

Agenda Date: February 28, 2019
Item Number: A1

Docket: PG-190093
Company Name: Cascade Natural Gas Corporation

Staff: Derek Norwood, Pipeline Safety Engineer
Darren Tinnerstet, Pipeline Safety Engineer

Recommendation

Issue an order granting Cascade Natural Gas Corporation's (Cascade or company) request to construct and operate 450 feet of 6-inch steel pipeline at a maximum allowable operating pressure (MAOP) of 400 pounds per square inch gauge (psig) within 100 feet of an existing building not owned by Cascade, as proposed in Cascade's Oak Harbor High Pressure Main Relocate proximity request.

Discussion

A gas pipeline company must have permission from the Washington Utilities and Transportation Commission (commission) to operate a pipeline at greater than 250 psig, up to and including 500 psig, within 100 feet of an existing building not owned by the gas pipeline company, as described in Washington Administrative Code (WAC) 480-93-020. The commission has adopted the Code of Federal Regulation, Title 49, Part 192 and 480-93 of the WAC as minimum standards for natural gas pipeline construction.

Cascade is proposing to construct and operate a new 6-inch pipeline with a MAOP of 400 psig within 100 feet of one existing building in Oak Harbor, Washington. The US Naval Air Station, Whidbey Island has informed Cascade of proposed construction plans for a facility located on the Naval Air Station base in Oak Harbor. The new facility to be constructed will be in conflict with the existing 6-inch Oak Harbor high pressure line where a 450 foot segment of 6-inch pipeline will have to be relocated. Approximately 450 feet of the new pipeline will be installed using standard excavated trench. The complete route is depicted on the attached aerial map, titled Oak Harbor 6-inch HP Line Relocate – Project Route (Attachment 1).

Staff reviewed the proposed proximity request and calculations. As the facility will be new, there are no existing records. Staff notes the following facts:

- (a) The proposed MAOP of the new pipeline will be the same as the MAOP of the current pipeline, 400 psig.
- (b) The proposed piping and all fittings are commensurate with the proposed MAOP.
- (c) The proposed MAOP is commensurate with the current class location, which is Class 3.

- (d) The new pipeline will be 45 feet from one building not owned by Cascade. All other buildings are greater than 100 feet from the pipeline.
- (e) At the proposed MAOP of 400 psig, the maximum stress level of the pipe would be 9.1 percent of the specified minimum yield strength (SMYS). Pipelines that operate under 20 percent of SMYS are considered low-stress lines and pose a lower risk than pipelines operating above 20 percent of SMYS.
- (f) The proposed pipeline and fittings will be pressure tested to a minimum of 750 psig in accordance with the company's procedures prior to operation. This test pressure is at least 1.5 times the MAOP of the pipeline as required for a Class 3 location.

Conclusion

A review of Cascade's proposed construction plans indicate that it meets all of the pertinent requirements of the Code of Federal Regulation, Title 49, Part 192 and 480-93 of the WAC and that the selected location of the new pipeline has the least impact on surrounding population densities.

The commission's proximity rule, WAC 480-93-020, is one such rule that allows pipeline staff the opportunity to review construction plans of high pressure pipelines in close proximity to structures to address safety considerations. Staff's recommended conditions described below appropriately minimize the public safety risk associated with the proposed pipeline.

For these reasons, staff recommend that the commission issue an Order approving Cascade's request to install and operate a 6-inch pipeline with a MAOP of 400 psig subject to the following conditions:

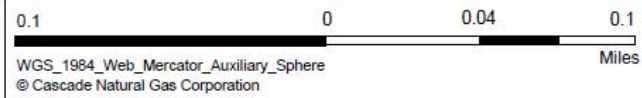
- a) For underground installations, Cascade must electrically inspect (jeep) the pipe coating and repair any coating defects in accordance with Cascade's operating standard prior to backfilling.
- b) For underground installations, Cascade must apply backfill material around the pipe to protect the pipe and coating. The material around the pipe must be free of any sharp rocks or other objects with a maximum particle size of one half inch and must contain a large percentage of fines, such as, sand, native soil, or soil-based select materials.
- c) Cascade must non-destructively test 100 percent of all welds. Cascade must remedy defects in the welds in accordance with Cascade's operating standards and procedures.

Cascade must non-destructively test all repaired welds to ensure pipeline integrity and compliance with existing standards.

- d) Cascade must install cathodic protection within 90 days after the pipeline is installed.
- e) Cascade must provide notification via email at least two business days prior to the beginning of project construction.



Oak Harbor 6-inch HP Line Relocate - Project Route



This map is a user generated static output from the GIS Web Viewer mapping website and is for reference only. It is not to be relied upon for construction purposes. It is provided for planning purposes only.
FIELD LOCATES ARE REQUIRED FOR LOCATION OF UTILITY FACILITIES

Notes: