



Staff Investigation Report

Cascade Natural Gas Corporation: Failure to Confirm Maximum Allowable Operating Pressure (MAOP) for Washington High Pressure Pipelines

Docket PG-150120

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I. OVERVIEW

A. Summary

The primary purpose of this investigation is to determine whether Cascade Natural Gas Corporation (Cascade or Company) violated Order 01 in Docket PG-150120 by missing a critical compliance deadline. In Order 01, the Commission approved a Stipulated Agreement between Cascade and the Commission's pipeline safety staff (Staff). The agreement required Cascade to submit a written plan describing how the Company planned to determine the Maximum Allowable Operating Pressure (MAOP) for all high pressure pipelines¹ in the Company's Washington service territory for which the Company lacked sufficient MAOP-confirming documentation. Order 01 required the Company to submit its plan by August 12, 2015.

Cascade submitted its initial MAOP validation plan on January 29, 2016—more than five months after the deadline. Staff determined the plan was not acceptable because it failed to identify a path to compliance and instead asked the Commission to excuse the Company's noncompliance by granting "allowances." On April 29, 2016—more than eight months after the original deadline—Cascade submitted its revised plan. Staff is currently reviewing this plan to determine whether it meets the requirements of the Stipulated Agreement approved in Order 01.

From Staff's perspective, Cascade's violation of Order 01's compliance deadline is symptomatic of the Company's broader inattention to pipeline safety regulations. Therefore, another purpose of this investigation is to examine Cascade's commitment to safety, focusing on the Company's level of oversight and attention to regulations requiring the Company to ascertain MAOP and operate in a manner consistent with that determination.

Overall, Staff finds that Cascade has demonstrated a lax attitude toward compliance that exposes the public to an unacceptable level of risk. As shown by the 2010 explosion in San Bruno, California, which killed eight people, inadequate oversight can have catastrophic consequences.

To remedy past violations and minimize the risk of a potentially deadly natural gas release, Staff recommends that the Commission complain against Cascade and impose significant penalties.

B. Authority

The Commission has general authority under RCW 80.01.040 to regulate Cascade in the public interest. RCW 81.88.065 gives the Commission authority to "develop and administer a comprehensive program of gas pipeline safety" in accordance with chapter 81.88 RCW. The Commission has jurisdiction over Cascade because Cascade is a "gas pipeline company" within the meaning of RCW 81.88.010(4), WAC 480-93-005(13), and WAC 480-93-223. Under RCW 81.88.020, the Commission regulates Cascade to the same extent as other public service corporations. Under RCW 81.88.030, Cascade is a "common carrier" within the meaning of Title 81.

¹ High pressure pipelines in Cascade's Washington service territory have maximum allowable operating pressures between 60 pounds per square inch gauge (psig) and 500 psig.

II. BACKGROUND

A. Cascade's Washington Operations

Cascade is a subsidiary of Montana Dakota Utility Resources. After forming in 1953, the Company began serving smaller communities outside larger metropolitan areas.² The Company now serves 68 Washington communities in the following counties: Whatcom, Skagit, Snohomish, Island, Kitsap, Mason, Grays Harbor, Thurston, Cowlitz, Douglas, Grant, Adams, Franklin, Benton, Walla Walla, Chelan, and Yakima. **Appendix A.** The Company also serves 28 communities in Oregon.

Over the years, Cascade has grown by direct expansion or by acquiring other gas systems. The Company's older pipelines include distribution systems that were constructed to distribute manufactured gas to consumers (natural gas was introduced to the Pacific Northwest in 1955). Cascade acquired a number of these systems in the late 1950s and throughout the 1960s.

B. Overview of Pipeline Safety Regulation

In 1970, the federal government promulgated minimum safety standards in accordance with the Natural Gas Pipeline Safety Act of 1968.³ One set of standards requires pipeline operators to establish the maximum allowable operating pressure (MAOP) for every pipeline segment (an operator-defined portion of the pipeline) in the operator's service territory. If an operator cannot establish or confirm MAOP, it cannot assure the public an adequate margin of safety.

Prior to 1970, operators had no federal obligation to maintain MAOP records. Accordingly, PHMSA adopted a "grandfather clause" that authorized operators of pipeline segments constructed before 1970 ("pre-code" pipelines) to establish MAOP using the highest actual operating pressure to which the segment was subjected between 1965 and 1970.⁴ This pressure is often referred to as a "high-5" pressure.

High-5 pressures must be demonstrable. The operator must be able to prove the pressure using some form of reliable information such as a pressure log in a compressor station or a maintenance record showing a pressure gauge reading.

MAOP for pipelines constructed after 1970 ("post-code" pipelines) cannot be established using a high-5 pressure. All post-code pipeline segments must pass a pressure test meeting the requirements of Subpart J of the federal minimum safety standards.⁵ Operators must maintain documentation sufficient to prove compliance.

² See Cascade Natural Gas Corporation, *About Us*, available at <http://www.cngc.com/utility-navigation/about-us>.

³ See PHMSA, Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines, Notice of Proposed Rulemaking, 81 Fed. Reg. 20722, 20725 (April 8, 2016), available at http://www.phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/Files/Pipeline/GasNPRM_April_8_2016.pdf.

⁴ See 49 C.F.R. § 192.619(c).

⁵ See 49 C.F.R. § 192.503.

Cascade operates both pre-code and post-code pipelines. In general, Cascade's high pressure pipeline system consists of pre-code welded steel pipeline segments. As noted below, the 2010 San Bruno explosion involved a pre-code welded steel segment.

C. 2010 San Bruno Explosion

On September 9, 2010, a 30-inch diameter segment of a welded steel intrastate natural gas transmission line ruptured in a residential area of San Bruno, California. The resulting explosion and fire killed eight and injured more than 50.⁶ The federal government's investigation found, among other violations, that the operator failed to maintain records necessary to establish and confirm MAOP.

PHMSA has described the San Bruno incident as a wake-up call. It recently stated:

The San Bruno incident exposed several problems in the way data on pipeline conditions is collected and managed, showing that many operators have inadequate records regarding the physical and operational characteristics of their pipelines. Many of these records are necessary for the correct setting and validation of MAOP, which is critically important for providing an appropriate margin of safety to the public.⁷

In 2011, PHMSA initiated a rulemaking to establish more stringent MAOP recordkeeping requirements.⁸ As of the date of this Investigation Report, PHMSA has not yet adopted its updated rules. In this docket, Staff evaluated Cascade's compliance with current regulations.

D. 2013 Staff Inspections

Staff routinely conducts pipeline safety inspections in Washington State. Staff's inspections typically involve a review of compliance records at the operator's offices and field inspections of the operator's gas assets. Staff's primary goal is to verify the operator's compliance with the pipeline safety regulations found in 49 C.F.R. §§ 191 and 192, and in WAC 480-93. Staff's records review typically occurs on-site for logistical ease and to safeguard against falsification of records. Staff expects that records will be available for review at the time of the inspection.

In 2013, Staff inspected Cascade's records and gas assets in the Company's Cowlitz (Longview), Whatcom (Bellingham), and Tri Cities-Walla Walla districts. During each inspection, Staff asked Cascade district personnel to produce valid MAOP-confirming documentation for randomly-selected, high pressure pipeline segments (i.e., segments with an established or assumed MAOP of greater than 60 psig, or pounds per square inch gauge). Staff focused on older segments located in more populated areas and on segments that receive supply directly from the Williams Northwest transmission pipeline. As discussed in this Investigation Report, Cascade was unable to produce all requested MAOP-confirming documentation during Staff's district inspections.

⁶ Notice of Proposed Rulemaking, *supra*, 81 Fed. Reg. at 20727.

⁷ *Id.*

⁸ *See id.* at 20722, 20734-35.

The Company has since acknowledged that nearly 40% of its Washington high pressure system lacks sufficient MAOP-confirming documentation.

III. STAFF INVESTIGATION

A. Cowlitz (Longview) Inspection (March 25-28, 2013)

During the Cowlitz (Longview) inspection, Staff asked Cascade to produce MAOP-confirming documentation for the 6” Kalama High Pressure (HP) Replacement constructed in 1996. Staff made the following findings in its inspection report (**Appendix B**):

During the records review to confirm MAOP of HP lines, the 6” Kalama HP replacement project constructed in 1995 was evaluated. As part of the record review, as-builts, invoices, bills of lading and other information from the job file were reviewed. The pipe used in this project was FBE coated, 6-inch steel. What strength pipe was actually put in the ground is unclear. CNG procures their own materials for construction. They order materials based on CNG part numbers identified in their CNG Parts Catalogue. For the Kalama project, one record, “Cost Analysis Sheet for Expenditure Requisition”, identified the pipe as part No. PXW-650X42. According to the CNG Part Numbering system, this would be X42 (42000 psi yield strength) pipe. However on all “Material Transfer Records” and as-built records it’s listed as PXW-650, without the X42 designation. This is significant as CNG has several pipe specifications listed in their part numbering system, each with different designations for pipe strength. For example, if listed as PXW-650, it’s class B pipe, with 35,000 for yield strength. If listed as PXW-650X42, then pipe strength is 42,000. The actual construction related documents- Material Transfer Records and as-builts do not have the X42 designation shown. CNG is searching their records for any additional information on this project, however, the records available during this inspection are inconsistent and do not allow confirmation of MAOP according to [49 C.F.R. § 192.619].

