



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, D.C. 20590

**MAY 5 2008**

Mr. Michael Thompson  
Chief, Pipeline Safety  
Oregon Public Utility Commission  
550 Capitol Street NE, Suite 215  
Salem, OR 97308

Dear Mr. Thompson:

The Pipeline and Hazardous Materials Safety Administration (PHMSA) has reviewed your letter of February 27, 2008, notifying us that the Oregon Public Utility Commission (OPUC) granted Northwest Natural Gas (Northwest Natural) of Portland, Oregon, a waiver of compliance from state regulations 49 CFR §§ 192.745(a) and 192.747(a) (as incorporated by reference in OR 860-024-0020) on February 26, 2008, to expire on July 1, 2010. Section 192.745(a) requires the operator of each gas transmission pipeline to inspect and partially operate each transmission line valve that might be required during any emergency at intervals not exceeding 15 months, but at least once each calendar year. Section 192.747(a) requires the operator of a gas distribution system to check and service each valve that may be necessary for the safe operation of the distribution system at intervals not exceeding 15 months, but at least once each calendar year.

This waiver applies to the partial operation of certain 4-inch, 6-inch, 8-inch, 16-inch and 24-inch valves, and is intended to promote public safety by allowing Northwest Natural time to complete a root cause analysis of a recent catastrophic failure of a 12-inch valve, which failed after being fully operated one time. The waiver requires Northwest Natural to establish and follow alternate valve maintenance procedures for valves identified as being similar in age and installation date to the valve that recently failed. The alternate procedures require Northwest Natural to locate and visually inspect each valve that may be required during an emergency, and ensure it is accessible in the event of an emergency. However, Northwest Natural need not partially operate these valves while the waiver remains in effect.

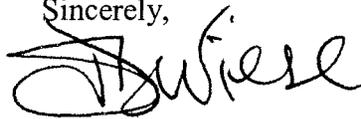
The OPUC requested Northwest Natural meet the following conditions and provide the following information as part of this waiver:

- 1. On or before the 15<sup>th</sup> of April 2008, Northwest Natural will provide the OPUC gas safety section with a list of all known suspect valves, their locations, size and installation dates.*
- 2. On or before the 15<sup>th</sup> of April 2008, Northwest Natural will provide the OPUC gas safety section with a company procedure for operating any of the affected valves in case an emergency necessitates its use.*
- 3. On or before the 15<sup>th</sup> of April 2008, Northwest Natural will provide the OPUC gas safety section with a copy of the revised annual inspection procedure for the affected valves.*

4. *On or before the 12<sup>th</sup> of August 2008, Northwest Natural will provide the OPUC gas safety section with their findings on the root cause investigation and a remediation plan and schedule for addressing the affected valves.*
5. *Northwest Natural will conduct this investigation and repair process as part of its Gas Transmission Integrity Management Program.*
6. *Northwest Natural will provide the OPUC gas safety section, through the Chief, Pipeline Safety monthly updates on the status of this process until completion."*

Because Northwest Natural is required to establish interim procedures and meet all six conditions as stipulated by the OPUC, PHMSA does not object to this waiver. We also request the OPUC to keep PHMSA apprised of the results of any forensic metallurgical analysis and the pipeline operator's root cause failure analysis.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Wiese". The signature is fluid and cursive, with a large initial "J" and "W".

Jeffrey D. Wiese  
Associate Administrator for Pipeline Safety



# Oregon

Theodore R. Kulongoski, Governor

## Public Utility Commission

550 Capitol Street NE, Suite 215

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Salem, OR 97308-2148

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**Administrative Services**

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February 27, 2008

Jeffrey D. Wiese  
Associate Administrator, Office of Pipeline Safety  
1200 New Jersey Avenue, SE, Room E22-330  
Washington, DC 20590

Re: Waiver Request – Operation and Maintenance of 4”, 6”, 8”, 16” and 24” PBV Valves

Mr. Wiese,

Attached please find a copy of a waiver request submitted by Northwest Natural Gas of Portland, Oregon seeking approval to waive a portion of the requirements found in the company’s operations and maintenance (O&M) manual and CFR title 49, part 192.745(a) and 192.747(a) relative to the operation of certain 4”, 6”, 8”, 16” and 24” PBV Valves during their regularly scheduled maintenance activities.

The Gas Safety Section of the Public Utility Commission of Oregon (OPUC) has reviewed this request and decided to fully support and grant this request for waiver as to the partial operation of the affected valves. Please see our attached letter of support dated February 26, 2008. It is our opinion that operating these valves during the investigation and remediation time frame suggested will cause a greater risk of failure, and that by insuring the valves are checked for availability and by performing an instrumented leakage survey during the annual inspections, the best possible safety for Northwest Natural’s employees, its customers and the general public will be obtained.

Please feel free to contact me if you or your staff has any questions.

Sincerely,

Michael Thompson  
Chief, Pipeline Safety  
Public Utility Commission of Oregon  
550 Capitol Street NE, Suite 215  
Salem, Oregon 97308  
503-378-6760  
[Michael.thompson@state.or.us](mailto:Michael.thompson@state.or.us)

Jeffrey D. Wiese  
February 27, 2008  
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Cc: w/attachments;  
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PHMSA Office of Pipeline Safety, PHP-50  
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1200 New Jersey Ave., SE  
Washington, D.C. 20590



# Oregon

Theodore R. Kulongoski, Governor

**Public Utility Commission**  
550 Capitol Street NE  
Mailing Address: PO Box 2148  
Salem, OR 97308-2148

February 26, 2008

Mr. Bruce Paskett, P.E.  
Manager Code Compliance  
Northwest Natural Gas  
220 NW 2<sup>nd</sup> Avenue  
Portland, Oregon 97209

