

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



November 2, 2022

GI-2022-05-WGS-36-03-07-10

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

SUBJECT: General Order 112-F Inspection of Wild Goose Gas Storage

Dear Mr. Fournier:

The Safety and Enforcement Division (SED) of the California Public Utilities Commission conducted a General Order 112-F inspection of Wild Goose Gas Storage (WGS) on May 23 – May 27, 2022, July 18 – July 22, 2022. The inspection included a review of the Operations and Maintenance Plan (O&M), the Operator Qualification Program (OQ), Control Room Management Program (CRM) and the PIPES ACT 2020 Section 114 – Updating Pipeline Operator Inspection and Maintenance Plan (Section 114).

SED has identified 51 violations and 6 concerns which are described in the "Post-Inspection Written Findings". SED's findings are noted in the Attached Post-Inspection Written Findings (Summary) section of this letter. The Summary reflects only those plans and records that SED inspected during the inspection.

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

If you have any questions, please contact James Zhang at (415) 603-1310 or by email at James.Zhang@cpuc.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Terence Eng".

Terence Eng, P.E.
Program Manager
Gas Safety and Reliability Branch
Safety and Enforcement Division

Enclosure: Post-Inspection Written Findings

cc:

Andy Anderson, WGS (andy.anderson@rockpointgs.com)
Greg Clark, WGS (greg.clark@rockpointgs.com)
Claudia Almengor, SED
Dennis Lee, SED

Post-Inspection Written Findings

Dates of Inspection: 5/23/2022 – 5/27/2022, 7/18/2022 – 7/22/2022

Operator: WILD GOOSE STORAGE LLC

Operator ID: 31287 (primary)

Inspection Systems: GT

Assets (Unit IDs) with results in this report: Wild Goose Storage O&M Plan (88673)

System Type: GT

Inspection Name: 2022 Wild Goose Storage O&M Plan

Lead Inspector: James Zhang

Operator Representative: Greg Clark

Unsatisfactory Results

Reporting : Regulatory Reporting (Traditional) (RPT.RR)

Question Title, 192.18 Required Notifications to PHMSA, RPT.RR.19218NOTIF.P
ID

Question 20. Do the procedures include provisions for each of the required types of notifications to PHMSA per §192.18?

References 192.18(c) (192.506(b), 192.607(e)(4), 192.607(e)(5), 192.624(c)(2)(iii), 192.624(c)(6), 192.632(b)(3), 192.710(c)(7), 192.712(d)(3)(iv), 192.712(e)(2)(i)(E), 192.921(a)(7), 192.937(c)(7))

Assets Covered Wild Goose Storage O&M Plan (88673 (36))

Issue Summary SED reviewed Wild Goose Storage (WGS) Operation and Maintenance (O&M) Manual, Section 2.1 Pipeline Reporting and found this section does not identify the Title 49 Code of Federal Regulations (49 CFR) 192.18(c) requirements that the operator provide notification to the Pipeline and Hazardous Materials Safety Administration (PHMSA) at least 90 days prior to using other technologies, analytical

methods, sampling approach, or technique. Therefore, WGS is in violation of 49 CFR 192.18(c).

Question Title, 192.18 Required Notifications to PHMSA - Training,
ID RPT.RR.NOTIFTRAINING.P

Question 22. Do the procedures require operator training for all affected personnel on the 192.18(c) reporting requirements?

References 192.18(c) (192.506(b), 192.607(e)(4), 192.607(e)(5), 192.624(c)(2)(iii), 192.624(c)(6), 192.632(b)(3), 192.710(c)(7), 192.712(d)(3)(iv), 192.712(e)(2)(i)(E), 192.921(a)(7), 192.937(c)(7))

Assets Covered Wild Goose Storage O&M Plan (88673 (36))

Issue Summary SED reviewed WGS O&M Manual, Section 2.1 Pipeline Reporting and found this section does not include personnel training on the specific 49 CFR 192.18(c) requirements that the operator provide notification to PHMSA at least 90 days prior to using other technologies, analytical methods, sampling approach, or technique. Therefore, WGS is in violation of 49 CFR 192.18(c).

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

Question Title, Atmospheric Corrosion, TD.ATM.ATMCORRODE.P
ID

Question 1. Does the process give adequate guidance identifying atmospheric corrosion and for protecting above ground pipe from atmospheric corrosion?