Whether the pipe is X42 or Class B, CNG’s current MAOP would be satisfactory. However, CNG is not sure what pipe specification is in the ground in Kalama, and therefore, not sure of what the MAOP should be. Records (and their management), especially of MAOP confirming documents, must be complete, accurate and readily available. CNG must confirm the MAOP of the 6” Kalama HP line. If pipe material cannot be ascertained, then 49 CFR 192.105 requires using 24,000 as the pipe strength in the design pressure formula to calculate MAOP.

B. Whatcom (Bellingham) Inspection (May 13-16, 2013)

During the Whatcom (Bellingham) inspection, Staff asked Cascade to produce MAOP-confirming documentation for the Line 1-8” Bellingham high pressure line constructed in 1957. Staff made the following findings in its inspection report (**Appendix C**):

During the records review to confirm MAOP of HP lines, CNG staff were asked to produce the MAOP confirming documents for Line 1-8” Bellingham HP. CNG at the time of the inspection could not produce supporting MAOP documents for this line. This line was installed in 1957. The two documents CNG did produce cannot be considered reliable records. One was undated and titled “Construction Specification for Proposed Pipeline (Order Cause Nos.U-8799-8800, Rule 20)”. This document notes the pipeline was to be tested to a pressure of 500 psi. The other document was a 1970 letter to Lee Johnson & Associates which states that the line was “built to the following specifications” including pipe grade, diameter, thickness, coating and construction test pressure. These documents do not provide a definitive answer supporting the current MAOP of 380 psi as they are not original record documents. CNG is searching their files for any additional information on this pipeline, however, the records available during the inspection do not allow confirmation of MAOP according to this subpart.

Records (and their management), especially of MAOP-confirming documents, must be complete, accurate and readily available. CNG needs to have documents which support all the “facts” outlined in the 1970 letter to Lee Johnson & Associates for Line 1-8” Bellingham HP. If pipe material cannot be ascertained, then 49 CFR §192.105 requires using 24,000 as the pipe strength in the design pressure formula to calculate MAOP.

C. Cascade Agrees to Confirm MAOP for All Washington High Pressure Pipelines (June 28, 2013)

After completing the Whatcom (Bellingham) inspection, Staff suspected that Cascade’s inability to verify MAOP could be a systemic issue. To probe the extent of the issue, Staff requested in its inspection report that Cascade confirm MAOP for *all* Washington high pressure pipelines. Staff wrote in its inspection report (**Appendix C**):

*[R]ecords management (not being able to find MAOP confirming documents) was also an issue during the 2013 CNG Longview inspection. It appears that this is not an isolated incident. Therefore, CNG must confirm the MAOP of **all** their HP lines with supporting documentation for Bellingham as well as all other districts. Please tell us the date by which CNG can produce the confirmation with supporting documentation.*

In a letter dated June 28, 2013, Cascade advised Staff that it had initiated a “review of all CNGC HP records” that would “address any HP lines whose MAOP-confirming documents cannot be located.” **Appendix D.** Cascade represented that it would complete its review by September 30, 2013.

D. Cascade’s Initial Review Identifies 28 Pipeline Segments with Insufficient MAOP-Confirming Documentation (September 27, 2013)

On September 27, 2013, Cascade submitted the results of its initial MAOP review. **Appendix E.** Cascade informed Staff that it had discovered 28 pipeline segments lacking sufficient MAOP-confirming documentation. Cascade wrote:

In response to a 2013 inspection performed by WUTC staff in the Bellingham District, Cascade Natural Gas (Cascade) has recently completed a review of the documentation on its high pressure (HP) pipelines which are operating in the state of Washington. The purpose of this review is to validate the Maximum Allowable Operating Pressure (MAOP) for each pipeline. This review included records located in Cascade’s General Office, district offices, off-site storage facilities, and electronically stored files. **As a result of this review Cascade discovered 28 pipeline sections with missing or insufficient documentation to validate the current MAOP.**

