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Date: September 29, 2017

Subject: Six Month Status Report

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September 29, 2017

Sean C. Mayo – Pipeline Safety Director, Pipeline Safety Program
State of Washington Utilities and Transportation Commission
1300 S. Evergreen Park Dr. SW
P.O. Box 47250
Olympia, WA 98504-7250

Subject: Docket PG-150120, Settlement Agreement, Six-Month Status Report

Dear Mr. Mayo,

This letter serves as Cascade Natural Gas Corporation’s (CNGC) first six-month status report as outlined in the Settlement Agreement, Docket PG-150120, between the Staff of the Washington Utilities and Transportation Commission (WUTC) and CNGC.

V. TERMS OF AGREEMENT

B. Compliance Program

1. CNGC will document the basis for validation of the MAOP of every pipeline segment operating above 60 psig. Such documentation will be completed in accordance with the provisions of 49 C.F.R. § 192.619 as it currently exists, or as it may be amended by PHMSA. CNGC will meet the following timelines:

Documentation of MAOP Validation

- a. For the 116 pipeline segments currently identified as missing critical information necessary for documenting the basis for validation of MAOP:
 - i. CNGC will document the basis for validation of the MAOP on at least 50% of the mileage by December 31, 2018. **The Commission will impose a \$250,000 suspended penalty if CNGC fails to comply.**
 - ii. CNGC will document the basis for validation of the MAOP on 100% of the mileage by December 31, 2023. **The Commission will impose a \$250,000 suspended penalty if CNGC fails to comply.**

Cascade Response

CNGC is currently on schedule to have validation completed on 50% of the mileage for the 116 pipeline segments identified as missing critical documentation by December 31, 2018. From the pressure testing, in-situ testing, field verifications, and pipe replacements that have been completed

and projects in progress, CNGC is in position to meet this term of the Settlement Agreement. Notable projects completed to date include the following:

Pressure Testing

- 2" Burbank H.P. Line (12301, 3,520')
- 4" South Moses Lake H.P. Line (14455, 2,927')

In-Situ Testing

- 8" Bellingham Transmission Line (Line 1-1, 13,286)
- 16" Fredonia Transmission Line (30636 (1) (Transition Fittings and Elbows), 64,426')
- 16" March Point Transmission Line (40000 (Transition Fittings and Elbows), 43,344')
- 12" South Longview H.P. Line (43600 (1) (Transition Fittings), 18,373')
- 16" North Whatcom Transmission Line (18794, 143,907')
- 8" & 12" Bremerton Transmission Line (BremertonL2-1, 2,843')
- 8" Anacortes Transmission Line (MTVL1-1, 102,813')
- 8" March Point Transmission Line (11C1144-1, 8,134')
- 8" March Point Transmission Line (11C1144-2, 814')
- 8" Central Whatcom Transmission Line (14c1344, 57,437')
- 8" Central Whatcom Transmission Line (40855 (Transition fittings), 10,579')
- 8" Lake Terrell Rd Transmission Line (18734-1, 10,314')
- 16" Squalicum Transmission Segment (41508, 2,600')

Replacement

- 4" Grandview H.P. Line (Fish-L2-1, 4,736')
- 4" McCleary H.P. Line (79C6323, 225')
- 3" Burlington H.P. Line (211220, 5,349')

Exposure/Verification of Fittings

- 8" Kitsap Line (20C6308-3, 35,770')
- 12" Kitsap H.P. Line (44000, 34,782')
- 4" North Lynden H.P. Line (25773, 8,161')
- 4" Plymouth H.P. Line (28141, D0069144, 28330, 4,112')
- 6" North Oak Harbor H.P. Line (17206, 19,048')

Operate Accepting Most Stringent Criteria

- 6" & 8" Moses Lake H.P. Line (60390, 2,041')
- 8" Yakima H.P. Line (40C4357, 4,891')
- Longview-Kelso H.P. Distribution Line (Pre-CNGC-L1-2, 4,964')
- Pasco H.P. Distribution System (KennL4-1, 10,125')
- 4" Mount Vernon H.P. Line (MTVL4-1, 23,760')

CNGC is working towards finalizing documentation of all the field work completed to date and by the end of 2017 will have approximately 87 miles of the total 222 miles fully validated and completed.

Validation of Highest Risk Segments

- b. Validation of highest risk pipeline segments: CNGC has identified five segments currently operating at 30% specified minimum yield strength (SMYS) or above that are missing critical information necessary to document the basis for validation of MAOP. CNGC will complete validation of all five segments by December 31, 2017.

