

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
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July 1, 2019

GI-2019-03-WGS-36

Mathieu Fournier, VP of Eng/Ops (Mathieu.Fournier@rockpointgs.com)
Niska Gas Storage Partners LLC
400, 607 – 8th Avenue S.W.
Calgary, Alberta, Canada T2P 0A7

SUBJECT: Closure letter for General Order 112-F Comprehensive Operation and Maintenance Gas Inspection of Wild Goose Gas Storage LLC.

Dear Mr. Fournier:

The Safety and Enforcement Division (SED) of the California Public Utilities Commission reviewed Wild Goose Gas Storage LLC.'s (WGS) Comprehensive Operation and Maintenance Gas Inspection response letter dated June 7, 2019 that addressed one (1) Violation and nine (9) Concerns identified during General Order 112-F inspection of WGS's Comprehensive Operation and Maintenance Gas Inspection conducted on March 3 through 7, and March 11, 2019.

Attached is a summary of SED's inspection findings, WGS' responses to SED's findings, and SED's evaluation of WGS' responses to the Violation and Concerns.

This letter serves as an official closure of the 2019 Comprehensive Operation and Maintenance Gas Inspection of WGS and any matters that are being recommended for enforcement will be processed through the Commission's Citation Program or a formal proceeding.

Thank you for your cooperation in this inspection. If you have any questions, please contact Mahmoud (Steve) Intably, at (213) 576-7016 or by email: mai@cpuc.ca.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matthewson Epuna'.

Matthewson Epuna
Program and Project Supervisor
Gas Safety and Reliability Branch
Safety and Enforcement Division

cc: Harold Gold, WGS (Harold.Gold@rockpointgs.com)
Gary Theberge, WGS (Gary.Theberge@rockpointgs.com)
Mahmoud Intably, SED (mai@cpuc.ca.gov)
Kan-Wai Tong, SED (kwt@cpuc.ca.gov)
Claudia Almengor, SED (Claudia.Almengor@cpuc.ca.gov)

Post-Inspection Written Preliminary Findings

Date of Transmittal: 04/05/2019

Dates of Inspection: March 3-7 and 11, 2019

Operator: Wild Goose Storage LLC

Operator IDs: 31287

Inspection Systems: Wild Goose Gas Storage facility

Assets (Unit IDs): Wild Goose Storage (88673 (36))

System Type: GT

Inspection Name: 2019 WGS' Wild Goose Gas Storage (Comprehensive Operation and Maintenance Gas Inspection (Transmission))

Lead Inspector: Mahmoud (Steve) Intably

Operator Representative: Gary Theberge, Manager, E&O SPS & WGS, Engineering & Operations

Unsatisfactory Results

Violation

Time-Dependent Threats: External Corrosion - CP Monitoring (TD.CPMONITOR)

- 1) **Question** Do records adequately document cathodic protection monitoring tests have occurred as required?

References 192.491(c) (192.465(a))

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary 49 CFR, §192.469 states: "Each pipeline under cathodic protection required by this subpart must have sufficient test stations or other contact points for electrical measurement to determine the adequacy of cathodic protection".

49 CFR, §192.465(a) states in part: "Each pipeline that is under cathodic protection must be tested at least once each calendar year, but with intervals not exceeding 15 months, to determine whether the cathodic protection meets the requirements of §192.463"

WGS' Operation and Maintenance Manual, Section 3.5 states: Cathodic protection test stations or contact points shall normally be located at pipeline mile markers, cased crossings, and other convenient locations. Recommended test station spacing should generally not exceed 1 mile.

SED noted that WGS's procedure requires test station spacing not to exceed 1 mile. During records review, SED found that due to a bad test lead / a damaged test station, WGS did not take CP reads for approximately 3 years. At the same time, the actual spacing between the test stations ranged from 1.6 to 3.2 miles. Therefore, WGS is in violation of G.O. 112-F, Reference Title 49 CFR, Part 192,

Section 192.465 and 192.605(a) for failure to take the CP reads, promptly correct any deficiencies indicated by the monitoring, and to follow its procedure.