The Company represented that it had “prepared a schedule to gather missing or insufficient information, or to replace the affected pipeline section.” **Appendix E.**

E. Staff Data Requests (October 10, 2013)

On October 10, 2013, Staff submitted to Cascade data requests seeking clarification of certain aspects of the Company’s September 27, 2013 MAOP response. **Appendix F.**

F. Tri Cities-Walla Walla Inspection (October 14-18, 2013)

While awaiting Cascade’s response to the data requests, Staff continued its series of standard safety inspections. During the Tri-Cities-Walla Walla inspection, Staff asked Cascade to produce MAOP-confirming documentation for the 8” Attalia line. Staff made the following findings in its inspection report (**Appendix G**):

*Based on findings from previous CNG inspections completed this year, CNG has reviewed all of its high pressure pipelines in all units looking for missing data used to confirm MAOP including this unit. CNG has formulated a program to obtain all missing data and Pipeline Safety is currently reviewing it. HOWEVER, pressure test records for the 8” Attalia Line were asked for during this inspection. **CNG did not have complete pressure test records (per Kathleen Chirgwin, GO).** In reviewing CNG’s table of missing information submitted to Pipeline Safety as part of the above mentioned program, the 8” Attalia line was included, however, pressure testing records were NOT listed as missing; only “pipe grade” was listed as missing. This portion of the code is not retroactive and the 8” Attalia line was installed pre code. **CNG still must confirm MAOP per §192.619, if the pressure testing documents are not complete.** We will require CNG to submit its MAOP confirming documents for the 8-inch Attalia line to the UTC within 30 days from the date of this letter.*

G. After Further Review, Cascade Identifies Additional Pipeline Segments with Insufficient MAOP-Confirming Documentation (April 17, 2014)

Cascade submitted responses to Staff's data requests on April 17, 2014. **Appendix H.** The Company provided a table in which the Company now acknowledged that it was operating **98 pipeline segments** with insufficient MAOP-confirming documentation (Table 1). These segments were located in the following districts: Aberdeen (8 segments), Bellingham (19), Bremerton (8), Kennewick (13), Longview (9), Mt. Vernon (17), Walla Walla (2), Wenatchee (8), Yakima (5), and Sunnyside (9).

H. Staff and Cascade Execute Stipulated Agreement (February 2, 2015)

Cascade's updated response confirmed that the Company's inability to confirm MAOP was indeed systemic, rather than isolated. Staff determined that the Company should develop a comprehensive MAOP validation plan as an initial step toward compliance.

On February 2, 2015, Staff and Cascade executed a Stipulated Agreement under which the Company agreed to institute "a systematic process designed to provide Staff with certain detailed information regarding Cascade's high pressure pipeline system." **Appendix I.**

In particular, Cascade agreed to provide:

- i. A summary of all high pressure systems with data currently insufficient to demonstrate and confirm the MAOP of such systems. The Parties agree that . . . high pressure shall be defined as greater than 60 psig.
- ii. For pre-code pipe with unknown characteristics, written documentation describing the basis or bases by which the Company has determined said pipe's current MAOP.
- iii. Any such process or processes the Company uses to validate data to calculate hoop stress for unknown pipe, including but not limited to, pipe grade, diameter and wall thickness. Such process or processes must conform to the requirements set forth in 49 C.F.R. § 192.107. Any new or innovative processes for validating pipe characteristics shall be submitted to the Commission for review.
- iv. For the high pressure pipelines identified pursuant to section i. above, the following information:
 1. Percentage of Specified Minimum Yield Strength (%SMYS);
 2. Test pressure;
 3. Installation year;
 4. Critical missing information; and,
 5. An action plan for each pipeline segment set forth in a tabular format.
- v. Rationale describing the prioritization of the action plan referenced in section iv., above.
- vi. A process for identifying when immediate corrective actions will be required.

- vii. Time frames for completion of the action plan for each pipeline segment referenced in section iv., above. The Company shall also provide a justification for the established time frames for each line segment.

The parties further agreed, “Until a pipe’s characteristics can be verified, Cascade will assume the most stringent criteria for unknown pipe characteristics, as described in 49 C.F.R. § 192.107 and .109.” **Appendix I.**

Finally, the parties agreed that Cascade would submit its plan within six months after approval of the agreement by the Commission.

