### PUBLIC UTILITIES COMMISSION

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GI-2017-11-WGS36-08

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SUBJECT: General Order 112-F Transmission Integrity Management Program (TIMP) Inspection of Wild Goose Gas Storage

Dear Mr. Fournier:

On behalf of the Safety and Enforcement Division (SED) of the California Public Utilities Commission, Paul Penney, Nathan Sarina, Victor Muller and Richard Boakye Yiadom conducted a General Order (GO) 112-F inspection of the Wild Goose Storage TIMP from November 6-10, 2017. The inspection included a review of the TIMP plan as well as records associated with PHMSA's TIMP "Inspection Protocols with Results" form.

SED's findings are noted in the Summary of Inspection Findings (Summary), which is enclosed with this letter.

Within 30 days of your receipt of this letter, please provide a written response indicating the measures taken by WGS to address the violations and concerns/ recommendations noted in the Summary.

If you have any questions, please feel free to contact Paul Penney at 415-703-1817.

Sincerely, Kuneth A. Br

Kenneth Bruno Program Manager Gas Safety and Reliability Branch Safety and Enforcement Division

Enclosure: Summary of Inspection Findings

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# SUMMARY OF INSPECTION FINDINGS

### 1. Protocol Area A: Identify HCAs

**A.01.a.:** Verify the operator's integrity management program includes documented processes on how to implement methods (1) and (2) in order to identify high consequence areas. [§192.905(a)]

### **Issues Identified**

**RECOMMENDATION:** Revise the WGS TIMP Plan, Section 3.1.4 to align the language with GO 112-F as it relates to when method 1 or method 2 may be used.

### 2. Protocol Area B: Baseline Assessment Plan

We are past the baseline period. This Protocol Area was skipped.

# 3. Protocol Area C: Identify Threats, Data Integration, Risk Assessment

**C.01.a.** If the operator is following the prescriptive or performance-related approaches, verify that the following categories of failure have been considered and evaluated: [§192.917(a) and ASME B31.8S-2004, Section 2.2]

- i. external corrosion,
- ii.
- x. cyclic fatigue or other loading condition [§192.917(e)(2)],
- xi. all other potential threats.

# **Issues Identified**

**VIOLATION:** WGS needs to add more of a justification for the cyclic fatigue threat. WGS should include references to the IM FAQs and generic studies such as "Evaluating the stability of manufacturing and Construction defects in Natural Gas Pipelines" or ""Basics of Metal Fatigue in Natural Gas Pipeline Systems – A Primer for Gas Pipeline Operators", both reports by John Kiefner.

**C.01.c.** Verify that the operator's threat identification has considered interactive threats from different categories (e.g., manufacturing defects activated by pressure cycling, corrosion accelerated by third party or outside force damage) [ASME B31.8S-2004, Section 2.2].

# **Issue Identified**

**RECOMMENDATION:** Add extra detail to the WGS IMP plan, Section 4.1.3, for how interactive threats are considered and documented.

**C.02.b.** Verify that the operator has assembled data sets for threat identification and risk assessment according to the requirements in ASME B31.8S-2004, Section 4.2, ASME B31.8S-2004, Section 4.3, and ASME B31.8S-2004, Section 4.4. At a minimum, an operator must gather and evaluate the set of data specified in ASME B31.8S-2004, Appendix A (summarized in ASME B31.8S-2004, Table 1) and consider the following on covered segments and similar non-covered segments [§192.917(b)]:

- i. Past incident history
- ii. Corrosion control records
- iii. Continuing surveillance records
- iv. Patrolling records
- v. Maintenance history
- vi. Internal inspection records
- vii. All other conditions specific to each pipeline.

# **Issue Identified**

**RECOMMENDATION:** According to the WGS IMP, Section 4.2.3, WGS tabulates the data in the Master Data Set spreadsheet. Add language to reflect this protocol question, items i-vii into Section 4.2.3.

**C.02.f.** Verify that individual data elements are brought together and analyzed in their context such that the integrated data can provide improved confidence with respect to determining the relevance of specific threats and can support an improved analysis of overall risk. [ASME B31.8S-2004, Section 4.5]. Data integration includes:

- i. A common spatial reference system that allows association of data elements with accurate locations on the pipeline [ASME B31.8S-2004, Section 4.5];
- ii. Integration of ILI or ECDA results with data on encroachments or foreign line crossings in the same segment to define locations of potential third party damage [§192.917(e)(1)].

### **Issue Identified**

**RECOMMENDATION:** Update the MDS01 form, row 8 to include a follow up action to update the MDS with encroachments.

- 4. Protocol Area D: DA Plan N/A
- 5. Protocol Area E: Remediation No Issues Identified
- 6. Protocol Area F: Continual Evaluation and Assessment No Issues Identified
- 7. Protocol Area G: Confirmatory DA N/A

# 8. Protocol Area H: Preventative and Mitigative Measures

**H.01.a.** Verify that the process for identifying additional measures is based on identified threats to each pipeline segment and the risk analysis required by §192.917. [Note: Protocol H.08 addresses the implementation decision process for additional preventive and mitigative measures.] [§192.935(a)]

# Issue Identified

**RECOMMENDATION:** Add and additional column to the Risk Assessment spreadsheet (HCA-01) to identify potential additional mitigative measures.

**H.08.a.** Verify that a systematic, documented decision-making process is in place to decide which measures are to be implemented, involving input from relevant parts of the organization such as operations, maintenance, engineering, and corrosion control. [§192.935(a)]

# **Issue Identified**

**RECOMMENDATION:** Put additional general language in Section 6 describing the decision making process.

# 9. Protocol Area I: Performance Measures

**I.01.b.** Verify the process to evaluate IM program effectiveness includes an adequate set of performance metrics to provide meaningful insight into IM program performance.

### **Issue Identified**

**RECOMMENDATION:** Consider "Process/ Activity" and "Operational" metrics to include into WGS's performance metrics. See B31.8S-2004, Sections 9.2.1 and 9.2.2 for details.

**J.01.a** Verify that the following records, as a minimum, are maintained for the useful life of the pipeline: [§192.947, ASME B31.8S-2004, Section 12.1 and ASME B31.8S-2004, Section 12.2(b)(1)]

- i. A written integrity management program [§192.947(a)]
- ii. Threat identification and risk assessment documentation per §192.917 [§192.947(b)]
- iii. A written baseline assessment plan per §192.919 [§192.947(c)]
- iv. 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 [§192.947(d)]
- v. Training program documentation and training records per §192.915 [§192.947(e)]
- vi. Remediation schedule and technical basis documentation per §192.933 [§192.947(f)]
- vii. Direct assessment plan documentation per §192.923 through §192.929 [§192.947(g)]
- viii. Confirmatory assessment documentation per §192.931 [§192.947(h)]
- ix. Documentation of Notifications to PHMSA or State/Local Regulatory Agencies. [§192.947(i)]

### **Issue Identified**

**RECOMMENDATION:** Expand on the training requirements for each category in 192.915.

### 10. Protocol Area J: Record Keeping

**K.02.c.** Verify the following are provided for by the change procedures: [ASME B31.8S-2004, Section 11(a)]

#### **Issue Identified**

**RECOMMENDATION:** Add "Time Limitations" to the MOC form by defining the "Priority", and the timeline for the priority.

- **11. Protocol Area K: Management of Change (MOC)** No Issues Identified
- **12. Protocol Area L: Quality Assurance** No Issues Identified
- **13. Protocol Area M: Communications Plan** No issues identified
- **14. Protocol Area N: Submittal of Program Documents** No issues identified