WGS' Response:

WGS agrees that Section 3.5 Corrosion Control of the Operations and Maintenance (O&M) manual identified recommendation for cathodic protection (CP) test station spacing to not exceed 1 mile.

"Cathodic protection test stations or contact points shall normally be located at pipeline mile markers, cased crossings, and other convenient locations. Recommended test station spacing should generally not exceed 1 mile."

WGS also agrees that for approximately a 3 years period there are some sections of the 30" pipeline in which the spacing between pipe to soil potential readings exceeded 1 mile due to 4 faulty test stations. However, WGS believes that despite not being able to attain CP readings at these 4 test stations, that sufficient readings have been taken from other parts of the CP system to show that the pipeline system is adequately protected and not at risk.

At the time that the 4 faulty test stations were identified, Corrpro provided reassurance to WGS that the adjacent test stations showed acceptable potential readings. This is shown in their 2016, 2017 and 2018 annual CP reports (Attachment #1). During discussion with Corrpro at the time that test station repairs were being contemplated, they indicated that the test stations were not at critical locations, and based on pipeline survey data, there was no indication that CP was inadequate in these areas.

Pipe to soil reads have continued to be taken adjacent the faulty stations, and the areas in question continually assessed. Thus, WGS does not believe they're in violation of not taking CP reads.

Further reassurance was provided by Corrpro in May 14, 2019 email correspondence where they confirmed that readings adjacent the faulty test stations have remained consistent and are not showing abnormal results.

WGS asked: Based on more recent survey results can you confirm that the CP system is operating adequately within area of the 4 damaged test lead stations.

Corrpro response: *The P/S potential reads both upstream/downstream of each of the 4 missing TS's indicate adequate levels, exceeding -850mV by at least 75mV. There is no reason/evidence to believe the test points in between readings are below criteria, based on information provided to Corrpro at the time of survey.*

WGS asked: Please provide any other information that would help give the CPUC comfort that the pipeline continues to be well protected in these areas despite the 4 damaged test lead stations.

Corrpro response: *The 30" Delevan Pipeline CP system maintains pipe-to-soil potentials more electronegative than -850mVCSE at all assessed test stations; there has been no evidence to suggest inadequate potentials which would not meet NACE 100mV Polarization or -850mV Polarized Potential Criteria existed during the 2016/2017/2018 Annual Surveys.*

Thus, one can surmise that the piping is still receiving adequate cathodic protection in the area where the test stations are faulty.

The 100mV polarization/-850 mV polarized potential criteria also aligns with Section 3.5 Corrosion Control of the WGS O&M manual:

*"D.O.T. acceptable criteria to assure adequate cathodic protection for steel pipelines are:
A negative polarized (current switched off) potential of at least 0.85 volt relative to a saturated copper-copper sulfate reference electrode.
A minimum of 100 mV of cathodic polarization. The formation of decay of polarization can be used to satisfy criterion."*

Note that in speaking with Corrpro, the 1 mile spacing for test stations is considered to be a best practice and is not code.

Due to the perceived lack of severity of this issue, WGS proposes to perform repair to 1 faulty test station per year, versus all 4 during the same year. WGS will allocate budget funding and start in 2020 with repairs to TS#96A at mile post (MP) 23.9, which has the longest span between adjacent test points (MP 21.8 and MP 25.0 at 3.2 mile spacing). Scheduling for repair to the other 3 faulty test stations will be as follows:

MP 19.7 test station repair during Year 2021

MP 1.7 test station repair during Year 2022

MP 18.0 test station repair during Year 2023

WGS will continue to monitor CP system performance by way of their annual survey and will expedite repair to any test station in which adjacent test station pipe to soil readings drop below -850 mV criteria, and/or the CP contractor recommends repairs to ensure adequacy of the CP monitoring system.

Section 3.5 Corrosion Control of the O&M manual has been revised to better explain how test station readings/repairs will be managed in the future (Attachment #2).

SED's Conclusion:

SED has reviewed WGS' response and determined that the explanation articulated by WGS sufficiently addressed SED's concern. However, SED may review the records of the corrective action during future inspections.

