Agenda Date: December 8, 2016
Item Number: A2

Docket: **PG-161057**
Company Name: Cascade Natural Gas Corporation

Staff: Derek Norwood, Pipeline Safety Engineer
Dennis Ritter, Pipeline Safety Engineer

Recommendation

Issue an order granting Cascade Natural Gas Corporation's (Cascade or company) request to construct and operate the inlet of a regulator station, a pipeline heater and a short segment of 4-inch pipeline from the custody transfer point at a maximum allowable operating pressure (MAOP) of 850 pounds per square inch gauge (psig) within 500 feet of existing buildings not owned by Cascade, as proposed in Cascade's Sunnyside Gate Station Upgrade 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 500 psig within 500 feet of an existing building not owned by the gas pipeline company, as 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 (WAC) as minimum standards for natural gas pipeline construction.

Cascade is proposing to operate a new 4-inch pipeline, a pipeline heater and a regulator station with a MAOP of 850 psig within 500 feet of thirteen existing buildings in Sunnyside, WA. Cascade is taking over responsibility of pressure control from Northwest Pipeline (NWP) whose regulator station and pipeline has a MAOP of 809 psig. Cascade is proposing to locate the new regulator station adjacent to NWP's existing regulator station, as shown in the attached photo (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 location of the new regulator station, the pipeline heater and the 4-inch pipe from the custody transfer would be fully within the fenced gate station grounds.

(b) The proposed regulator station materials and connection piping are commensurate with the proposed MAOP.

(c) Of the 13 existing buildings within 500 feet of this proposed regulator station, all are currently located within 500 feet of existing NWP facilities operating at a pressure above 500 psig.

(d) At the proposed MAOP of 850 psig, the maximum stress level of the pipe and pipeline fittings would be 15.52 percent of 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%.

(e) According to Cascade, the proposed regulator station is located in a Class 3 location. The new Cascade regulator station is designed appropriately for the class location and is located immediately adjacent to the existing NWP station. As this new pressure regulation station is replacing pressure control equipment operated by NWP, it would not be prudent to move the new station as all the connecting pipeline would operate at NWP line pressure (MAOP is 809 psi) until it is reduced at the new pressure regulating station. Therefore, the closer Cascade's station is to the existing NWP gate station, the shorter this higher pressure line needs to be.

(f) The proposed regulator station would be pressure tested with nitrogen for 8 hours at 1275 psig as required by WAC 480-93-170 for Class 3 locations. Federal code only requires a 1-hour test.

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 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 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 4-inch pipeline, a pipeline heater and a regulator station with a MAOP of 850 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 perform radiograph inspections of 100 percent of all welds. Cascade must remedy defects in the welds in accordance with Cascade's operating standards and procedures. Cascade must radiograph all repaired welds to ensure pipeline integrity and compliance with existing standard.

d) Cascade must install cathodic protection within 90 days after the pipeline is installed.

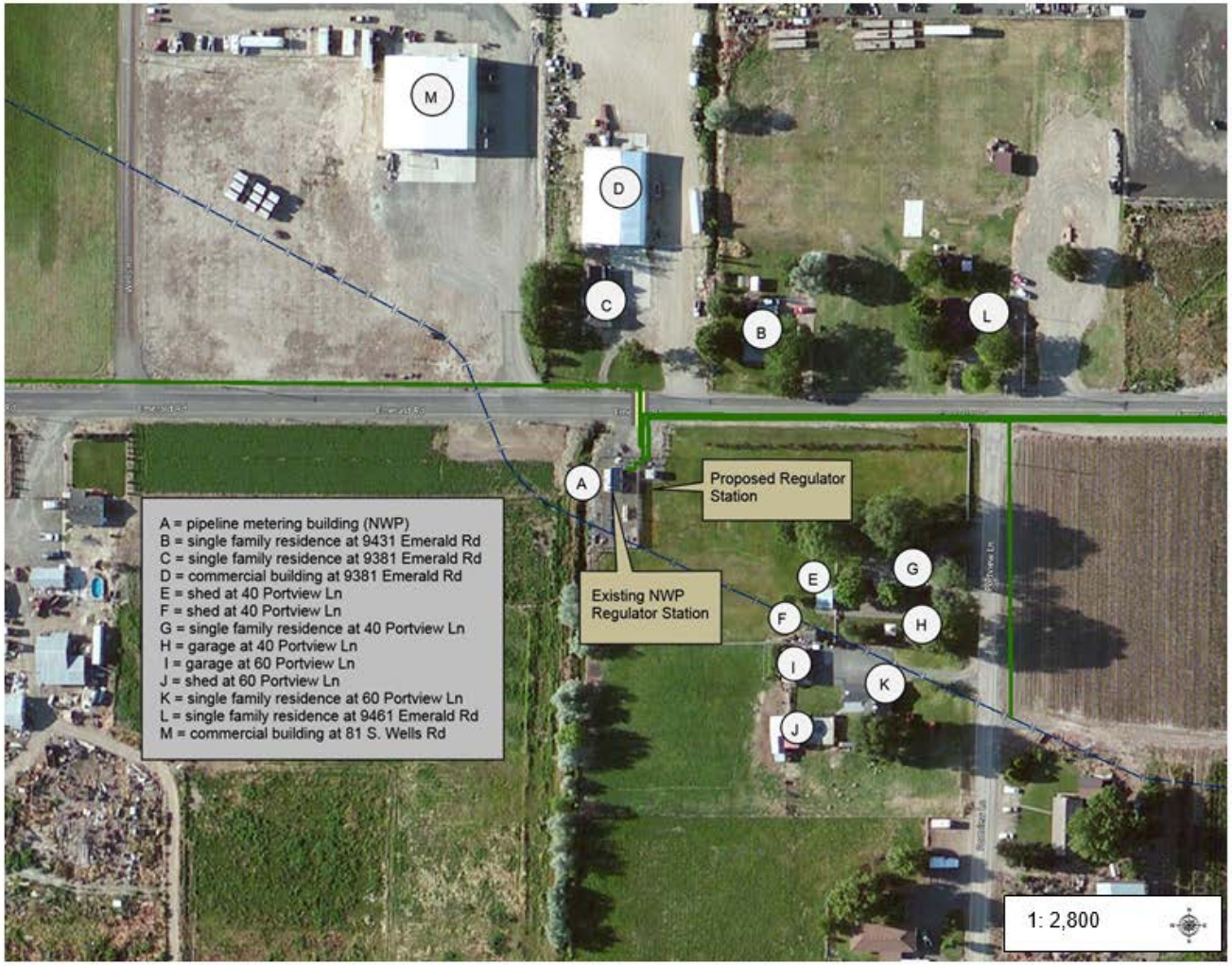
e) Cascade must provide telephonic notice to the Commission Pipeline Safety Program followed by an email confirmation at least two business days prior to the beginning of project construction.

f) Cascade must contact residents within 500 feet of the regulator station and inform them of the project construction and any additional information consistent with the public awareness requirements in Title 49 CFR, Part 192.616.

Attachment - 1

CASCADE NATURAL GAS CORPORATION

Sunnyside Gate Station Upgrade Figure 1



Legend

Main
- <all other values>
- Bare Steel Main
- Coated Steel Main
- Plastic Main
- Unknown

Gas Pipe Casing
Foreign Owned Pipe
Marker

Notes

0.1 0 0.04 0.1 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere
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This map is a user generated static output from the CNG GIS Silverlight 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 GAS FACILITIES