References 192.605(b)(2) (192.479(a), 192.479(b), 192.479(c))

Assets Covered Wild Goose Storage O&M Plan (88673 (36))

Issue Summary SED reviewed WGS O&M Manual, Section 3.5 Corrosion Control - Atmospheric Corrosion (Scope/Applicability - page#100) and found it inadequate. Although WGS listed the code language of 49 CFR 192.479(a)&(b), it did not give adequate guidance identifying atmospheric corrosion and for protecting above ground pipe from atmospheric corrosion. Therefore, WGS is in violation of 49 CFR 192.605(b)(2).

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

Question Title, Cathodic Protection Criteria, TD.CPMONITOR.MONITORCRITERIA.P
ID

Question 1. Does the process require CP monitoring criteria to be used that is acceptable?

References 192.605(b)(2) (192.463(a), 192.463(c))

Assets Covered Wild Goose Storage O&M Plan (88673 (36))

Issue Summary SED reviewed WGS O&M Manual, Section 3.5 Corrosion Control – Cathodic Protection/External Corrosion Control (Page#115) and found it inadequate, as the procedure only includes a copy of the code language of 49 CFR 192.463. The procedure does not provide an adequate method for the consideration of IR drop (e.g. IR drop measurement-instant off), as required by 49 CFR Part 192 Appendix D. Therefore, WGS is in violation of 49 CFR 192.605(b)(2).

Question Title, Test Leads, TD.CPMONITOR.TESTLEAD.P
ID

Question 17. Does the process provide adequate instructions for the installation of test leads?

References 192.605(b)(2) (192.471(a), 192.471(b), 192.471(c))

Assets Covered Wild Goose Storage O&M Plan (88673 (36))

Issue Summary SED reviewed WGS O&M Manual, Section 3.5 Corrosion Control (i.e. "Under Scope/Applicability" - Page#116) and found it inadequate, as the procedure does not provide adequate instructions for the installation of test leads. Therefore, WGS is in violation of 49 CFR 192.605(b)(2).

Time-Dependent Threats: External Corrosion - Coatings (TD.COAT)

Question Title, New Buried Pipe Coating, TD.COAT.NEWPIPE.P
ID

Question 1. Does the process require that each buried or submerged pipeline installed after July 31, 1971 be externally coated

with a material that is adequate for underground service on a cathodically protected pipeline?

References 192.605(b)(2) (192.455(a)(1), 192.461(a), 192.461(b), 192.483(a))

Assets Covered Wild Goose Storage O&M Plan (88673 (36))

Issue Summary SED reviewed WGS O&M Manual, Section 3.5 Corrosion Control –External Protective Coating (i.e. "Coating Procedure") (Page#109-110) and found it inadequate. Although WGS listed the code language of 49 CFR 192.461 (a)(b), it did not include procedures to require that each buried or submerged pipeline installed after July 31, 1971 be externally coated with a material that is adequate for underground service on a cathodically protected pipeline. Therefore, WGS is in violation of 49 CFR 192.605(b)(2).

Question Title, New Buried Pipe Coating Application, TD.COAT.NEWPIPEINSTALL.P
ID

Question 4. Does the process give adequate guidance for the application and inspection of protective coatings on pipe?

References 192.605(b)(2) (192.461(c), 192.461(d), 192.461(e), 192.483(a))

Assets Covered Wild Goose Storage O&M Plan (88673 (36))

Issue Summary SED reviewed WGS O&M Manual, Section 3.5 Corrosion Control –External Protective Coating (i.e. "Coating Procedure") and found it inadequate, as the procedure copied code language of 49 CFR 192.461(c)(d)(e); however, it does not include requirements for visual inspection, coating thickness measurement, or electrical testing of the coating, also known as "Jeeping". Therefore, WGS is in violation of 49 CFR 192.605(b)(2).

Concerns

Maintenance and Operations: Gas Pipeline MAOP (MO.GOMAOP)

Question Title, Maximum Allowable Operating Pressure Determination,
ID MO.GOMAOP.MAOPDETERMINE.P

Question 1. Does the process include requirements for determining the maximum allowable operating pressure for a pipeline segment in accordance with 192.619?

References 192.605(b)(1) (192.619(a), 192.619(b), 192.619(f))

Assets Covered Wild Goose Storage O&M Plan (88673 (36))

Issue Summary SED reviewed WGS O&M Manual, Section 2.10 Maximum Allowable Operating Pressures (Page#56) and found the operator's procedure only mentions "MAOP established by WGS is in accordance with 192.619", without any detailed information on the establishment of MAOP. WGS should elaborate on the MAOP establishment process.

