

Agenda Date: March 13, 2008
Item Number: A4

Docket: PG-080292
Company Name: Northwest Natural Gas Company

Staff: Kuang Chu, Pipeline Safety Industrial Expert

Recommendation

Approve Northwest Natural Gas Company's petition for exemption from WAC 480-93-100 regarding periodic maintenance of PBV-USA valves through July 1, 2010, based on the facts and the additional safety measures agreed to by NWN.

Discussion

On February 27, Northwest Natural Gas Company (NWN) petitioned the Commission for an exemption from WAC 480-93-100 regarding the company's obligation to write and follow a valve maintenance program.

The company had recently experienced a serious failure on a buried 12" steel ball valve manufactured by PBV-USA shortly after the operation of the valve. Company personnel excavated the valve to investigate the cause of the failure and found that all six of the bolts that hold the valve mechanism together had fractured near the bolt head. This allowed the mechanism to separate from the valve body and resulted in a significant release of gas. The preliminary analysis suggests that the bolts failed due to a manufacturing defect. Based on these preliminary findings, NWN believes it is prudent to expand the scope of its investigation and limitations on operation, to include other sizes of PBV valves with a similar design.

The company asked for relief from WAC 480-93-100 for limited annual operations and maintenance relative to the partial operation of similar known and suspected PBV valves. In addition to the requirements in WAC 480-93-100 applicable to valve operation, NWN is also required to comply with the requirements of Title 49 Code of Federal Regulations (CFR) Part 192, Sections 192.745 and 192.747 adopted by reference in WAC 480-93-999. If the commission approves this request for exemption, then staff will forward the commission's order to the Pipeline and Hazardous Material Safety Administration (PHMSA) for its approval as well.

This issue was first discovered in Oregon where NWN has a much larger gas distribution system. On January 8, 2008, NWN requested the Oregon Public Utility Commission (OPUC) to waive the requirements of 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 bolt failures and has taken the appropriate remedial action. The OPUC approved the company's exemption request on January 22, 2008. On February 18, 2008, NWN filed a second exemption request to the OPUC relative to the partial operation of known or suspected 4", 6", 8", 16" and 24" PBV valves during annual maintenance activities. The second exemption request has also been approved by the OPUC. After the OPUC issues its order, it will be forwarded to PHMSA for its approval.

Based on preliminary evaluation of the failed valves, the company has requested that the exemption from WAC 480-93-100 be in effect until July 1, 2010. This timeline represents the amount of time the company will need to complete a full analysis of their system and complete remediation.

Staff agrees it is very possible that operating the known and suspected PBV valves, as required as part of annual valve maintenance, could cause damage to those valves before the remediation of the defective valves has been completed. In order to protect NWN employees and the public as the remediation is being conducted, staff believes it is prudent to grant the exemption requested by NWN because we believe it is the safest option. While the exemption is in effect NWN has agreed to the following additional safety measures:

- (a) The company will conduct a gas leak survey of each potentially affected valve at intervals not exceeding 4 ½ months, but at least four times each calendar year until such time as the valve is remediated or eliminated from consideration. This condition will provide additional safety measures that may help detect leaks in their early stage and prevent the lead from becoming a hazardous condition.
- (b) The company will provide to commission staff a list of all known suspect valves, their locations, size and installation date as the information becomes available during the course of the investigation.
- (c) On or before July 15, 2008, the company will provide commission staff its findings on the root cause investigation and a remediation plan and schedule for addressing the affected valves.
- (d) The company will provide commission staff monthly updates on the status of this process until completion.

Conclusion

Staff supports NWN's petition for exemption from WAC 480-93-100 regarding periodic maintenance of PBV-USA valves until July 1, 2010 based on the facts discovered through NWN's investigations and the additional safety measures agreed to by NWN.