

**Mark R. Thompson**  
Manager, Rates and Regulatory Affairs  
Tel: 503.721.2476  
Fax: 503.721.2516  
email: mrt@nwnatural.com



December 7, 2012

**VIA ELECTRONIC FILING**

Dave Danner, Secretary and Executive Director  
WASHINGTON UTILITIES &  
TRANSPORTATION COMMISSION  
1300 S Evergreen Park Drive, SW  
Post Office Box 47250  
Olympia, Washington 98504-7250

Re: Docket UG-120715  
NW Natural Response to Commission Request for pipe replacement plan  
Commission Investigation into the Need to Enhance the Safety of Natural Gas  
Distribution Systems

Northwest Natural Gas Company, dba NW Natural (NW Natural or Company), submits the following in response to the Washington Utilities and Transportation Commission's ("Commission") request for the Company's pipe replacement plan in the above-referenced docket.

**Pipe Replacement Plan**

**A. Identification of Pipe of Concern.**

*Each utility should identify the pipeline segments that it deems desirable to replace because the pipe poses an elevated risk of cracking, leakage, breakage, or other failure. To the extent that the utility cannot, based on information and technology available to it, identify the location of such pipe, it should set forth a plan and timeline within which such location will be identified and explain why the location of all the pipe of concern cannot be identified now. If the utility currently has no such higher-risk pipe in its system, it should so state and explain the basis for that determination.*

**Response**

NW Natural's system in Washington contains unprotected bare steel distribution main and services. The facilities were installed from 1925 to 1960. In addition, the distribution system contains a small number of vintage plastic services.

Since the bare steel facilities are not cathodically protected, they are susceptible to the threat of external corrosion and associated leakage. The vintage plastic services have been found to become brittle and more subject to failure.

NW Natural's system currently contains approximately three miles of bare steel main in service in Washington. The majority of the remaining bare steel facilities are scheduled for replacement in 2013. The remaining bare steel facilities are scheduled to be replaced in 2014.

NW Natural has currently identified 26 vintage plastic services in Washington. The services are scheduled for replacement in 2013.

## **B. Scope of Work/ Program Rational**

*The plan should detail the company's strategy for replacing certain plastic pipe that has been identified as posing an elevated risk of cracking, leakage, breakage, or other failure. The detail should include the expected overall project length, expected replacement schedule, type/vintages of pipe to be replaced, and technical bases (identified threats) for proposed work.*

### **Response**

NW Natural's system in Washington contains approximately 3 miles of unprotected bare steel distribution main, two bare steel distribution services and 26 vintage plastic services.

NW Natural is currently involved in the replacement of bare steel and vintage plastic in Washington.

NW Natural currently plans to replace all of the remaining bare steel and vintage plastic facilities in the State of Washington prior to the end of 2014.

## **C. Project Costs Estimates**

*The plan should contain a detailed estimate of the costs the company anticipates it would incur under the plan over the next three years should the plan be implemented, along with a total projected cost for replacement all the pipe of concern.*

### **Response**

NW Natural expects to spend approximately \$3 to 4 million (excluding construction overhead costs) on bare steel pipe replacement in Washington prior to the end of 2014. NW Natural expects to spend approximately \$50,000 to replace the vintage plastic services in 2013. Both estimates are based on historical average replacement costs and are subject to variation based on site conditions and permitting impacts.

## **D. Pipeline Threat Model and Methodology**

*The plan should describe a methodology by which the company can itemize, identify and prioritize pipe segments for replacement. The Commission recognizes that additions to and changes in priority may occur over the course of the project, but it is important that the company develop a methodology to develop such a prioritization. This section would serve as the basis for development of an annual project schedule.*

### **Response**

NW Natural assesses the risks to the company's pipeline infrastructure in accordance with the provisions specified in 49 CFR, Part 192, specifically Subpart O for transmission lines and Subpart P for distribution lines.