Post-Inspection Written Findings

Dates of Inspection: 7/18/2022 – 7/22/2022

Operator: WILD GOOSE STORAGE LLC

Operator ID: 31287 (primary)

Inspection Systems: GT

Assets (Unit IDs) with results in this report: Wild Goose Storage (88673)

System Type: GT

Inspection Name: 2022 Wild Goose Storage CRM

Lead Inspector: James Zhang

Operator Representative: Greg Clark

Unsatisfactory Results

CRM, SCADA, and Leak Detection: CRM Roles and Responsibilities (CR.CRMRR)

Question Title, Communication Failure, CR.CRMRR.COMMSYSFAIL.P
ID

Question 10. Do processes specifically address the controller's responsibilities in the event of a SCADA system or data communications system failure impacting large sections of the controller's domain of responsibility?

References 192.631(b)(3)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section V and found the written processes inadequate since they only referenced the code language of 49 CFR 192.631 (b)(3) and its Frequently Asked Questions (FAQ). The processes do not specifically address the controller's responsibilities in the event of a SCADA system or data communications system failure impacting large sections of the controller's domain of responsibility. Therefore, WGS is in violation of 49 CFR 192.631(b)(3).

Question Title, Shift Change Process - Documentation,
ID CR.CRMRR.HANDOVERDOC.R

Question 14. Are there records that document the hand-over of responsibility, document the time the actual hand-over of responsibility occurs, and the key information and topics that were communicated during the hand-over?

References 192.631(b)(4) (192.631(c)(5))

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed "Shift Change Briefing Form Hours of Service Deviations" and found that prior to 2022, WGS only recorded shift change weekly as it is the same controller covering the whole 7-day shift with no indication of specific time and date of shift change. Therefore, WGS is in violation of 49 CFR 192.631(b)(4).

CRM, SCADA, and Leak Detection: Supervisory Control and Data Acquisition (CR.SCADA)

Question Title, Adequate Information (API 1165 Compliance),
ID CR.SCADA.SYSTEMMOC.P

Question 1. Do processes clearly define the types of changes to the SCADA system(s) that constitute additions, expansions, or replacements under the meaning of the CRM rule?

References 192.631(c)(1)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section V. "Provide Adequate Information" and found it inadequate, since they only referenced the code language of 49 CFR 192.631 (c)(1) and its FAQs. The processes do not clearly define the types of changes to the SCADA system(s) that constitute additions, expansions, or replacements under the meaning of the CRM rule. Therefore, WGS is in violation of 49 CFR 192.631(c)(1).

Question Title, SCADA Displays, CR.SCADA.DISPLAYCONFIG.P
ID

Question 2. Are there written processes to implement the API RP 1165 display standards to the SCADA systems that have been added, expanded, or replaced since August 1, 2012?

References 192.631(c)(1)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section V. "Provide Adequate Information" and found it inadequate, since they only referenced code language of 49 CFR 192.631 (c)(1), API RP 1165: Recommended Practice for Pipeline SCADA Displays and its FAQs. The written processes do not implement the API RP 1165 display standards to the SCADA systems that have been added, expanded, or replaced since August 1, 2012. Therefore, WGS is in violation of 49 CFR 192.631(c)(1).

Question Title, Point-to-Point Verification, CR.SCADA.POINTVERIFY.P
ID

Question 10. Are there adequate processes to define and identify the circumstances which require a point-to-point verification?

References 192.631(c)(2)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section V. "Provide Adequate Information" for point-to-point verification and found it inadequate, since they only referenced the code language of 49 CFR 192.631 (c)(2) and its FAQs. WGS does not have circumstances outlined which would require a point-to-point verification, only safety-related points to be verified. Therefore, WGS is in violation of 49 CFR 192.631(c)(2).

Question Title, Point-to-Point Verification Interval,
ID CR.SCADA.POINTVERFIYINTVL.P

Question 14. Is there an adequate process for defining when the point-to-point verification must be completed?

References 192.631(c)(2)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section V. "Provide Adequate Information" and found it inadequate, since they only referenced the code language of 49 CFR 192.631 (c)(2) and its FAQs. There is no adequate process for defining when the point-to-point verification must be completed. Therefore, WGS is in violation of 49 CFR 192.631(c)(2).