I. The Commission Issues Order 01 in Docket PG-150120 Approving the Staff-Cascade Stipulated Agreement (February 12, 2015)

The Commission approved the Stipulated Agreement on February 12, 2015, in Order 01 in Docket PG-150120. **Appendix J.** Order 01 required Cascade to submit its written compliance plan no later than August 12, 2015 (i.e., six months from Order 01’s effective date).

J. Cascade Submits Initial MAOP Validation Plan (January 29, 2016)

Cascade failed to submit its written compliance plan by the Commission’s August 12, 2015 deadline, thereby violating Order 01 in Docket PG-150120.

In a letter dated January 12, 2016, Staff advised Cascade: “CNGC has not performed and is therefore in violation of the Order. Therefore, the Commission is obligated, in the public interest, to issue a complaint unless the performance deficiencies are immediately rectified.”

Appendix K. Staff asked Cascade to submit its plan no later than January 29, 2016.

On January 29, 2016, Cascade submitted to Staff a document titled “Maximum Allowable Operating Pressure Determination & Validation Plan.” **Appendix L.** Staff reviewed the plan and determined that it failed to meet the requirements in the Stipulated Agreement approved in Order 01. In particular, rather than provide MAOP-confirming documentation for all Washington high pressure pipelines, the plan requested that the Commission grant several “allowances” enabling the Company to continue operating certain Washington high pressure pipelines without MAOP-confirming documentation.

Cascade’s initial plan also included Table 1, which identified “HP pipeline segments with data currently insufficient to demonstrate and confirm MAOP.” **Appendix L.** Table 1 identified **90 pipeline segments** being operated with insufficient MAOP-confirming documentation.

Staff required Cascade to resubmit its initial plan by April 29, 2016, this time omitting requests for “allowances.”

K. Cascade Submits Revised MAOP Validation Plan (April 29, 2016)

On April 29, 2016, Cascade submitted its revised MAOP Determination & Validation Plan. **Appendix M.** Notably, Cascade again revised the number of high pressure pipeline segments admittedly being operated “with data currently insufficient to demonstrate and confirm MAOP.”

In revised Table 1, the Company reported that it was operating **116 pipeline segments** without MAOP-confirming documentation. (For reference, the Company reported in September 2013 that it lacked MAOP-confirming documentation for 28 pipeline segments. In April 2014, the number rose to 98. In January 2016, as stated above, the number fell to 90.)

The table below illustrates how Cascade’s numbers have changed over time:

Pipeline Segments with Insufficient MAOP Documentation				
	Date of Cascade’s Submittal			
Cascade District	9/27/2013	4/17/2014	1/29/2016	4/29/2016
Aberdeen	1	8	6	7
Bellingham	4	19	18	28
Bremerton	2	8	4	4
Kennewick	5	13	12	15
Longview	4	9	10	12
Mt. Vernon	4	17	17	22
Walla Walla	3	2	2	2
Wenatchee	0	8	8	10
Sunnyside	4	9	9	12
Yakima	1	5	4	4
Total	28	98	90	116

The large number of segments lacking MAOP-confirming documentation raises obvious public safety concerns. But equally concerning is the change in Cascade’s data over time. The fluctuations reflected in the above table concern Staff because they call into question Cascade’s ability to provide accurate data. The shifting data suggest that Cascade does not know its system well enough to pinpoint exactly how many Washington high pressure pipeline segments it is operating with insufficient MAOP-confirming documentation.

As of the date of this Investigation Report, Staff is still reviewing Cascade’s revised plan for compliance with the Stipulated Agreement approved in Order 01.

L. By Its Own Admission, Cascade Currently Lacks MAOP-Confirming Documentation for Nearly 40% of its Washington High Pressure System (June 6, 2016)

While reviewing Cascade’s revised MAOP Determination & Validation Plan for compliance with the Stipulated Agreement approved in Order 01, Staff requested that Cascade report the

percentage of its Washington high pressure system that presently lacks MAOP-confirming documentation.

On June 6, 2016, Cascade emailed Staff a “table showing per district the total unvalidated [sic] mileage and total mileage of all pipelines operating at over 60 psig [i.e., high pressure pipelines].” **Appendix N.**

The table from **Appendix N** is reproduced below:

District	Total Unvalidated Mileage	Total Mileage
Aberdeen	15.01	85.14
Bellingham	62.73	105.51
Bremerton	4.69	65.58
Kennewick	22.12	53.34
Longview	13.75	24.67
Mt. Vernon	55.24	103.87
Walla Walla	1.34	2.28
Wenatchee	22.43	68.76
Yakima	25.37	50.52
Total	222.68	559.67

According to this table, Cascade is currently operating 39.8% (222.68 out of 559.67 miles) of its Washington high pressure system without MAOP-confirming documentation.