Concerns

Maintenance and Operations: Gas Pipeline Operations (MO.GO)

1) Question Has the operator conducted annual reviews of the written procedures or processes in the manual as required?

References 192.605(a)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED noted that TIPS-Task Information and Practices System's review document was not updated for year 2018. SED recommends that WGS take the appropriate actions to ensure the documents were reviewed and updated accordingly

Question Text Do records indicate periodic review of the work done by operator personnel to determine the effectiveness, and adequacy of the processes used in normal operations and maintenance and modifying the processes when deficiencies are found?

References 192.605(a) (192.605(b)(8))

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED noted that WGS' Operations and Maintenance Manual did not include a procedure to describe the review process of work done by its personnel, including the record requirement of such process. SED recommends that WGS prepare and follow a procedure that will address job performance and evaluation of its personnel-QA/QC.

WGS' Response:

WGS agrees with the CPUC's finding. WGS had made a conscious effort in the past to review and update their Task Information and Practices System (TIPS) procedures, and ensure all Operations personnel were aware of any changes that were made. However, revisions to TIPS had not been formally tracked, as far as the date which the document was reviewed and/or changed. Operations personnel were being alerted verbally, when a change was made. Going forward, WGS will be implementing a process which involves the Lead Operator signing and dating a TIPS procedure whenever it's reviewed and sending email to Operations group alerting them if any changes have been made. In the email Operations staff will be asked to review the revised TIPS, to ensure they understand the change and to let the Lead Operator know if they have any questions. Also note that any changes that are made to WGS operating conditions/procedures etc, are typically discussed during their operations meetings. This helps to ensure the group fully understands why the change was made, the implications of the change, and provides opportunity to openly discuss. The O&M manual has been revised to include aforementioned procedure (Attachment #3).

SED's Conclusion:

SED has reviewed WGS' response and accepts the corrective actions that it has articulated and implemented. However, SED may review the records of the corrective action during future inspections.

Time-Dependent Threats: Atmospheric Corrosion (TD.ATM)

2) Question Is pipe that is exposed to atmospheric corrosion protected?

References 192.481(b) (192.481(c), 192.479(a), 192.479(b), 192.479(c))

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED noted during the field inspection that valve on Well 27 below cameron tag, flange on well 28H, sections on the flowline for well 20H, and well 30HZ were exposed to the atmosphere and had evidence of atmospheric corrosion. SED recommends that WGS takes the appropriate corrective measure to remedy the atmospheric corrosion on its pipeline.

WGS' Response:

WGS agrees with the CPUC's finding that superficial atmospheric corrosion is evident on a piping component at each of the 20H, 27H, 28H and 30H locations. WGS will be addressing the surface rust at these 4 locations by September 15, 2019.

SED's Conclusion:

SED has reviewed WGS' response and accepts the corrective actions that it has articulated and implemented. However, SED may review the records of the corrective action during future inspections.

Training and Qualification: Training of Personnel (TQ.TR)

3) Question Is training for emergency response personnel documented?

References 192.615(b)(2) (192.807(a), 192.807(b))

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED noted that WGS' Emergency Response Plan, Section 1.2.1.3 training of appropriate personnel on emergency requires personnel on the Emergency Response Team (ERT) be trained on the FEMA Incident Command System ICS-100 course once every 3 years. WGS did not substantiate this practice with any records during this inspection period (2013 to 2018). SED recommends that WGS to follow its procedure and trained its personnel once every 3 years.

WGS' Response:

Upon further review of WGS records, evidence was found which confirms that Incident Command System (ICS-100) training was performed by Operations personnel in July-September/2016. Page 1 of the signed test sheet, from each of the operations staff who completed the test, is provided in Attachment #4.

SED's Conclusion:

SED has reviewed WGS' response and accepts the corrective actions that it has articulated and implemented. However, SED may review the records of the corrective action during future inspections.

Generic Questions: Generic Questions (GENERIC.GENERIC)

4) Question Generic question - please provide context in result notes.