Question Title, Point-to-Point Verification Interval,
ID CR.SCADA.POINTVERFIYINTVL.R

Question 15. Do records indicate the point-to-point verification has been completed at the required intervals?

References 192.631(c)(2)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED has reviewed WGS' records and found that its calibration reports (point-to-point verification) during system enhancements/replacements are made per manufacturers procedures, with no records available prior to 2021. Therefore, WGS is in violation of 49 CFR 192.631(c)(2).

CRM, SCADA, and Leak Detection: Fatigue Management (CR.CRMFM)

Question Title, Fatigue Quantification, CR.CRMFM.FATIGUEQUANTIFY.P
ID

Question 3. Do processes require that the potential contribution of controller fatigue to incidents and accidents be quantified during investigations?

References 192.631(d)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan and found it does not have any language in their CRM pertaining to documenting procedures for incidents or accidents that could potentially be associated with fatigue. Therefore, WGS is in violation of 49 CFR 192.631(d).

Question Title, Fatigue Education, CR.CRMFM.FATIGUEEDUCATE.R
ID

Question 23. Is periodic fatigue education/training documented for all controllers and control room supervisors?

References 192.631(d)(2) (192.631(d)(3))

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed Circadian Technologies Inc (CTI) training materials such as videos, (human physiology, commuting to work, sleep, common health concerns for round-the-clock workers, quality of life), and found missing signature for a

staff on the roster for 2020 and 2021. Therefore, WGS is in violation of 49 CFR 192.631(d)(2) and (d)(3).

CRM, SCADA, and Leak Detection: Alarm Management (CR.CRMAM)

Question Title, Managing Stale or Unreliable Data, CR.CRMAM.STALEDATA.P
ID

Question 5. Does the review of safety-related alarms include specific procedures and practices for managing stale or unreliable data?

References 192.631(e)(1)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section VII. Alarm Management and found it inadequate, as there are no procedures about stale or unreliable data. Therefore, WGS is in violation of 49 CFR 192.631(e)(1).

Question Title, Monthly Analysis of SCADA Data,
ID CR.CRMAM.MONTHLYANALYSIS.P

Question 6. Do processes require the monthly identification, recording, review, and analysis of points that have been taken off scan, have had alarms inhibited, generated false alarms, or that have had forced or manual values for periods of time exceeding that required for associated maintenance or operating activities?

References 192.631(e)(2)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section VII. Alarm Management and found it inadequate, since they only referenced the code language of 49 CFR 192.631 (e)(2) and its FAQs. The processes do not require the monthly identification, recording, review, and analysis of points that have been taken off scan, have had alarms inhibited, generated false alarms, or that have had forced or manual values for periods of time exceeding that required for associated maintenance or operating activities. Therefore, WGS is in violation of 49 CFR 192.631(e)(2).

Question Title, Alarm Point Verification, CR.CRMAM.ALARMVERIFY.R
ID

Question 8. Do records verify that monthly reviews and analysis of alarm points have been performed?

References 192.631(e)(2)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary WGS could not provide any records of monthly reviews or analysis of alarm points. Therefore, WGS is in violation of 49 CFR 192.631(e)(2).

Question Title, Alarm Setpoint Process, CR.CRMAM.ALARMSETPOINTS.P
ID

Question 9. Is there a formal process to determine the correct alarm setpoint values and alarm descriptions?

References 192.631(e)(3)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, section VII. Alarm Management and found it inadequate, since they only referenced the code language of 49 CFR 192.631 (e)(3) and its FAQs. There is no formal process to determine the correct alarm setpoint values and alarm descriptions. Therefore, WGS is in violation of 49 CFR 192.631(e)(3).

Question Title, Alarm Value Verification, CR.CRMAM.ALARMVALUEVERIFY.R
ID

Question 11. Do records demonstrate verification of correct safety-related alarm set-point values and alarm descriptors when associated field instruments are calibrated or changed and at least once each calendar year, but at intervals not to exceed 15 months?

References 192.631(e)(3)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS' records for Mid Valve (11/18/2021), but no records could be provided prior to 2021. Therefore, WGS is in violation of 49 CFR 192.631(e)(3).

Question Title, Alarm Management Plan Review, CR.CRMAM.PLANREVIEW.P
ID

Question 12. Are there processes to review the alarm management plan at least once each calendar year, but at intervals not exceeding 15 months, in order to determine the effectiveness of the plan?