M. Timeline

The following timeline summarizes the major events in Staff’s investigation:

1. March 25-28, 2013 Cowlitz (Longview) inspection
2. April 11, 2013 Cowlitz (Longview) inspection report sent to Cascade
3. May 13-16, 2013 Whatcom (Bellingham) inspection
4. May 29, 2013 Whatcom (Bellingham) inspection report sent to Cascade; report includes requirement that Cascade confirm MAOP for all Washington high pressure pipelines
5. September 27, 2013 Cascade submits initial MAOP response identifying 28 pipeline segments lacking MAOP-confirming documentation
6. October 10, 2013 Staff submits data requests to Cascade
7. October 14-18, 2013 Tri-Cities-Walla Walla inspection
8. November 5, 2013 Tri-Cities-Walla Walla inspection report sent to Cascade
9. April 17, 2014 Cascade submits responses to Staff’s October 2013 data requests
10. February 2, 2015 Staff and Cascade execute Stipulated Agreement under which Cascade promises to submit a comprehensive MAOP

- | | |
|-----------------------|--|
| | validation plan within six months after approval of the Agreement by the Commission |
| 11. February 12, 2015 | Commission approves Stipulated Agreement in Order 01 in Docket PG-150120 (deadline to submit MAOP validation plan becomes August 12, 2015) |
| 12. August 12, 2015 | Cascade misses deadline to submit MAOP validation plan, thereby violating Order 01 |
| 13. January 29, 2016 | Cascade submits deficient initial MAOP Determination & Validation Plan |
| 14. April 29, 2016 | Cascade submits revised MAOP Determination & Validation Plan (Staff is currently reviewing the plan’s sufficiency) |

IV. VIOLATIONS

Based on the evidence summarized above and appended to this report, Staff finds that Cascade committed the following violations:

A. Violation of Order 01 in Docket PG-150120

Order 01 in Docket PG-150120 required Cascade to submit a comprehensive MAOP validation plan no later than August 12, 2015. Cascade submitted a deficient initial plan on January 29, 2016, and a revised plan on April 29, 2016. As of the date of this Investigation Report, Staff continues to work with the Company to ensure that the Company’s revised plan complies with all requirements of the Stipulated Agreement approved in Order 01.

For administrative ease, Staff determines that the Company’s violation of Order 01 commenced on August 12, 2015, and continued until, at the earliest, April 29, 2016, the date on which Cascade submitted its revised MAOP compliance plan.

B. Systemic Failure to Maintain MAOP-Confirming Documentation

WAC 480-93-018(1) provides, “Each gas pipeline company must maintain records sufficient to demonstrate compliance with all requirements of 49 CFR §§ 191, 192 and chapter 480-93 WAC.”

49 C.F.R. § 192.13 provides:

- (a) No person may operate a segment of pipeline listed in the first column that is readied for service after the date in the second column, unless: (1) The pipeline has been designed, installed, constructed, initially inspected, and initially tested in accordance with this part; or (2) The pipeline qualifies for use under this part according to the requirements in § 192.14.

Pipeline	Date
Offshore gathering line	July 31, 1977.
Regulated onshore gathering line to which this part did not apply until April 14, 2006	March 15 2007.
All other pipelines	March 12, 1971.

(b) No person may operate a segment of pipeline listed in the first column that is replaced, relocated, or otherwise changed after the date in the second column, unless the replacement, relocation or change has been made according to the requirements in this part.

Pipeline	Date
Offshore gathering line	July 31, 1977.
Regulated onshore gathering line to which this part did not apply until April 14, 2006	March 15 2007.
All other pipelines	November 12, 1971.

(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

49 C.F.R. § 192.503(a) provides, “No person may operate a new segment of pipeline, or return to service a segment of pipeline that has been relocated or replaced until—(1) It has been tested in accordance with this subpart and § 192.619 to substantiate the maximum allowable operating pressure; and (2) Each potentially hazardous leak has been located and eliminated.”

49 C.F.R. §§ 192.517 and 192.603 require that operators maintain MAOP records for the life of the pipeline.

49 C.F.R. § 192.603(a) further provides, “No person may operate a segment of pipeline unless it is operated in accordance with this subpart [§§ 192.601-192.631].”

