PG-120452

CASCADE NATURAL GAS CORPORATION
A Subsidiary of MDU Resources Group, Inc.

8113 WEST GRANDRIDGE BOULEVARD, KENNEWICK, WASHINGTON 99336-7166

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Pipeline Safety Program

David Lykken
Director, Pipeline Safety
Utilities & Transportation Commission
1300 S. Evergreen Park Dr. S.W
PO Box 47250
Olympia, WA 98504-7250

Subject: WAC 480-93-020 – Request for Approval – Mount Vernon Gate Station Upgrade

Dear Mr. Lykken:

Pursuant to the requirements of WAC 480-93-020 Proximity Considerations, Cascade Natural Gas Corporation (CNGC) requests approval to operate an existing four inch pipeline and a proposed new regulator station at a Maximum Allowable Operating Pressure (MAOP) of 960 psig within 500 feet of existing structures intended for human occupancy.

Proposed Scope of Work:

In order to serve the growing communities in and around the City of Mount Vernon, Cascade is required to upgrade the existing Mount Vernon Gate Station at its interconnect with Northwest Pipeline (NWP). Aside from custody transfer of the gas, the gate station also odorizes the gas for distribution and reduces pressure from an MAOP of 960 psig to a proposed MAOP of 400 psig.

The proposed upgrade would require Cascade to take over the responsibility of pressure control from NWP, and in doing so; Cascade would be required to operate facilities at MAOP of 960 psig. These facilities include an existing four inch pipeline installed in 2005 and a proposed new regulator station to control pressure. Cascade would be completing the uprate in full compliance with DOT 192, Subpart K "Uprating", in addition to WAC 480-93-155 "Increasing maximum allowable operating pressure".

Existing Four Inch Pipeline:

The existing 300 foot segment of the four inch pipeline, installed in 2005, is located in rural Skagit County along Beaver Lake Road, east of the City of Mount Vernon. The pipeline runs between NWP facilities and the CNGC facilities at the Mount Vernon Gate Station. The pipeline location is depicted on Figure 1.

At the time of the installation, the four inch pipeline and its associated facilities were fully designed with the intent of the proposed scope of work occurring at a future date. The line was designed with a minimum component rating of 960 psig and was pressure tested to a minimum of 1440 psig.

At the proposed MAOP of 960 psig, the maximum stress level of the pipe and pipeline fittings would be 19.81% of the specified minimum yield strength (SMYS); thus, the pipeline would be classified as high pressure distribution main.

Specifications of the four inch pipeline are as follows:

- 300 feet of 4" x 0.237" API 5L Grade X-46 Steel line pipe with extruded polyethylene coating.
- All fittings (elbows, tees, caps) a minimum 0.237" wall thickness (standard weight), ANSI 16.9 WPHY-46 to meet or exceed the design rating of the 4" line pipe
- All components (valves, line stoppers) ANSI 600 class with a maximum working pressure rating of 1440 psig

Proposed Regulator Station:

The proposed regulator station would be installed at the west end of the four inch pipeline described above, as shown on figure 1. This would effectively replace the NWP regulator station which is currently at the east end of the four inch pipeline. The existing NWP station, along with the NWP mainline, operates with an MAOP of 960 psig.

The proposed regulator station would be designed with a minimum component rating of 960 psig and would be pressure tested to a minimum of 1440 psig. At the proposed upstream MAOP of 960 psig, the maximum stress level of the pipe and pipeline fittings would be 17.53% of SMYS. At the proposed downstream MAOP of 400 psig, the maximum stress level of the pipe and pipeline fittings would be 9.10% of the SMYS. Thus, the pipeline would be classified as a high pressure distribution facility.

Specifications of the regulator station would be as follows:

- All pipe would be API 5L Grade X-52 Steel line pipe. All buried pipe will be hand wrapped with below ground Trenton.
- All fittings (elbows, tees, caps etc.) would be standard weight, ANSI 16.9 WPHY-52.
- All components (valves, regulators, etc.) upstream of and including the regulator devices would be ANSI 600 class with a maximum working pressure rating of 1440 psig.
- All components (valves, regulators, etc.) downstream of the regulator devices would be ANSI 300 class with a maximum working pressure rating of 720 psig.

Proximity:

The existing four inch pipeline and the proposed regulator station are located within 500 feet of the following buildings as shown on Figure 1:

- 15 feet from existing pipeline metering building owned and operated by NWP
- 50 feet from existing small shed at 14853 Beaver Lake Road
- 85 feet from existing barn at 14853 Beaver Lake Road
- 130 feet from existing shed at 14853 Beaver Lake Road.
- 170 feet from existing single family residence at 14853 Beaver Lake Road
- 250 feet from existing single family residence at 14838 Beaver Lake Road
- 270 feet from existing single family residence at 14895 Beaver Lake Road
- 420 feet from existing detached garage at 14838 Beaver Lake Road
- 490 feet from existing single family residence at 14770 Beaver Lake Road

In addition, the pipeline passes under and parallels Beaver Lake Road, a county highway. Cascade personnel conducted a field survey and verified that as of March 19, 2012, no additional buildings have been constructed or are under construction since the date of the aerial photograph.

