

Agenda Date: December 19, 2024
Item Number: E3

Docket: PG-240538
Company Name: Cascade Natural Gas Corporation

Staff: Anthony Dorrough, Pipeline Safety Engineer
Dennis Ritter, Pipeline Safety Chief Engineer
Scott Rukke, Pipeline Safety Director

Recommendation

Issue an order granting Cascade Natural Gas Corporation's (Cascade or Company) request to operate the proposed pipeline at a pressure of 330 psig with a maximum allowable operating pressure (MAOP) of 340 pounds per square inch gauge (psig) within 100 feet of existing buildings or those that are under construction.

Discussion

As described in Washington Administrative Code (WAC) 480-93-020, a gas pipeline company must receive approval 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. The Commission has adopted the Code of Federal Regulations, Title 49, Part 192 and Chapter 480-93 of the WAC as minimum standards for natural gas pipeline construction and operation.

Cascade is proposing the uprating of approximately 22,325 feet of 12-inch steel, 47 feet of 8-inch steel, 437 feet of 6-inch steel, 2,542 feet of 4-inch steel, 23 feet of 2-inch steel and 5 regulator stations. Cascade is performing this work to maintain core customer needs, meet large volume industrial needs and to have the ability to supply necessary capacities for future growth in Longview, WA.

No new pipeline or regulator stations will be installed as part of this uprate. This project begins at regulator station 54 (R-54) located near 300 Fiber Way. Other stations along the route are as follows: R-127, R-38, R-8, R-36 and R-14. The minimum design pressure of these regulator stations are ANSI Class 300 components with a maximum working pressure rating of 720 psig. All existing regulator stations have already been pressure tested to a minimum certification pressure of 400 psig. Commission staff (Staff) notes the following facts:

- a) The proposed MAOP of the new pipeline is 340 psig.
- b) The proposed piping and all fittings are commensurate with the proposed MAOP.
- c) There are 95 existing structures located within 100 feet of the proposed pipeline as shown in Appendix B. All other buildings are greater than 100 feet from the pipeline.

- d) At the proposed MAOP of 340 psig, the stress level of the regulator stations, pipe and pipeline fittings will be a maximum of 19.85 percent of the specified minimum yield strength (SMYS). As the hoop stress of the line is under 20 percent SMYS, the proposed pipeline is considered high-pressure distribution. Lines at or over 20 percent are considered Transmission.

Conclusion

A review of Cascade's proximity request indicates that it meets the pertinent requirements of Chapter 480-93 of the WAC and that the proposed uprating has the least impact on surrounding population densities.

The Commission's proximity rule, WAC 480-93-020, allows pipeline Staff to review proposed high-pressure pipelines in close proximity to structures to address safety considerations. Staff was able to perform a comprehensive review of the following documentation towards that effort:

- a) Longview-Kelso H.P. Distribution Pipeline cathodic history.
- b) List of affected pipelines.
- c) Design and construction plans, standards and Pressure tests.
- d) Previous operating pressures.
- e) A review of 12 affected mainline valves
- f) A review of 3 current service lines off the H.P. Distribution Pipeline.
- g) A review of 5 affected regulator stations.
- h) A review of the SMYS calcs.
- i) A review of regulator station maintenance records.

Staff's recommended conditions described below appropriately minimize the public safety risk associated with the proposed pipeline uprating.

For these reasons, Staff recommends that the Commission issue an order approving Cascade's request to uprate and then operate a pipeline with a MAOP of 340 psig subject to the following conditions:

- a) Cascade must provide notification to the Commission Pipeline Safety Division via email at least two business days prior to the beginning of the uprating project. This email notification shall be sent to pipelineprogram@utc.wa.gov.
- b) Cascade must contact building occupants within 100 feet of the pipeline prior to the Commission's open meeting and inform them of the uprating project and any additional information consistent with the public awareness requirements in Title 49 CFR Part 192.61.