Cascade Response

CNGC has completed validation work on four of the five segments currently operating at or above 30% SMYS. Work on the fifth segment (16" North Whatcom Line) is in progress and is scheduled to be completed in October 2017. CNGC is currently on schedule to have all five of these segments validated by December 31, 2017. The five segments include:

- 16" Fredonia Transmission Line (30636 (1) (Transition Fittings and Elbows), 64,426')
- 16" March Point Transmission Line (40000 (Transition Fittings and Elbows), 43,344')
- 12" South Longview H.P. Line (43600 (1) (Transition Fittings), 18,373')
- 16" N. Whatcom Transmission Line (18794, 143,907')
- 8" & 12" Bremerton Transmission Line (BremertonL2-1, 2,843')

TRC's Audit and Findings

- c. CNGC has retained TRC Pipelines Service LLC (TRC) to complete a records review of all remaining pipelines operating above 60 psig. The TRC MAOP records review will be completed by the end of first quarter 2017.
- d. CNGC will incorporate any additional pipeline segments operating above 60 psig that have been identified by TRC's review as missing critical information necessary to document the basis for validation of MAOP into the risk matrix to identify mitigation prioritization.
 - i. CNGC will submit an updated timeline/plan that includes the additional segments to Commission Staff by December 31, 2017.
 - ii. CNGC and Commission Staff will file an Amended Settlement Agreement with the Commission by March 31, 2018, that reflects a completion date by which CNGC will document the basis for validation of all the high pressure (greater than 60 psig) MAOP for the additional segments identified by TRC. **The Amended Settlement Agreement will include a \$500,000 suspended penalty, imposed in full if CNGC fails to comply with the completion date associated with any new high pressure segments identified by TRC.**

If CNGC and Staff disagree on a completion date, they commit to discuss the nature of the disagreement and to work cooperatively to resolve it. If agreement on the timeline cannot be reached in this way, either Staff or CNGC (or both) may bring the matter to the Commission for decision in a petition to enforce this Agreement.

Cascade Response

TRC Pipeline Services LLC (TRC) completed the records review of all remaining pipelines operating above 60 psig on March 31, 2017. CNGC is currently in the process of reviewing the information from TRC, incorporating additional pipeline segments into the risk matrix, and working on developing an updated timeline/plan to address additional segments identified by TRC. CNGC is on schedule to have an updated plan to the WUTC Staff by December 31, 2017.

In addition to the work currently in progress, a WUTC inspection was performed by Dennis Ritter on May 10-11, 2017. The inspection consisted of a review of the TRC information and CNGC's review process. No concerns were noted during the inspection.

Prioritization of Pipeline Validation

2. CNGC will prioritize the work set forth in No. 1 above, with priorities established for pipeline segments based on risk to public safety. Risk considerations will include but are not limited to:
 - a. Segment class location;
 - b. Location of high consequence areas;
 - c. Segment SMYS percentage based on the most stringent criteria for missing pipe characteristics;
 - d. Pipe vintage with special consideration for pre-code pipe with unknown characteristics;
 - e. Pipe material, installation characteristics, or maintenance records that indicate increased risk; and
 - f. Low frequency electric resistance welded (ERW) and unknown seam types when SMYS >25%.

Cascade Response

No new updates at this time. CNGC is reviewing the additional segments TRC identified through the records review and is applying and establishing risk considerations to be used to determine mitigation prioritization of the additional segments.

Leak Surveys

3. All unvalidated pipeline segments with preliminary SMYS calculations of 20% or greater will be leak surveyed a minimum of four (4) times annually. Once information is available to substantiate SMYS below 20% or to validate the MAOP of a pipeline segment, that pipeline segment will return to leak survey intervals prescribed by code. CNGC will notify Commission Staff when a pipeline segment returns to code-based survey intervals and will make available for Commission Staff inspection documentation of the basis for the action.

Cascade Response

No new updates at this time. Leak survey of unvalidated pipeline segments is ongoing. Documentation of validation work that has been completed is being finalized, once finalized WUTC staff will be notified of the pipeline segments that will be returning to code-based survey intervals.

Pressure Reductions

4. All unvalidated pipeline segments with low frequency seam welds or unknown seam types, with preliminary SMYS calculations of over 30%, shall be maintained at a 20% pressure reduction. Once information becomes available to identify seam type as not low frequency ERW or to substantiate SMYS below 30%, pipeline segments will return to previous operating pressure. CNGC will notify Commission Staff when a pipeline segment returns to a previous operating pressure and will make available for Commission Staff inspection documentation of the basis for the action.

Cascade Response

Currently there are still five of the six pipelines with unvalidated segments, that were initially identified with low frequency ERW or an unknown seam type and with a calculated percent SMYS greater than 30%. These five pipelines are still operating at a 20% pressure reduction. In-situ testing has been completed on the remaining segments and CNGC is in the process of evaluating the test results. The results from in-situ testing of the remaining segments are as follows:

- 8" Central Whatcom Transmission Line, (14c1344, 57,437')
 - Minimum Yield Strength = 43,800 psi
 - 80% of Average Yield Strength = 40,700 psi
 - Wall Thickness = 0.188"
 - % SMYS = 21.42%
- 8" Central Whatcom Transmission Line, (40855 (Transition fittings), 10,579')
 - Minimum Yield Strength = 46,500 psi
 - 80% of Average Yield Strength = 42,500 psi
 - Wall Thickness = 0.322"
 - % SMYS = 11.97%
- 8" Bellingham Transmission Line (Line 1-1, 15,086')
 - Minimum Yield Strength = 37,300 psi
 - 80% of Average Yield Strength = 35,000 psi
 - Wall Thickness = 0.188"
 - % SMYS = 24.91%
- 8" Anacortes Transmission Line (MTVL1-1, 102,813')
 - Minimum Yield Strength = 35,500 psi
 - 80% of Average Yield Strength = 40,000 psi
 - Wall Thickness = 0.188"
 - % SMYS = 23.26%
- 8" March Point Transmission Line (11C1144-1, 8,134')
 - Minimum Yield Strength = 48,400 psi
 - 80% of Average Yield Strength = 42,300 psi
 - Wall Thickness = 0.188"
 - % SMYS = 19.52%
- 8" March Point Transmission Line (11C1144-2, 814')
 - Minimum Yield Strength = 45,200 psi
 - 80% of Average Yield Strength = 40,700 psi
 - Wall Thickness = 0.250"

- % SMYS = 15.26%
- 8” March Point Transmission Line (11C5628, 285’)
 - In-situ testing wasn’t performed on this pipeline segment. Segment is located inside a casing under Hwy 20 near Anacortes. Segment is slated for replacement in 2018.
- 8” Lake Terrell Rd Transmission Line (18734-1, 10,314’)
 - Minimum Yield Strength = 35,000 psi
 - 80% of Average Yield Strength = 34,100 psi
 - Wall Thickness = 0.188”
 - % SMYS = 25.56%

The only pipeline that has been returned to previous operating pressures is the 8” & 12” Bremerton Transmission Line #2. This line was returned to previous operating pressure in November 2016. Pressure increase was approved by the WUTC on 11/10/2016.

- 8” & 12” Bremerton Transmission Line (BremertonL2-1, 2,843’)
 - Minimum Yield Strength = 46,000 psi
 - 80% of Average Yield Strength = 40,400 psi
 - Wall Thickness = 0.188”
 - % SMYS = 28.33%

TIMP and DIMP

5. Line segments preliminarily calculated at greater than 20% SMYS will be incorporated into CNGC’s transmission integrity management program (TIMP). Baseline assessments for said pipe will be completed by December 31, 2020. Upon completion of MAOP validation, CNGC’s TIMP and distribution integrity management program (DIMP) will be re-evaluated and updated as required.

Cascade Response

Line segments that have been calculated at greater than 20% SMYS have been incorporated into CNGC’s TIMP. Baseline assessment requirements are being evaluated based on the MAOP validation plan for each of the pipeline segments and are on schedule to be completed by December 31, 2020. Additional line segments that have been incorporated into CNGC’s TIMP include:

- 8” Bellingham H.P. Line (Line 1-1)
- 8” Central Whatcom H.P. Line (14c1344, 40855)
- 16” Squalicum H.P. Line (41508)
- 8” Attalia H.P. Line (O1C4776, 14375)
- 12” Longview-Kelso H.P. Distribution Line (Pre-CNGC-L1-1)
- 12” South Longview H.P. Line (43600)
- 8” Kalama H.P. Line (51820)
- 8” Anacortes H.P. Line (MTVL1-1, 18191)
- 8” March Point H.P. Line (11C1144, 11C5628)
- 6” & 8” Moses Lake Line (WenL1-2)
- 4” Othello H.P. Line (18998)
- 6” Toppenish-Zillah Line (YakimaL5-1)

API 1173 and Third Party Audit

6. CNGC will submit to a third party audit to determine baseline variance from the standards set forth in American Petroleum Institute (API) Recommended Practice 1173, Pipeline Safety Management Systems (PSMS). Commission Staff will provide input on the selection of the consultant. At a minimum, the audit will review the following company elements:
 - a. Leadership and management commitment
 - b. Stakeholder engagement
 - c. Risk management
 - d. Operational controls
 - e. Incident investigation, evaluation and lessons learned
 - f. Safety assurance
 - g. Management review and continuous improvement
 - h. Emergency preparedness and response
 - i. Competence, awareness, and training
 - j. Documentation and record keeping

Upon completion of the audit, CNGC will submit the consultant's report to the Commission. The third-party audit and written report will be completed by December 31, 2017. The Commission will impose a \$500,000 suspended penalty if CNGC fails to submit the consultant's report by December 31, 2017. The results of the third-party audit shall not be the basis for Staff recommendations of additional penalties against CNGC and if the third-party audit identifies violations of code, CNGC shall have a reasonable opportunity to correct such violations.

7. CNGC will commence a program to align its operations with the standards of API Recommended Practice 1173. Commission Staff will review CNGC's progress in implementing these operational changes. API 1173 is a recommended practice and, as such, compliance with API 1173 may be subject to audit but shall not be the basis for penalties.

Cascade Response

Jacobs Consultancy (Jacobs) has completed the work associated with determining CNGC's baseline variance from the standards set forth in American Petroleum Institute (API) Recommended Practice 1173. CNGC is scheduled to conclude the third-party audit process with Jacobs in the month of October and is on track to submit a finalized report prepared by Jacobs prior to December 31, 2017 as required by the Agreement.

I will be reaching out to you directly to find a time when we can meet and review this update in person.

Respectfully Submitted,



/s/ Eric Martuscelli
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