49 C.F.R. § 192.619(a) provides, “No person may operate a segment of steel or plastic pipeline at a pressure that exceeds a maximum allowable operating pressure determined [using a method approved in this section].” The operator must have documentation that substantiates its determination. The full text of 49 C.F.R. § 192.619 is provided in **Appendix O**.

Staff alleges that Cascade failed to maintain records or documentation sufficient to establish and/or validate the MAOP of at least 116 pipeline segments, in violation of WAC 480-93-018(1), 49 C.F.R. § 192.13, 49 C.F.R. § 192.503(a), 49 C.F.R. § 517, 49 C.F.R. § 192.603, and/or 49 C.F.R. § 192.619(a).

For administrative ease, Staff determines that this violation commenced on April 29, 2016, the date Cascade submitted its revised MAOP Determination & Validation Plan. **Appendix M**. Cascade admitted in Table 1 to the plan that it was operating 116 high pressure pipeline segments with “data currently insufficient to demonstrate and confirm MAOP.”

This violation continues as of the date of this Investigation Report.

V. PENALTY RECOMENDATION

A. Commission's Enforcement Policy

In 2013, the Commission adopted a policy statement setting forth 11 factors the Commission may consider when deciding whether to bring an enforcement action and, if an action will be brought, the appropriate penalty to seek.⁹ Staff addresses these factors below.

1. How serious or harmful the violation is to the public.

Cascade's violation of Order 01 and ongoing failure to maintain records sufficient to verify MAOP are serious because they indicate that the Company has failed to ensure an adequate margin of public safety. As demonstrated by the 2010 San Bruno explosion, inadequate oversight and poor recordkeeping can have deadly and catastrophic operational consequences. Staff is very concerned about Cascade's inability to assure the Commission and, by extension, the public, that the Company has taken all necessary actions to reduce the risk of a catastrophic incident in Washington State.

2. Whether the violation is intentional.

In Staff's view, Cascade's violations constitute intentional inaction arising from a complacent attitude toward Commission regulation. Staff is particularly concerned by the Company's January 29, 2016 request for "allowances" (i.e., permission to continue operating unlawfully). This request demonstrated that Company is willing to continue to operate its system using unreliable data. The timing of the request was also troubling, as it came several months after Order 01's unambiguous deadline to submit a comprehensive MAOP validation plan.

3. Whether the company self-reported the violation.

Cascade did not self-report its violations. Staff first brought the violations to the Company's attention during the course of standard inspections in 2013.

4. Whether the company was cooperative and responsive.

Cascade has been cooperative but not responsive. Most importantly, the Company failed to submit its comprehensive MAOP validation plan by August 12, 2015, as required by Order 01. The Company also failed to submit timely responses to Staff's October 2013 data requests.

5. Whether the Company promptly corrected the violations and remedied the impacts.

Cascade did not promptly correct its violations. The Company submitted its initial MAOP validation plan more than five months after the deadline set by Order 01. The plan was deficient because it merely asked for "allowances" to violate minimum pipeline safety standards. The Company has submitted a revised plan that is currently under review. As of the date of this Investigation Report, however, the Company continues to operate 116 high pressure pipeline segments without MAOP-confirming documentation.
Appendix M.

⁹ *Enforcement Policy of the Washington Utilities and Transportation Commission*, Docket A-120061 (Jan. 7, 2013).

6. The number of violations.

Cascade plainly violated Order 01's compliance filing deadline and subsequently acknowledged that it continues to operate 116 pipeline segments in Washington State with insufficient MAOP-confirming documentation. In Staff's view, these facts support two distinct series of violations that have each continued well past the maximum charging period (ten days) in WAC 480-93-223. Staff accordingly views this case as a high-violation matter that warrants significant penalties.

7. The number of customers affected.

Staff contends that Cascade has created the potential for widespread harm. The Company is admittedly operating nearly 40% of its Washington high pressure system with insufficient MAOP-confirming documentation.

8. The likelihood of recurrence.

As demonstrated by Cascade's January 2016 request for "allowances," the Company is willing to operate its system on unreliable assumptions. Further, Staff's investigation has demonstrated that the Company was largely unaware of its behavior until the issue was brought to light by Staff. Absent effective enforcement, the Company's resolve to correct the deficiencies that prompted this investigation is suspect.