- c) The uprate will occur in 4 consecutive pressure increases with a leak survey after each increase as follows: 240 to 272.5 psig; 272.5 to 295 psig; 295 to 317.5 psig; 317.5 to 340 psig. The leak survey shall include the regulator stations R-127, R-38, R-8, R-36, R-14, and R-54.
- d) 10 days after the increase has been established, a final leak survey shall be conducted.
- e) When the revised control room operational and alarm set points have been revised/set, the UTC shall be notified by email to pipelineprogram@utc.wa.gov. The notice shall include a list of the new/revised control room set points (normal and alarm conditions) and RTU modifications conducted (and appropriately tested) as part of the uprate.
- f) The sectional valves located at Industrial Way & Fibre Way, isolating the 250 psig Kelso TBS system from the uprated 340 psig system, shall be painted differentially, or in some other way identified, to minimize mistaken operation.
- g) 9441ft of 4-inch, pre-Cascade pipe near the end of the current H.P. line, shall be disconnected from the system and reconnected to the distribution system off of R-38 prior to the uprate in pressure commencing.

Appendix A



Figure 1: Overall view of the existing Longview-Kelso HP Distribution system to be uprated from 250psig to 340psig.

Appendix B



Figure 2: Section of the existing Longview-Kelso HP Distribution system to be uprated from 250psig to 340psig. Shows its proximity to buildings from 300 Fibre Way to 123 15th Ave within the 100ft boundary.



Figure 3: Section of the existing Longview-Kelso HP Distribution system to be uprated from 250psig to 340psig. Shows its proximity to buildings from 103 Oregon Way to 1300 Prudential Blvd within the 100ft boundary.

Proximity Buildings

Bldg #	DIST	Bldg. Description	ADDRESS
1	78 ft. Commercial	300 FIBRE WAY	
2	81 ft. Commercial	921 COLUMBIA BLVD	
3	57 ft. Commercial	20 FIBRE WAY	
4	63 ft. Commercial	957 INDUSTRIAL WAY	
5	60 ft. Commercial	957 INDUSTRIAL WAY	
6	31 ft. Substation	81 FIBRE WAY	
7	66 ft. Commercial	961 INDUSTRIAL WAY	
8	73 ft. Commercial	1005 INDUSTRIAL WAY	
9	69 ft. Commercial	80 INTERNATIONAL WAY	
10	95 ft. Commercial	80 INTERNATIONAL WAY	
11	53 ft. Commercial	40 INTERNATIONAL WAY	
12	73 ft. Commercial	1061 INDUSTRIAL WAY	
13	92 ft. Commercial	1111 INDUSTRIAL WAY	
14	50 ft. Commercial	1291 INDUSTRIAL WAY	
15	49 ft. Commercial	1329 INDUSTRIAL WAY	
16	35 ft. Commercial	1331 INDUSTRIAL WAY	
17	34 ft. Commercial	1341 INDUSTRIAL WAY	
18	72 ft. Commercial	1381 INDUSTRIAL WAY	
19	74 ft. Commercial	1401 INDUSTRIAL WAY	
20	30 ft. Commercial	1445 A INDUSTRIAL WAY	
21	31 ft. Commercial	1465 17 INDUSTRIAL WAY	
22	39 ft. Commercial	1555 16 INDUSTRIAL WAY	
23	87 ft. Commercial	86 PORT WAY	
24	28 ft. Residential	103 OREGON WAY	
25	44 ft. Residential	107 OREGON WAY	
26	95 ft. Residential	123 2 OREGON WAY	
26	95 ft. Residential	123 1 OREGON WAY	
26	95 ft. Residential	123 3 OREGON WAY	
26	95 ft. Residential	123 4 OREGON WAY	
27	70 ft. Residential	138 15TH AVE	
28	39 ft. Residential	111 15TH AVE	
29	80 ft. Residential	123 15TH AVE	
30	31 ft. Residential	114 16TH AVE	
31	66 ft. Residential	118 16TH AVE	
32	42 ft. Residential	107 16TH AVE	
33	42 ft. Residential	106 1 17TH AVE	
33	42 ft. Residential	106 2 17TH AVE	

