak is re-graded or no longer results in a reading.*

Finding(s):

NWN did not have or did not provide records identifying that the following Grade C leaks were re-evaluated at intervals not to exceed 15 months:

- a. 185 W. Jewett, White Salmon – No leak re-evaluation between 2003 and May 20, 2011. Leak identified in 2003 requires a minimum of 4 re-evaluations to have been completed.
- b. 7th St. & Oak St., White Salmon – No leak re-evaluation between 04.20.87 and 05.04.89.
- c. Franklin & Ash, Bingen – No leak re-evaluation between 03.30.98 and 07.08.99.

6. **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.*

1. **Finding(s):**

NWN failed to record a leak grade for a below ground leak revealed during an investigation (by second responder employee T.D.) on 12.23.10 at 541 El Camino Real, White Salmon. Leak was identified as a non-hazardous leak.

2. **Finding(s):**

NWN failed to record the magnitude and/or location of CGI reads taken during an investigation at 541 El Camino Real, White Salmon on the following dates:

- a. 12.23.10
- b. 01.04.11

7. **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);*

Finding(s):

NWN did not have or did not provide leak survey maps for the following high occupancy structures:

- a. 04.23.09 – 351 Hot Springs Rd., Carson – Carson Grade School (3 services)
- b. 05.11.10 – 351 Hot Springs Rd., Carson – Carson Grade School (3 services)
- c. 04.14.09 – 450 Main St. & Pool, White Salmon (2 services)
- d. 05.11.10 – 450 Main St. & Pool, White Salmon (2 services)

8. **49 CFR §199.113 Employee assistance program.**

(b) *Education under each EAP must include at least the following elements: display and distribution of informational material; display and distribution of a community service hot-line telephone number for employee assistance; and display and distribution of the employer's policy regarding the use of prohibited drugs.*

Finding(s):

NWN's Drug and Alcohol Policy, which is distributed to employees, identifies the Washington employee assistance program (EAP) contact number as 800.255.5255. This contact number is invalid and has been invalid for approximately 2 years due to a change in EAP providers. Staff notes the correct number is displayed on the employee bulletin board in the headquarters building.

9. **49 CFR §199.113 Employee assistance program.**
(c) *Training under each EAP for supervisory personnel who will determine whether an employee must be drug tested based on reasonable cause must include one 60-minute period of training on the specific, contemporaneous physical, behavioral, and performance indicators of probable drug use.*

Finding(s):

NWN did not have or did not provide training certification records for the following supervisory personnel for this district:

- a. Field Operations & Customer Field Services Supervisor – Y.R.
- b. Field Supervisor of District Regulation – M.C.

10. **49 CFR §199.241 Training for supervisors.**
Each operator shall ensure that persons designated to determine whether reasonable suspicion exists to require a covered employee to undergo alcohol testing under §199.225(b) receive at least 60 minutes of training on the physical, behavioral, speech, and performance indicators of probable alcohol misuse.

Finding(s):

NWN did not have or did not provide training certification records for the following supervisory personnel for this district:

- a. Field Operations & Customer Field Services Supervisor – Y.R.
- b. Field Supervisor of District Regulation – M.C.

AREAS OF CONCERN OR FIELD OBSERVATIONS

1. **WAC 480-93-018 Records.**
NWN needs to update the list of forms and databases they maintain, including examples where applicable, that specify what records the company maintains per WAC 480-93-018(3). Database records provided to staff were incomplete and did not contain all documentation from the original forms. If electronic records will be used, NWN needs to update their manual's list of forms to reflect this change - if other records will be used to supplement the database records these records should also be identified.

Example:

- a. Printed computer database records for 600 Washington, White Salmon, WO # 3310756 is dated 05.17.11 with a basic start date of 06.15.09 and basic end date of 12.15.09. Staff found these dates did not match the NWN asset register schedule and tracking form where these dates do not appear.
- b. Computer database records documenting leaks identify CGI reads as a range rather than the exact magnitude and location of reads as is required the rule.

- c. Printed computer database records do not identify the individual records from each visit such as which CGI or FI was used at a particular time, or show that the map provided on the backside of a leakage form actually goes with the front side of the form since only one side is dated.
2. **WAC 480-93-180 Plans and procedures.**
NWN atmospheric corrosion remediation procedures do not identify painting standards and procedures for application.
3. **WAC 480-93-180 Plans and procedures.**
There is no mechanism in NWN Procedure SPW 483 (general corrosion/atmospheric corrosion) which ties it to the Construction Field Manual (CFM) 601.3 Pit Gauge Measurement. In other words, field employees report a grade 2 & 3 corrosion issue to their Supervisor but there is no process for taking/completing the actual pit gauge measurement and equating it to a particular remediation. Additionally, pit gauge measurement tool training should be incorporated applicable field employees.
4. **49 CFR §192.63 Marking of materials.**
Staff found several lengths of various sized unmarked FBE steel pipe stored on an unprotected pipe rack in NWN's The Dalles pipe yard. NWN is responsible for assuring a means to identify each pipeline component until it is installed. *OPS Interpretation" . . . "For coated, pipe in short term storage or protected storage, a marking on the coating or coating wrapper will normally remain legible until installation. For coated pipe in long term storage, marking is usually maintained by painting the pipe (identification) inside each end. Also, some operators paint a color code on pipe. It is an operator's responsibility to use markings that will identify material until it is installed. Section 192.63 does not require that markings be maintained after installation, but materials used in any segment of pipeline must be identifiable for the life of the facility to ensure proper operation and maintenance. This is accomplished by maintaining appropriate records."*