9. The company's past performance regarding compliance, violations, and penalties.

As stated elsewhere in this Investigation Report, Staff believes that Cascade has adopted a lax or complacent attitude toward compliance. The following recent incidents have contributed to this belief:

- In 2015, the Commission penalized Cascade \$275,000 for improper billing practices.¹⁰
- In 2012, Staff inspected Cascade's Natural Gas Distribution Integrity Management Program (DIMP).¹¹ The inspection found that the DIMP was flawed because Cascade based its risk model in part on inaccurate data from leak repair and classification records. As a result, Cascade's assigned risk factors and subsequent mitigation strategies were also flawed. These plan elements are fundamental to effective DIMP implementation. Cascade's omissions and oversights resulted in significant portions of the plan being rewritten to meet minimum code requirements.
- In 2012, Staff conducted a Control Room Management Inspection (CRM) involving Cascade's Bismarck, North Dakota control room (operated by Montana-Dakota Utilities).¹² Staff found more than 30 CRM implementation issues.
- In 2012, Staff conducted a Natural Gas Public Awareness Program (PAP) inspection.¹³ Significant portions of the PAP had to be rewritten because they were insufficient to meet minimum code requirements.

¹⁰ *Washington Utilities and Transportation Commission v. Cascade Natural Gas Corporation*, Docket UG-140381, Initial Order Approving Settlement Agreement (June 10, 2015).

¹¹ Staff Inspection No. 2574.

¹² Staff Inspection No. 2576.

¹³ Staff Inspection No. 2613.

- In 2011, the Commission penalized Cascade \$425,000 for 364 violations of Commission gas safety rules occurring in several of Cascade’s operating districts.¹⁴ The investigation found that Cascade failed to follow its gas pipeline plan and procedure manual, indicating an “overall lack of accountability, an overall lack of quality control, and overall lack of interest in and/or attention to the details of compliance with gas pipeline safety laws and rules.”

10. The Company’s existing compliance program.

Staff is not aware of any voluntary compliance program aside from the MAOP validation plan required by Order 01 in Docket PG-150120. The Company probably will not adopt an effective compliance program unless the Commission compels action.

11. The size of the company.

Cascade serves more than 272,000 Washington and Oregon customers. The Company’s 2015 Washington total revenue (per books) was \$215,894,678¹⁵.

B. Monetary Penalty Recommendation

WAC 480-93-223 provides, “Any gas pipeline company that violates any pipeline safety provision of any commission order, or any rule in this chapter including those rules adopted by reference, or chapter 81.88 RCW is subject to a civil penalty not to exceed two hundred thousand dollars for each violation for each day that the violation persists. The maximum civil penalty under this subsection for a related series of violations is two million dollars.”

Pursuant to WAC 480-93-223, after giving consideration to the enforcement factors discussed above, Staff recommends that the Commission pursue the maximum penalty for each of the two series of violations identified above. Because each violation continued for at least ten days, the Commission may pursue \$2 million for each violation, for a total penalty of \$4 million.

VI. CONCLUSION

The federal Pipeline and Hazardous Materials Safety Administration (PHMSA) recently stated, “In order to keep the public safe and to assure the nation’s energy security, operators and regulators must have an *intimate understanding* of the threats to and the operations of the entire pipeline system.”¹⁶ As discussed in this Investigation Report, Staff finds that Cascade does not have an intimate understanding of the threats to and the operations of its entire pipeline system. As MAOP records are a basic building block of pipeline safety requirements, Staff is unsure if Cascade has even a basic understanding of its system.

¹⁴ *Washington Utilities and Transportation Commission v. Cascade Natural Gas Corporation*, Docket PG-110443, Complaint (March 21, 2011).

¹⁵ Cascade Natural Gas Corporation, Statement of Operations and Rate of Return, Docket UG-160445 (Dec. 31, 2015).

¹⁶ PHMSA, Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines, Notice of Proposed Rulemaking, 81 Fed. Reg. 20722, 20727 (April 8, 2016) (emphasis added), available at http://www.phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/Files/Pipeline/GasNPRM_April_8_2016.pdf.

Public trust is predicated on compliance with the standards and regulations governing the operations of a natural gas utility. After the 2010 San Bruno disaster, Cascade should have diligently reviewed its records to ensure compliance with pipeline safety requirements. Cascade instead chose to *assume* compliance.

To encourage better oversight and a more sincere interest in compliance with pipeline safety regulations, Staff recommends that the Commission issue a formal complaint against Cascade and pursue a significant monetary penalty. Staff further recommends that the Commission authorize any other just and lawful form of relief, including, but not limited to, an order requiring Cascade to develop and follow a new or updated MAOP compliance plan.