33	42 ft. Residential	106 3 17TH AVE
33	42 ft. Residential	106 4 17TH AVE
34	90 ft. Residential	118 17TH AVE
35	61 ft. Residential	107 17TH AVE
36	31 ft. Residential	102 18TH AVE
37	77 ft. Residential	106 18TH AVE
38	50 ft. Residential	107 18TH AVE
39	96 ft. Residential	115 18TH AVE
40	33 ft. Residential	106 19TH AVE
41	68 ft. Residential	114 19TH AVE
42	36 ft. Residential	113 19TH AVE
42	36 ft. Residential	115 19TH AVE
43	30 ft. Residential	203 20TH AVE
44	78 ft. Residential	207 20TH AVE
44	78 ft. Residential	211 20TH AVE
45	52 ft. Residential	208 21ST AVE
45	52 ft. Residential	210 21ST AVE
46	59 ft. Residential	211 22ND AVE
47	34 ft. Residential	214 23RD AVE
48	73 ft. Residential	216 23RD AVE
49	36 ft. Residential	215 23RD AVE
49	36 ft. Residential	217 23RD AVE
50	29 ft. Residential	206 24TH AVE
51	63 ft. Residential	210 24TH AVE
52	38 ft. Residential	211 24TH AVE
53	88 ft. Residential	225 24TH AVE
54	35 ft. Residential	224 101 25TH AVE
54	35 ft. Residential	224 201 25TH AVE
54	35 ft. Residential	224 102 25TH AVE
54	35 ft. Residential	224 202 25TH AVE
55	83 ft. Residential	228 101 25TH AVE
55	83 ft. Residential	228 201 25TH AVE
55	83 ft. Residential	228 202 25TH AVE
55	83 ft. Residential	228 102 25TH AVE
56	31 ft. Residential	217 25TH AVE
57	67 ft. Residential	229 25TH AVE
58	29 ft. Residential	228 26TH AVE
59	82 ft. Residential	230 26TH AVE

60	59 ft. Residential	231 26TH AVE
61	87 ft. Residential	233 26TH AVE
62	37 ft. Residential	214 27TH AVE
63	74 ft. Residential	220 27TH AVE
64	28 ft. Residential	221 27TH AVE
65	78 ft. Residential	229 27TH AVE
66	37 ft. Residential	216 28TH AVE
67	93 ft. Residential	220 28TH AVE
68	26 ft. Residential	215 28TH AVE
69	67 ft. Residential	221 28TH AVE
70	31 ft. Residential	220 29TH AVE
71	69 ft. Residential	228 29TH AVE
72	27 ft. Residential	235 29TH AVE
73	63 ft. Residential	243 29TH AVE
74	26 ft. Residential	228 BEECH ST
75	66 ft. Residential	234 BEECH ST
76	32 ft. Residential	227 1 BEECH ST
76	32 ft. Residential	227 2 BEECH ST
76	32 ft. Residential	227 3 BEECH ST
77	67 ft. Residential	235 1 BEECH ST
77	67 ft. Residential	235 2 BEECH ST
77	67 ft. Residential	235 3 BEECH ST
78	34 ft. Residential	202 3 BALTIMORE ST
78	34 ft. Residential	202 1 BALTIMORE ST
78	34 ft. Residential	202 2 BALTIMORE ST
79	81 ft. Residential	210 1 BALTIMORE ST
79	81 ft. Residential	210 2 BALTIMORE ST
79	81 ft. Residential	210 3 BALTIMORE ST
80	63 ft. Residential	217 1 BALTIMORE ST
80	63 ft. Residential	217 2 BALTIMORE ST
80	63 ft. Residential	217 3 BALTIMORE ST
81	27 ft. Residential	202 CYPRESS ST
81	27 ft. Residential	204 CYPRESS ST
82	77 ft. Residential	206 CYPRESS ST
82	77 ft. Residential	208 CYPRESS ST
83	20 ft. Residential	203 CYPRESS ST
83	20 ft. Residential	205 CYPRESS ST
84	61 ft. Residential	207 CYPRESS ST

115	84	61 ft. Residential	209 CYPRESS ST
116	85	27 ft. Residential	210 COLORADO ST
117	86	73 ft. Residential	212 COLORADO ST
118	87	27 ft. Residential	209 COLORADO ST
119	88	73 ft. Residential	211 COLORADO ST
120	89	24 ft. Residential	204 CAROLINA ST
121	90	71 ft. Residential	206 CAROLINA ST
122	91	21 ft. Residential	205 C CAROLINA ST
123	91	21 ft. Residential	205 B CAROLINA ST
124	91	21 ft. Residential	205 A CAROLINA ST
125	92	87 ft. Commercial	201 DOUGLAS ST
126	93	15 ft. Commercial	3357 WASHINGTON WAY
127	93	15 ft. Commercial	3353 WASHINGTON WAY
128	94	0 ft. Substation	3401 INDUSTRIAL WAY ?
129	95	67 ft. Industrial	3400 INDUSTRIAL WAY