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September 16, 2008

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WASH. UT. & TP. COMM

Ms. Ann Soiza
Pipeline Safety Director
Washington Utilities and Transportation Commission
1300 South Evergreen Park Drive SW
P.O. Box 47250
Olympia, Washington 98504-7250

Re: Columbia River Gorge, Washington Inspection – Response to Data Requests

Dear Ms. Soiza:

In preparation for the Washington Utilities and Transportation Commission (WUTC) standard inspection of NW Natural's Columbia River Gorge facilities, Staff requested that NW Natural provide operations and maintenance records prior to the inspection. This letter responds to Staff's data requests made by Lex Vinsel, by e-mail, dated September 11, 2008.

WUTC DATA REQUESTS

Data Request 1. *Please provide a list of all rectifiers in this unit and their location.*

NW Natural response:

Enclosed is NW Natural's current list of rectifiers in the Columbia River Gorge, Washington (Enclosure 1).

Data Request 2. *Please provide a list of all casings in this unit and their location.*

NW Natural response:

Enclosed is NW Natural's current list of casings in the Columbia River Gorge, Washington (Enclosure 2).

Data Request 3. *On casings without test leads, what test or inspection methods do you use to demonstrate electrical isolation and adequate cathodic protection levels?*

NW Natural response:

In accordance with 49 CFR 192.467 and WAC 480-93-110 (5), NW Natural's Standard Practice 467, Sections 3.1.3, 3.3, and 3.4, describe the company's procedures for testing and inspecting casings without test leads or inaccessible test leads that were installed prior to September 5, 1992 (Enclosure 3). Please note that NW Natural does not have any such casings in the Columbia River Gorge, Washington inspection area.

Sincerely,



Bruce L. Paskett
Principal Compliance Engineer

cc: Lex Vinsel
Scott Rukke

Enclosures (2)

dtm549

**Washington Utilities and Transportation Commission
Inspection of NW Natural's Columbia River Gorge Operations
Docket #080034
September 29-October 10, 2008**

Rectifiers:

Rectifier Number (NWN ID)	Plat ID	Address/Location Description
116833	4-011-175	Main St./Mill, Klickitat, Washington
116851	1-001-111	Metzger & Smith Beckon Rd., Carson, Washington
116902	1-013-099	Cascade Dr./Shady Oak, North Bonneville, Washington
116969	4-006-217	John Day Gate Station, Goldendale, Washington
123331	1-002-145	Dock Grade Rd. & E. Jewett Blvd., White Salmon, Washington

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Casings:

NWN ID	Plat ID	Address/Location Description
119463	4-012-175	R St. Regis Dr./RR Xing, Klickitat, Washington
119465	1-004-146	R Walnut St. Near Mill @ RR, Bingen, Washington
119466	1-005-148	R Hwy 14/Bingen Mt. Adams, Bingen, Washington
120140	4-012-175	R St. Regis Dr./RR Xing, Klickitat, Washington
120900	1-001-219	H Hwy 14 20761' S/Gate Station, Goldendale, Washington
121702	1-003-145	H Hwy 14 2416' E Hood River Bridge, White Salmon, Washington
121703	1-003-145	Hwy 14 3095' E Hood River Bridge, White Salmon, Washington



Title: External Corrosion Control: Electrical Isolation

Revision: 06 (supersedes Rev. 05, 12/27/06) Approved: S. E. Nelson, 12/13/07

Reviewed: S. E. Nelson, 8/26/08

Reviewed:

1. SCOPE

This standard practice establishes the requirements for electrical isolation of buried, submerged, and aboveground pipelines.

2. POLICY

Company metallic pipelines must be electrically isolated from other facilities, where practicable. Inspection and electrical tests must be made to ensure that electrical isolation is adequate.

3. PROCEDURE

3.1 Installation Requirements

3.1.1 Underground Installation

1. Electrically isolate each buried or submerged pipeline from other underground metallic structures unless the pipeline and the other structures are electrically interconnected and cathodically protected as a single unit.
2. Protect against damage pipelines located near electrical towers, ground cables, or other areas where fault currents or unusual risk of lightning may be anticipated.

3.1.2 Aboveground Installation

Electrically isolate aboveground pipe from foreign metallic structures and do not use for the purpose of grounding.

3.1.3 Casings

1. If steel pipe is installed in a casing, require the casing be bare steel.
2. Electrically isolate all steel pipelines from metallic casings that are a part of the underground system.
 - a. For unvented casings installed on steel pipe after September 5, 1992, attach separate test lead wires to the casing and the pipe to verify that:
 - no electric short exists between the two, and
 - an adequate level of cathodic protection is applied to the steel pipeline.
 - b. For casings installed prior to September 5, 1992, that do not have test leads, NW Natural must 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.
3. For mains installed in conduit, seal both ends. Seal conduit at the riser end for services installed in conduit.

3.1.4 Insulating Devices

1. Install one or more insulating devices where electrical isolation of a portion of a pipeline is needed for corrosion control.
2. Do not install insulating devices in an area where a combustible atmosphere is anticipated unless precautions are taken to prevent arcing.

3.2 Testing for Electrical Isolation of Metallic Pipe in Metallic Casings

3.2.1 Electrical Isolation Test

The standard test for electrical isolation on casings is a comparison of the pipe-to-soil and the casing-to-soil potentials. May require additional testing if the two values are nearly identical or if within 250 mV of each other.

3.2.2 Follow-up Test

If the standard test in section 3.2.1 above indicates that a possible shorted condition exists, repeat the test within 90 days with a current interrupter installed in series with the rectifier associated with the casing in question.

3.3 Remedial Action for Electrically Continuous Casings

1. If the standard and follow-up tests indicate that a casing is electrically short-circuited to the pipeline (e.g., shorted casing), inspect the wires for damage and short circuits.
2. If isolation is not achieved because it is impractical, take other measures to minimize corrosion of the pipeline inside the casing. Monitor safe operating conditions by the study of corrosion and leak history records, by leak detection survey, or by other means.

3.4 Inspections

1. Perform casing isolation inspections as specified in SPW 465, External Corrosion Control: Monitoring.
2. Whenever a short exists between a metallic pipeline and a metallic casing, conduct a leakage survey within 90 days of discovery and every 6 calendar months (at least twice each calendar year) thereafter, at intervals not to exceed 7½ months, until the shorted condition is eliminated or the pipe is replaced.

4. RELATED COMPANY INFORMATION

SPW 361 – Meter Location Policy for New Residential Construction

SPW 465 – External Corrosion Control: Monitoring

OP-I-201-01 – Measuring Electrical Values

OP-I-201-02 – Testing for Electrical Isolation

5. REFERENCE CODES AND STANDARDS

49 CFR 192.323 – Casing

49 CFR 192.467 – External corrosion control: Electrical isolation

WAC 480-93-110 – Corrosion control

WAC 480-93-115 – Casing of pipelines

DEPARTMENTAL RESPONSIBILITIES

Department	Responsibilities
Engineering	The Engineer responsible for the design of a project must coordinate with the Corrosion Engineer/Technician to ensure that the installation is consistent with cathodic protection requirements.