Agenda Date: April 28, 2016
Item Number: A5

Docket: **PG-160210**
Company: Cascade Natural Gas Corporation

Staff: Dave Cullom, Pipeline Safety Engineer

Recommendation

After examination of the request with an on-site field visit and discussion with Cascade Natural Gas Corporation (CNGC) personnel, and after giving consideration to all relevant matters, staff recommends the commission issue an Order granting CNGC's request to operate a pipeline above 250 pounds per square inch gage (psig), subject to the conditions in the Order.

Discussion

A gas pipeline company must have permission from the commission to operate a gas pipeline at greater than 250 psig, within 100 hundred feet of certain buildings described in WAC 480-93-020. The commission has adopted the Code of Federal Regulation, Title 49, Part 192 and 480-93 of the Washington Administrative Code as minimum standards for natural gas pipeline construction.

This project, identified as Kitsap Phase 4, will eventually connect with the previously installed Kitsap Phase 1, 2, 3 and 6 pipelines to serve the increasing demand for natural gas on the Kitsap Peninsula to ensure system reliability. The new 20,500 foot segment of 12-inch pipeline will be located in rural Mason County approximately 2 miles northeast of Shelton, WA. CNGC proposes to operate this pipeline at a pressure of 499 psig with a maximum specified minimum yield strength (SMYS) of 16.31 percent.

Conclusion

A review of CNGC'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 Washington Administrative Code 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 and allows pipeline staff the opportunity to review construction plans of high pressure pipelines in close proximity to inhabited structures to address safety considerations. Staff's recommended conditions described below appropriately minimize the public safety risk associated with the proposed pipeline. System improvements are necessary to ensure adequate natural gas capacity in CNGC's growing distribution system.

For these reasons, staff recommend that the commission issue an Order approving CNGC's request to install and operate Phase 4 of the new Kitsap 12-inch pipeline at a pressure of up to 500 psig subject to the following condition(s):

(a) CNGC must submit "as-built" ESRI GIS Shapefiles of the pipeline location with final construction specifications to the commission within 30 days of completing the project.

(b) CNGC must construct and operate the proposed new 12-inch pipeline to maintain a pipe hoop stress below 20 percent of SMYS of the pipe at the MAOP of 499 psig.

(c) CNGC will construct the pipeline to accommodate in-line inspection (ILI) tools such as "Smart Pigs."

(d) CNGC must test the pipeline to a minimum of 749 psig in all locations along the pipeline route at a test pressure that is at least 1.5 times the MAOP of 499 psig. The test will be for 24 hours without pressure loss unless the loss can be justified by a corresponding change in temperature. If CNGC identifies any leaks, CNGC will stop the pressure test, repair the leak, and start the pressure test anew.

(e) CNGC must electrically inspect (jeep) the pipe coating and repair any coating defects in accordance with CNGC's Operating Standard prior to backfilling or pulling into a directional borehole.

(f) Where physically practicable, CNGC will bury the pipeline with a minimum of 48 inches of cover. Where 48 inches of cover is not practicable, CNGC will bury the pipeline with a minimum of 36 inches of cover.

(g) CNGC 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. CNGC may use rock shield where the use of sand is impractical or prohibited.

(h) CNGC must perform radiograph inspections of 100 percent of all welds unless impractical. Upon request by the commission, CNGC will provide written documentation where radiographs are impractical including the written radiographer's statement. CNGC must remedy defects in the welds in accordance with CNGC's operating standards and procedures. CNGC must radiograph all repaired welds to ensure pipeline integrity and compliance with existing standards.

(i) CNGC must install and maintain mainline valves spaced at intervals necessary to meet the Class 3 location requirement under CFR Title 49, Part 192.179 for valve spacing to ensure each point of the pipeline is within 4 miles of a valve.

(j) CNGC must annually conduct a leak survey of the pipeline when it operates at or above 250 psig. Regardless of operating pressure, CNGC must conduct leak surveys near high occupancy structures or areas no less frequently than annually unless the commission rules require additional surveys.

(k) CNGC must install cathodic protection within 90 days after the pipeline is installed.

(l) CNGC may not use any material to wrap or coat pipeline girth welded joints that will not keep its integrity during horizontal directional drilling (HDD) construction. CNGC must visually and electronically inspect (jeep) HDD test joints upon exiting the borehole to verify the suitability of a particular product to withstand insertion into each bore.

(m) CNGC must provide telephonic notice to the Commission Pipeline Safety Program followed by an email confirmation at least two business days prior to the beginning of project construction.

(n) CNGC must contact residents along the pipeline right-of-way and inform them of the project construction and provide any additional information consistent with the public awareness requirements in Title 49 CFR, Part 192.616.