Of the buildings on the above list, only the residence at 14770 Beaver Lake Road is currently greater than 500 feet from a pipeline facility operating at a pressure above 500 psig.

Alternatives:

Transfer of pressure control from NWP to Cascade is a requirement by NWP in order to complete the proposed gate upgrade. Cascade believes the proposed regulator station location is the most practical as it within existing Cascade Right of Way, involves the minimum amount of new construction activity, avoids land use conflicts with the NWP transmission pipeline, the BPA transmission power line, and surrounding wetlands, and minimizes the level of new proximity concerns to homes.

Closing:

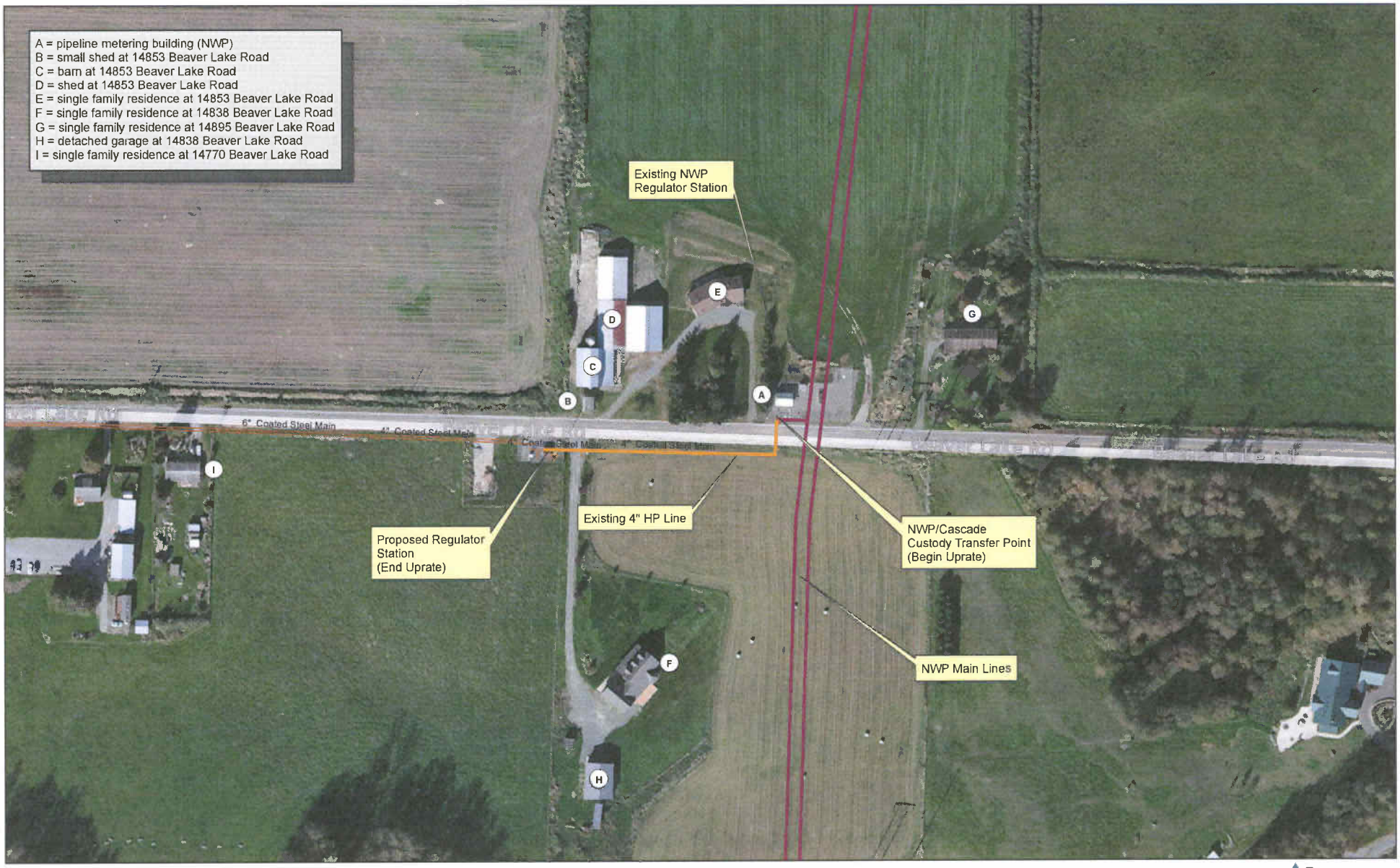
Cascade respectfully requests your approval to move forward with the installation of the proposed Mount Vernon Gate Station Upgrade, which is scheduled for a construction start of August 2012. If you have any questions or require additional information, feel free to contact me at (509) 734-4552 or via email at kevin.raschkow@cngc.com

Sincerely,
CASCADE NATURAL GAS

Kevin Raschkow, P.E.
Manager – Engineering Services

CC: Eric Martuscelli
Steve Kessie
Tina Beach
Ryan Privratsky
Mike Hardesty

Enclosures



Mount Vernon Gate Station Upgrade - Figure 1

Cascade Natural Gas
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