References 192.631(e)(4)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section VII. Alarm Management and found it inadequate, since they only referenced the code language of 49 CFR 192.631 (e)(4) and FAQs. There are no processes to review the alarm management plan at least once each calendar year, but at intervals not exceeding 15 months, in order to determine the effectiveness of the plan. Therefore, WGS is in violation of 49 CFR 192.631(e)(4).

Question Title, Measuring Work Load, CR.CRMAM.WORKLOAD.P
ID

Question 14. Does the CRM program have a means of identifying and measuring the workload (content and volume of general activity) being directed to an individual controller?

References 192.631(e)(5)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section VII. Alarm Management and found it inadequate, since they only referenced the code language of 49 CFR 192.631(e) and its FAQs. The CRM program does not have a means of identifying and measuring the workload (content and volume of general activity) being directed to an individual controller. Therefore, WGS is in violation of 49 CFR 192.631(e)(5).

Question Title, Monitoring Work Load, CR.CRMAM.WORKLOADMONITORING.P
ID

Question 15. Is the process of monitoring and analyzing general activity comprehensive?

References 192.631(e)(5)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section VII. Alarm Management and found it inadequate, since they only referenced the code language of 49 CFR 192.631(e) and its FAQs. There is no process of monitoring and analyzing general activity. Therefore, WGS is in violation of 49 CFR 192.631(e)(5).

Question Title, Controller Reaction to Incoming Alarms,
ID CR.CRMAM.CONTROLLERREACTION.P

Question 16. Does the process have a means of determining that the controller has sufficient time to analyze and react to incoming alarms?

References 192.631(e)(5)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section VII. Alarm Management and found it inadequate, since they only referenced the code language of 49 CFR 192.631 (e)(5) and its FAQs. The process does not have a means of determining that the controller has sufficient time to analyze and react to incoming alarms. Therefore, WGS is in violation of 49 CFR 192.631(e)(5).

Question Title, Analysis of Controller Performance,
ID CR.CRMAM.PERFORMANCEANALYSIS.R

Question 17. Has an analysis been performed to determine if controller(s) performance is currently adequate?

References 192.631(e)(5)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary WGS could not provide any records of workload analysis. Therefore, WGS is in violation of 49 CFR 192.631(e)(5).

Question Title, Alarm Deficiency Resolution, CR.CRMAM.DEFICIENCIES.P
ID

Question 18. Is there a process to address how deficiencies found in implementing 192.631(e)(1) through 192.631(e)(5) will be resolved?

References 192.631(e)(6)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section VII. Alarm Management is inadequate, since they only referenced the code language of 49 CFR 192.631(e)(6) and its FAQs. There is no process to address how deficiencies found in implementing 49 CFR 192.631(e)(1) through 49 CFR 192.631(e)(5) will be resolved. Therefore, WGS is in violation of 49 CFR 192.631(e)(6).

Question Title, Alarm Management Deficiencies, CR.CRMAM.DEFICIENCIES.R
ID

Question 19. Do records indicate deficiencies found in implementing 192.631(e)(1) through 192.631(e)(5) have been resolved?
References 192.631(e)(6)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary WGS could not provide any records of deficiencies found as there are no monthly review or workload analysis at the first place. Therefore, WGS is in violation of 49 CFR 192.631(e)(6).

CRM, SCADA, and Leak Detection: Change Management (CR.CRMCMGT)

Question Title, Field Equipment Changes, CR.CRMCMGT.EQUIPMENTCHANGES.P
ID

Question 1. Is there a process to assure changes in field equipment that could affect control room operations are coordinated with the control room personnel?
References 192.631(f)(1)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section VIII. Change Management and found it inadequate, since they only referenced the code language of 49 CFR 192.631(f) and its FAQs. There is no process to assure changes in field equipment that could affect control room operations are coordinated with the control room personnel. Therefore, WGS is in violation of 49 CFR 192.631(f)(1).

Question Title, Controller Participation in System Changes,
ID CR.CRMCMGT.CONTROLLERPARTICIPATE.P

Question 2. Are control room representative(s) required to participate in meetings where changes that could directly or indirectly affect the hydraulic performance or configuration of the pipeline (including routine maintenance and repairs) are being considered, designed and implemented?

