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November 21, 2017

Sean Mayo- Pipeline Safety Director  
State of Washington Utilities and Transportation Commission  
1300 S. Evergreen Park Dr. SW  
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Olympia, WA 98504-7250

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State of Washington  
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Pipeline Safety Program

Subject: Response to 2017 Transmission Integrity Management Plan (TIMP) Inspection – Cascade Natural Gas Headquarters (Insp. No. 7237)

Dear Mr. Mayo,

This letter is intended to address the five probable state safety code violations. Specifically, we are addressing how we will bring the probable violations into full compliance. The TIMP inspection was conducted from September 26-28, 2017 in Kennewick, Washington.

### PROBABLE VIOLATION

**1. §192.945 What methods must an operator use to measure program effectiveness?**

*(a) General. An operator must include in its integrity management program methods to measure whether the program is effective in assessing and evaluating the integrity of each covered pipeline segment and in protecting the high consequence areas. These measures must include the four overall performance measures specified in ASME/ANSI B31.8S (incorporated by reference, see §192.7 of this part), section 9.4, and the specific measures for each identified threat specified in ASME/ANSI B31.8S, Appendix A. An operator must submit the four overall performance measures as part of the annual report required by §191.17 of this subchapter.*

**Inspection Assistant (IA) question:  
Performance Metrics**

Does the process to evaluate IM program effectiveness include an adequate set of performance metrics to provide meaningful insight into IM program performance? IM.QA.IMPERFMETRIC.P

**Finding(s):**

During the inspection, Section 10.5 Performance Metrics, Table 10.1 Required and Discretionary Metrics, were reviewed. Table 10.1 lists many metrics which CNGC does not apply to their integrity management evaluation. This procedure includes required criteria for performance metrics (ASME B31.8S), however, it does not provide specificity to ensure effectiveness. For example, the procedure does not state which of the metrics listed in Table 10.1 apply to CNGC's transmission systems or how they can be utilized to address performance issues. CNGC does not benchmark metrics against industry standards or similarly sized gas distribution companies. The process does not include trending analyses to show leading or lagging indicators of system performance. In general, the process lacks CNGC specific criteria to allow effective management. CNGC must assess and revise its procedure including Table 10.1--discarding those that are not used and adding metrics that provide meaningful insights. It is likely the metrics (other than the required PHMSA annual report metrics) are not being effectively used to improve the integrity management of CNGC's transmission lines.

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### Cascade Response

CNGC is establishing the criteria to evaluate and determine the effectiveness of the performance measures. CNGC will update the performance measures upon the conclusion of this evaluation. CNGC will complete the evaluation by March 30, 2018.

2. **§192.945 What methods must an operator use to measure program effectiveness?**

*(a) General. An operator must include in its integrity management program methods to measure whether the program is effective in assessing and evaluating the integrity of each covered pipeline segment and in protecting the high consequence areas. These measures must include the four overall performance measures specified in ASME/ANSI B31.8S (incorporated by reference, see §192.7 of this part), section 9.4, and the specific measures for each identified threat specified in ASME/ANSI B31.8S, Appendix A. An operator must submit the four overall performance measures as part of the annual report required by §191.17 of this subchapter.*

**Inspection Assistant (IA) question:  
Measuring Program Effectiveness**

Do records demonstrate that the methods to measure Integrity Management Program effectiveness provide effective evaluation of program performance and result in program improvements where necessary? IM.QA.IMPERFEFFECTIVE.R

**Finding(s):**

During the inspection, Section 10.5 Performance Metrics, was reviewed along with Table 10.1 Required and Discretionary Metrics, and associated evaluations. This table includes the four required Pipeline and Hazardous Material Safety Administration (PHMSA) metrics and a listing of 17 discretionary metrics from ASME B31.8S Appendix A and six "QC Metrics". Most of these discretionary metrics are not used or tracked by CNGC. CNGC could not provide records showing how these metrics are used in determining the effectiveness of the integrity management program. CNGC does not benchmark their metrics against industry standards or similarly sized gas distribution companies. There are no records indicating the metrics have been revised or corrected based on feedback from internal reviews and evaluations. There are no records which would indicate management is aware of these metrics and track results (dashboards, annual reports to management showing trend analysis, comparison with peers, etc.). It is likely the metrics are not effective in improving the integrity management of CNGC's transmission lines.

### Cascade Response

CNGC will compile all performance measures outlined in Section 10.0 during the completion of the OPS annual reporting requirements. CNGC will establish an annual meeting schedule with key individuals to review the performance measures from the previous year and evaluate plan performance to assure plan is effective in improving the integrity management of CNGC's transmission lines. CNGC will revise the TIMP to incorporate the required compilation of these performance measures, the annual review, and the documentation of the results. The first annual meeting will be held in the second quarter of 2018.

3. **§192.945 What methods must an operator use to measure program effectiveness?**

*(a) General. An operator must include in its integrity management program methods to measure whether the program is effective in assessing and evaluating the integrity of each covered pipeline segment and in protecting the high consequence areas. These measures must include the four overall performance measures specified in ASME/ANSI B31.8S (incorporated by reference, see §192.7 of this part), section 9.4, and the specific measures for each identified threat specified in ASME/ANSI B31.8S, Appendix A. An operator must submit the four overall performance measures as part of the annual report required by §191.17 of this subchapter.*

**Inspection Assistant (IA) question:  
Performance Metrics**

Do records demonstrate that performance metrics are providing meaningful insight into integrity management program performance? IM.QA.IMPERFMETRIC.R-

**Finding(s):**

During the inspection, Section 10.5 Performance Metrics, was reviewed along with Table 10.1 Required and Discretionary Metrics. This table includes the four required Pipeline and Hazardous Material Safety Administration (PHMSA) metrics and a listing of 17 discretionary metrics from ASME B31.8S Appendix A and six "QC Metrics". However, many of these discretionary metrics are not used or tracked by CNGC. CNGC could not provide records showing how CNGC uses these metrics in determining the effectiveness of the integrity management program. Records did not show trend analysis, or performance attainment for specific metrics. Records showed evaluation of metrics but no follow up on concerns (i.e. Annual Scheduling and Evaluation of P&M Measures). Records did not support effective performance metrics have been established. CNGC needs to evaluate its performance metrics and determine which of the current Table 10.1 metrics are useful for effectively measuring performance of their integrity efforts. It is likely the metrics (other than the required PHMSA annual report metrics) are not being effectively used to improve the integrity management of CNGC's transmission lines.

**Cascade Response**

CNGC is establishing the criteria to evaluate and determine the effectiveness of the performance measures. Once established, CNGC will review plan performance measures and update the plan and metrics as necessary to assure performance measures are being utilized to provide meaningful insight into plan performance. CNGC will complete the plan update by March 30, 2018.

**4. §49 CFR 192.947 What Records Must an Operator Keep?**

*An operator must maintain, for the useful life of the pipeline, records that demonstrate compliance with the requirements of this subpart. At minimum, an operator must maintain the following records for review during an inspection.*

*(d) Documents to support any decision, analysis and process developed and used to implement and evaluate each element of the baseline assessment plan and integrity management program. Documents include those developed and used in support of any identification, calculation, amendment, modification, justification, deviation and determination made, and any action taken to implement and evaluate any of the program elements;*

**Inspection Assistant (IA) question:  
Record Keeping**

Is the process adequate to assure that required records are maintained for the useful life of the pipeline? IM.QA.RECORDS.P

**Finding(s):**

CNGC's TIMP manual does not have a specific chapter dedicated to recordkeeping. There are locations in specific chapters which define record keeping or documentation but not a holistic overview and procedure. It would appear this lack of a procedure allows for data and records to be mishandled.

For example, CNGC is in the process of validating MAOP records for high pressure pipelines including transmission lines. This effort requires a tremendous amount of data and subsequent records. During the inspection, Data records for segment 080208-01--8" Bremerton Line were reviewed. Data and records were finalized and validated in 2016 for the pipe grade of this segment. This data directly affects the Baseline Assessment for this line and it should have been revised accordingly, but this did not occur. Section 5.2.3 of the TIMP manual states "At the start of the calendar year the PIE will review the BAP and make any necessary changes with approval from the TIMP". It is not known how many other segments have not been updated based on new information, however, CNGC must ensure the BAPs are current and accurate and the data management procedure addresses appropriate steps to ensure compliance.

**Cascade Response**

CNGC's TIMP plan will be updated to include a Record Retention section specifically outlining documentation and record retention requirements. CNGC will complete the plan update by March 30, 2018.

5. **§49 CFR 192.947 What Records Must an Operator Keep?**

*An operator must maintain, for the useful life of the pipeline, records that demonstrate compliance with the requirements of this subpart. At minimum, an operator must maintain the following records for review during an inspection.*

*(d) Documents to support any decision, analysis and process developed and used to implement and evaluate each element of the baseline assessment plan and integrity management program. Documents include those developed and used in support of any identification, calculation, amendment, modification, justification, deviation and determination made, and any action taken to implement and evaluate any of the program elements;*

**Inspection Assistant (IA) question:  
Record Keeping**

Do records demonstrate that the quality assurance process for risk management applications is being completed as required by ASME B31.8S, Section 12? IM.QA.QARM.R

**Finding(s):**

During the inspection, records were reviewed for 2014, 2015, 2016 Annual Scheduling and Evaluation of P&M Measures. Three years of evaluations all stated that an "annual meeting" needs to be conducted, but this meeting has not been conducted. Currently the IMP states in 9.2 and 9.5 that an annual evaluation is required to see if the process for P&Ms has been followed. The process is not specific. CNGC should revise the IMP and add language to clearly define the expectation of annual reviews - in this specific case and in general for all annual evaluations to ensure adequate and complete results are compiled and followed up.

**Cascade Response**

CNGC will establish an annual meeting schedule with key individuals to review the results of the quality assurance audits. CNGC will utilize the management of change process for the evaluation of quality assurance audit findings and changes required to the TIMP plan. The first annual meeting will be held in the second quarter of 2018.

Please contact Chris Grissom at (509) 531-6427 with questions or comments.

Respectfully Submitted,



Eric Martuscelli  
Vice President, Operations  
Cascade Natural Gas Corporation