Re: Waiver Request – Operation and Maintenance of 4”, 6”, 8”, 16” and 24” PBV Valves

Dear Mr. Paskett,

The Gas Safety Section of the Public Utility Commission of Oregon (OPUC) has reviewed your request to waive a portion of the requirements found in the company’s operations and maintenance (O&M) manual and CFR title 49, part 192.745(a) and 192.747(a), relative to the operation of certain 4”, 6”, 8”, 16” and 24” PBV Valves during your regularly scheduled maintenance activities. NW Natural has recently experienced a serious failure on a buried 12” steel valve manufactured by PBV, and in light of significant additional information and findings related to the root cause of the original 12” PBV valve failure, we have decided to fully support and grant this request for waiver as to the partial operation of the affected valves. It is our opinion that operating these valves during the investigation and remediation timeframe suggested will cause a greater risk of failure, and insuring that during the annual inspections the valves are checked for availability and performing an instrumented leakage survey meets the spirit of the code as it pertains to public safety.

As with our response to your 1/8/2008 request for waiver, the OPUC as part of this support requests the following agreements and information.

1. On or before the 15<sup>th</sup> of April 2008, Northwest Natural will provide the OPUC gas safety section with a list of all known suspect valves, their locations, size and installation dates.
2. On or before the 15<sup>th</sup> of April 2008, Northwest Natural will provide the OPUC gas safety section with a company procedure for operating any of the affected valves in case an emergency necessitates its use.
3. On or before the 15<sup>th</sup> of April 2008, Northwest Natural will provide the OPUC gas safety section with a copy of the revised annual inspection procedure for the affected valves.
4. On or before the 12<sup>th</sup> of August 2008, Northwest Natural will provide the OPUC gas safety section with their findings on the root cause investigation and a remediation plan and schedule for addressing the affected valves.
5. Northwest Natural will conduct this investigation and repair process as part of its Gas Transmission Integrity Management Program.
6. Northwest Natural will provide the OPUC gas safety section, through the Chief, Pipeline Safety, monthly updates on the status of this process until completion.

The OPUC believes that in the granting of this waiver, the proposed valve maintenance procedure and the quickest possible remediation plan and schedule will provide the best possible safety for Northwest Natural's employees its customers and the general public. Therefore, a copy of your request, our response and a letter of support will be mailed to the Pipeline and Hazardous Safety Administration (PHMSA) Office of Pipeline Safety on or before February 28, 2008.

Please feel free to contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Thompson", with a long horizontal flourish extending to the right.

Michael Thompson  
Chief, Pipeline Safety  
Public Utility Commission of Oregon  
503-378-6760  
Michael.thompson@state.or.us

Cc: Grant Yoshihara, VP Utility Operations NWN



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February 18, 2008

Mr. Michael Thompson  
Chief, Pipeline Safety  
Utility Safety & Reliability  
Oregon Public Utility Commission  
P. O. Box 2148  
Salem, Oregon 97308-2148

Re: Waiver Request-Operation and Maintenance of 4", 6", 8", 16" and 24" PBV Valves

Dear Mr. Thompson:

By way of this letter, NW Natural is requesting a waiver of the company's operations and maintenance (O & M) manual requirements relative to the partial operation of known and suspected 4", 6", 8", 16" and 24" PBV valves during regularly scheduled valve maintenance activities. The company is requesting the waiver for a period of time extending from February 14, 2008 through July 1, 2010.

As you are aware, NW Natural recently experienced a serious failure on a buried 12" steel valve manufactured by PBV. The valve is a Class 300 (MAOP 720 PSI), trunnion supported, full port, ball valve with gear operator. Details of the failure were contained in the company's previous waiver request. Company personnel excavated the valve to investigate the cause of the failure and found that all six of the cap screws that hold the trunnion in the valve body had fractured near the cap screw head allowing the trunnion to separate from the valve body. The bolt failure resulted in a significant release of natural gas.

On January 8, 2008 NW Natural requested a waiver of O & M requirements relative to the partial operation of known and suspected 10" and 12" PBV steel valves during normal maintenance until such time as the company has determined a root cause of the trunnion bolt failures and completed appropriate remedial action. Staff approved the company's waiver request on January 22, 2008.

Subsequent to the company's January 8, 2008 waiver request, there has been significant additional information and findings related to the root cause of the original 12" PBV valve failure. The preliminary findings suggest that the bolts failed due to a time-dependant manufacturing defect. Based on these preliminary findings, NW Natural believes it is prudent to expand the scope of the investigation, and limitations on operation, to include other sizes of PBV steel valves with a similar design. NW Natural is therefore requesting a second waiver relative to the partial operation of known or suspected 4", 6", 8", 16" and 24" steel PBV valves, installed from 1994-2005, during annual valve maintenance activities.

NW Natural proposes that during routine scheduled inspections, field personnel would locate the valve, ensure that it is available (e.g. not paved over) and perform and document an instrumented leakage survey. However, until this issue is resolved appropriately, field personnel would not operate known or suspected PBV valves during normal maintenance. The valves would be operated if necessary, with appropriate procedural safeguards. NW Natural believes that the proposed valve maintenance procedures provide an improved level of safety for our employees, our customers and the general public.

The company is strongly committed to the reliable delivery of natural gas to our customers, and to the safety of our customers, our employees and the general public. We intend to proceed rapidly with the failure investigation in order to identify an appropriate remediation for this issue in a timely manner.

NW Natural wishes to thank Staff for the support and recommendations relative to this investigation.

Please contact me if you have questions.

Sincerely,



Bruce L. Paskett, P.E.  
Manager Code Compliance