References 192.631(f)(1) (192.631(f)(3))

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section VIII. Change Management and found it inadequate, since they only referenced the code language of 49 CFR 192.631(f) and its FAQs. The CRM Plan does not require control room representative(s) to participate in meetings where changes that could directly or indirectly affect the hydraulic performance or configuration of the pipeline (including routine maintenance and repairs) are being considered, designed and implemented. Therefore, WGS is in violation of 49 CFR 192.631(f)(1).

Question Title, Emergency Contact with Control Room,
ID CR.CRMCMGT.EMERGENCYCONTACT.P

Question 4. Is there a process requiring field personnel and SCADA support personnel to contact the control room when emergency conditions exist?

References 192.631(f)(2)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section VIII. Change Management and found it inadequate, since they only referenced the code language of 49 CFR 192.631(f) and its FAQs. There is no process requiring field personnel and SCADA support personnel to contact the control room when emergency conditions exist. Therefore, WGS is in violation of 49 CFR 192.631(f)(2).

Question Title, Coordination of Field Changes, CR.CRMCMGT.FIELDCONTACT.P
ID

Question 5. Does the process require field personnel and SCADA support personnel to contact the control room when making field changes (for example, moving a valve) that affect control room operations?

References 192.631(f)(2)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section VIII. Change Management and found it inadequate, since they only referenced code language of 49 CFR 192.631(f) and its FAQs. There is no process requiring field personnel and SCADA support personnel to contact the control room when making field changes (for example, moving a valve) that affect control room operations. Therefore, WGS is in violation of 49 CFR 192.631(f)(2).

Question Title, Coordination of Field Changes, CR.CRMCMGT.FIELDCHANGES.R
ID

Question 6. Do records indicate field personnel and SCADA support personnel contacted the control room when making field changes (for example, moving a valve) that affect control room operations?

References 192.631(f)(2)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed Valve Inspection Report (4/13/2021) and CRM logbook (4/4/2021 - 8/2/2021) and found records insufficient to demonstrate if efforts were coordinated with the control room. Therefore, WGS is in violation of 49 CFR 192.631(f)(2).

CRM, SCADA, and Leak Detection: Operating Experience (CR.CRMEXP)

Question Title, Reportable Incident (Review),
ID CR.CRMEXP.REPORTABLEINCIDENTREVIEW.P

Question 1. Is there a formal, structured approach for reviewing and critiquing reportable events to identify lessons learned?

References 192.631(g)(1)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED Reviewed WGS CRM, Section Plan IX. Operating Experience and found it inadequate, since they only referenced the code language of 49 CFR 192.631(g) and its FAQs. There is no formal, structured approach for reviewing and critiquing reportable events to identify lessons learned. Therefore, WGS is in violation of 49 CFR 192.631(g)(1).

Question Title, Reportable Incident (Review),
ID CR.CRMEXP.REPORTABLEINCIDENTREVIEW.R

Question 2. Do records indicate reviews of reportable events specifically analyzed all contributing factors to determine if control room actions contributed to the event, and corrected any deficiencies?

References 192.631(g)(1)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary WGS has no reportable incident or accident during the 2017 - 2022. However, there are lack of records, such as, controller fatigue and SCADA alarm monthly review, to show how the controllers' actions were reviewed to be sufficient. Therefore, WGS is in violation of 49 CFR 192.631(g)(1).

Question Title, Lessons Learned, CR.CRMEXP.LESSONSLEARNED.P
ID

Question 3. Does the program require training on lessons learned from a broad range of events (reportable incidents/accidents, near misses, leaks, operational and maintenance errors, etc.), even though the control room may not have been at fault?

References 192.631(g)(2) (192.631(b)(5))

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section IX. Operating Experience and found it inadequate, since they only referenced the code language of 49 CFR 192.631(g) and its FAQs. The program does not require training on lessons learned from a broad range of events (reportable incidents/accidents, near misses, leaks, operational and maintenance errors, etc.), even though the control room may not have been at fault. Therefore, WGS is in violation of 49 CFR 192.631(g)(2).

Question Title, Lessons Learned, CR.CRMEXP.LESSONSLEARNED.R
ID

Question 4. Has operating experience review training been conducted on lessons learned from a broad range of events (reportable incidents/accidents, near misses, leaks, operational and maintenance errors, etc.)?

References 192.631(g)(2) (192.631(b)(5))

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed safety meeting content and sign-in sheets dated 7/13/2022, but WGS could not provide any records prior to 2021. Therefore, WGS is in violation of 49 CFR 192.631(g)(2).

