Date: July 26th, 2024

Subject: WAC 480-93-020 8" Yakima HP Replacement Proximity Request

To: Jeff Killip, Executive Director and Secretary, Utilities & Transportation Commission

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Identification of Proceeding: N/A

Identification of Documents: CNGC – 8" Yakima HP Replacement Proximity Request
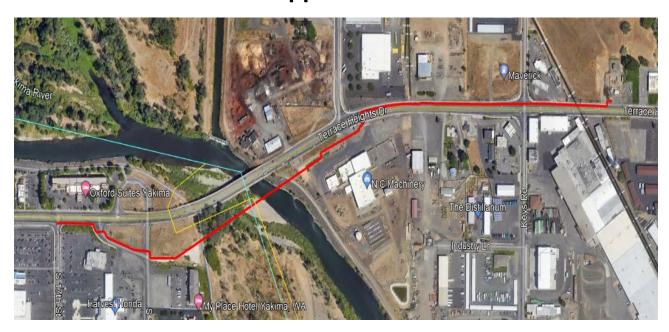
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Appendix A

Figure 1: Overall view of the proposed 8" Yakima HP Replacement (Red) pipeline alignment.

Figure 2: Section of the proposed pipeline showing buildings 1-12 within the 100-foot proximity boundary.

Proximity Buildings

Bldg. #	Distance to HP Line (feet)	Bldg. Description
1	88	Utilities – Natural Gas
2	47	Utilities – Natural Gas
3	52	Utilities – Natural Gas
4	7	Utilities – Natural Gas
5	100	Commercial
6	64	Manufacturing - Food
7	61	Manufacturing - Food
8	93	Commercial
9	82	Warehouse
10	53	Service - Commercial
11	19	stream gage monitoring building
12	80	Commercial

The Hoop Stress and %SMYS for steel pipe is determined in accordance with the following formulas:

$$\sigma_{hoop} = \frac{P \times D}{2 \times t} \qquad \sigma_{hoop} / S = \%SMYS$$

P=Design pressure, psig.
S=Yield strength, psig determined in accordance with §192.107.
D=Outside pipe diameter, inches.
t=Nominal wall thickness of pipe, inches.

Design pressure of new pipeline at 500 MAOP:

8" Hoop Stress = $\frac{500 \times 8.625}{2 \times 0.322}$ = 6696.43 psig   %SMYS = $\frac{6696.43}{52000}$ = 12.88 %

Figure 3: SMYS calculation

Appendix B

Figure 4: Route alternatives.