Key requirements of the risk assessment methodologies, as mandated by Subparts O and P, include identification of threats associated with the piping infrastructure (e.g. corrosion, natural forces, excavation damage, other outside forces damage, material/weld or joint failure, equipment failure, incorrect operation, and other concerns that could threaten the integrity of the pipeline). NW Natural incorporates key pipeline facility performance data specified by regulation in determining risk, such as; incident and leak history, corrosion control records, continuing surveillance records, patrolling records, maintenance history, excavation damage experience and failure experience. Processes and procedures are in place to update databases as new or additional information becomes available.

The pipeline safety regulations for TIMP and DIMP (Subparts O & P, respectively) define important criteria for the development of pipeline risk evaluation. For example, Subpart O defines high consequence areas and the requirements for periodically updating them. The regulations require operators to perform a risk analysis where risk is defined as probability times consequences ( $\text{Risk} = \text{Probability} \times \text{Consequences}$ ). Therefore, locations such as HCAs, densely populated class locations, business districts and other “places of public assembly” are key considerations for scheduling pipeline replacement schedules or other actions to reduce risk.

NW Natural believes in addition to the capital replacement of Pipe of Concern that significant improvements to overall pipeline safety may include supplementary activities focused on the highest risk and consequence as identified by the operator’s TIMP and DIMP Programs. For example, the implementation of “Preventative and Mitigative Actions” identified under an operator’s TIMP Program, such as installation of a Remote Control Valves, or “Additional and Accelerated” activities identified under the DIMP Program, such as more frequent leak surveys or a sewer cross-bore investigation program, all contribute to improvements in pipeline safety. The appropriate and timely recovery of capital and O&M costs under rate treatment mechanisms that eliminate regulatory lag and provide regulatory certainty ensures that there are no dis-incentives for operators to accelerate their enhanced pipeline safety programs.

#### **E. Other Factors**

*The plan should detail other factors a company must consider in its development of its plan such as: permitting issues, minimizing service interruptions to customers, scheduling integration with other planned work, weather, and geographic location.*

#### **Response**

On occasion, access issues such as environmental studies or permitting issues can delay the timing on pipeline safety projects.

Specific to the upcoming bare steel and vintage plastic replacement NW Natural is currently working with the appropriate agencies to obtain permits for the 2013 work. At this time there are no known permitting issues. The work has been planned to minimize impact to customers.

#### **F. Interim Safety Matters**

*The plan should discuss what safety measures are to be taken to minimize risk, if any. Such measures could include increased leak surveys or pressure reductions among others.*

**Response**

The risk assessment (not methodology) is updated when significant new or additional information becomes available, at least once per year. However, a single piece of new information (e.g. a single valve failure) could provide sufficient justification for an immediate replacement project or other Additional or Accelerated Actions.

**G. Reporting Progress Reports**

*The plan should include provisions for providing annual informational reports on the company's pipeline integrity replacement plan. The report would provide progress of replacements reflected by comparisons of target replacement footages to footage completed by year and also as general notice of any additions or changes in prioritization schedule.*

**Response**

NW Natural recommends at least one meeting annually that includes company personnel, pipeline safety staff, rates staff and other interested stakeholders to review and update the Program. The company suggests that the process need not be formal. In addition the results are of the replacements are formally reported on the Distribution Annual report filed with PHMSA and the WUTC annually.

Please accept the Company's apologies for the delay in filing.

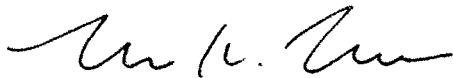
Please address correspondence on this matter to me with copies to the following:

Onita King  
Rates & Regulatory Affairs  
220 NW Second Avenue  
Portland, Oregon 97209  
Telephone: 503-721.2452  
Telecopier: (503) 721-2516  
E-mail: [ork@nwnatural.com](mailto:ork@nwnatural.com)

e-Filing  
Rates & Regulatory Affairs  
220 NW Second Avenue  
Portland, Oregon 97209  
E-mail: [eFiling@nwnatural.com](mailto:eFiling@nwnatural.com)

Sincerely,

NW NATURAL



Mark R. Thompson  
Manager, Rates & Regulatory Affairs