References N/A

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary

- I. SED noted that WGS' OQ program did not address the number of times an individual can be reevaluated after he/she failed to pass the evaluation process. In addition, if a reevaluation is offered, WGS should require the individual to go through a "cooling off" period following a failure to pass the evaluation. SED recommends that WGS to review and revise, wherever applicable, its OQ program to require individual to go through a "cooling off" period following an unsuccessful attempt of an evaluation. See PHMSA FAQ OQ 2.11.

WGS' Response:

WGS agrees with the CPUC's recommendation. WGS has made changes to their OQ program manual which addresses OQ training reevaluation and cooling off period. Attached is excerpt from the manual with revised wording (Attachment #5).

SED's Conclusion:

SED has reviewed WGS' response and accepts the corrective actions that it has articulated and implemented. However, SED may review the records of the corrective action during future inspections.

- II. SED noted that WGS' OQ program, Section 3.5, "inspection shall follow all coating application" did not address the qualifications of the Coating Inspector. SED recommends that WGS review and revise, wherever applicable, its OQ program to address the qualifications of the "Coating Inspector".

WGS' Response:

WGS agrees with the CPUC's recommendation. WGS will ensure that all contractors, including coating inspectors, are fully aware of the need to provide proof of OQ qualification/certification of personnel performing the work. Attached is excerpt from the O&M manual, Section 3.5 Corrosion Control, with revised wording (Attachment #6).

SED's Conclusion:

SED has reviewed WGS' response and accepts the corrective actions that it has articulated and implemented. However, SED may review the records of the corrective action during future inspections.

- III. SED noted that WGS' Operation and Maintenance Manual, Section 3.5 Corrosion Control published date 2/13/2019, did not address the amount of cathodic protection (upper limit) as required by 49CFR, §192.463(c) so that to prevent damage to the protective coating or the pipe. SED recommends that WGS to review and revise, wherever applicable, its corrosion control procedure to address the requirement of 49CFR, §192.463(c).

WGS' Response:

It's WGS's understanding that implementation of a set upper limit for CP potential is not a code requirement, however WGS agrees that it's important to limit this value to help prevent damage to the protective coating or pipe. WGS has revised Section 3.5 Corrosion Control of their O&M manual, to include an upper limit for CP as a guideline (Attachment #7).

SED's Conclusion:

SED has reviewed WGS' response and accepts the corrective actions that it has articulated and implemented. However, SED may review the records of the corrective action during future inspections.

- IV. SED noted that WGS' Operation and Maintenance Manual, Section "Record Keeping" did not address the recordkeeping/retention period for transmission lines as required by G.O. 112-F, Subpart C 145.1. SED recommends that WGS to review/revise its manual to include the requirement set forth in G.O. 112-F, Subpart C 145.1.

WGS' Response:

Upon further review of the O&M manual, wording was found within Section 3.12 that was very close to requirements identified in G.O. 112-F, Subpart C 145.1 for transmission line recordkeeping/retention period. However, to ensure there's no confusion, the wording in Section 3.12 was revised to match exactly with G.O. 112-F, Subpart C 145.1 (Attachment #8).

SED's Conclusion:

SED has reviewed WGS' response and accepts the corrective actions that it has articulated and implemented. However, SED may review the records of the corrective action during future inspections.

- V. SED noted during the field inspection at Delevan compressor station, valve number MCV-03 had a gas leak. In addition, SED observed that wellhead (valves, fittings, and piping that controls the flow of gas) in a cellar of well 32H was submerged in water and air bubbles

were forming on the water surface which indicate the possibilities of a gas leak. SED recommends that WGS to investigate and take prompt remedial actions to correct the deficiencies.

WGS' Response:

WGS has successfully repaired the leaks at Delevan meter station, valve number MCV-03, and the 32H wellhead. Parts were ordered/installed to correct the MCV-03 leak, and sealant was applied to 32H wellhead valve stem packing to correct that leak. A greenhouse gas survey was conducted by a contractor, per CARB Oil & Gas Rule § 95669 (g), during the week of March 18, 2019. No leaks were identified at these locations confirming they were adequately repaired.

SED's Conclusion:

SED has reviewed WGS' response and accepts the corrective actions that it has articulated and implemented. However, SED may review the records of the corrective action during future inspections.