CRM, SCADA, and Leak Detection: Training (CR.CRMTRAIN)

Question Title, Controller Training Program, CR.CRMTRAIN.CONTROLLERTRAIN.P
ID

Question 1. Has a controller training program been established to provide training for each controller to carry out their roles and responsibilities?

References 192.631(h)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section X - "Training" (Page#34-35) and found it inadequate, since they only referenced the code language of 49 CFR 192.631(h) and its FAQs. The controller training program has not been established to provide training for each controller to carry out their roles and responsibilities. Therefore, WGS is in violation of 49 CFR 192.631(h).

Question Title, Training Program Review, CR.CRMTRAIN.TRAININGREVIEW.R
ID

Question 4. Have processes been implemented to review the controller training program content to identify potential improvements at least once each calendar year, but at intervals not to exceed 15 months?

References 192.631(h)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary WGS could not provide any records prior to 12/15/2021 to demonstrate how to identify improvement or evaluate effectiveness. Therefore, WGS is in violation of 49 CFR 192.631(h).

Question Title, Communication Training,
ID CR.CRMTRAIN.COMMUNICATIONTRAINING.P

Question 10. Does the CRM program train controllers on their responsibilities for communication under the operator's emergency response procedures?

References 192.631(h)(3)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section X - "Training" (Page#34-35) and found it inadequate, since they only referenced the code language of 49 CFR 192.631(h)(3) and its FAQs. The training program should require that controllers demonstrate knowledge and proficiency in communicating during an emergency, as this was not clear how it was addressed in the procedures, course content, or standards. Therefore, WGS is in violation of 49 CFR 192.631(h)(3).

Question Title, Working Knowledge of Pipeline System,
ID CR.CRMTRAIN.SYSKNOWLEDGE.P

Question 11. Does the training program provide controllers a working knowledge of the pipeline system, especially during the development of abnormal operating conditions?

References 192.631(h)(4)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section X - "Training"(Page#34) and found it inadequate, since they only referenced the code language of 49 CFR 192.631(h)(4) and its FAQs. The training program does not provide controllers a working knowledge of the pipeline system, especially during the development of abnormal operating conditions. Therefore, WGS is in violation of 49 CFR 192.631(h)(4).

Question Title, Review of Procedures Prior to Use,
ID CR.CRMTRAIN.INFREQOPSREVIEW.P

Question 13. Do processes specify that, for pipeline operating set-ups that are periodically (but infrequently) used, the controllers must be provided an opportunity to review relevant procedures in advance of their use?

References 192.631(h)(5)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section X - "Training" Part A,5 (Page#34) and found it inadequate, since they only referenced the code language of 49 CFR 192.631(h)(5) and its FAQs. The processes do not specify that, for pipeline operating set-ups that are periodically (but infrequently) used, the controllers must be provided an opportunity to review relevant procedures in advance of their use. Therefore, WGS is in violation of 49 CFR 192.631(h)(5).

Question Title, Control Room Team Training - Personnel,
ID CR.CRMTRAIN.TEAMTRAINPERSONNEL.P

Question 14. Do processes establish who, regardless of location, operationally collaborates with control room personnel?
References 192.631(h)(6)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section X - "Training"(Page#34) and found it inadequate, since they only referenced the code language of 49 CFR 192.631(h)(6). The processes do not establish who, regardless of location, operationally collaborates with control room personnel. Also, the CRM Plan did not indicate that the process was in place by January 23, 2018. Therefore, WGS is in violation of 49 CFR 192.631(h)(6).

Question Title, Control Room Team Training - Frequency,
ID CR.CRMTRAIN.TEAMTRAINFREQ.P

Question 15. Do processes define the frequency of new and recurring team training?
References 192.631(h)(6)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section X - "Training", Part A - 6. (Page#34) and found it inadequate, since they only referenced the code language of 49 CFR 192.631(h)(6). SED also reviewed the following WGS' documents listed below and did not find any related language that covers the frequency of new and recurring team training. Therefore, WGS is in violation of 49 CFR 192.631(h)(6).

1. Operator Qualification Manual, section 4.1 "Evaluation" (Page#16)

2. O&M Manual, Section 5.2 (Page#206) & 6.0 (Page#208-210)

Question Title, Control Room Team Training - Completeness,
ID CR.CRMTRAIN.TEAMTRAINCOMPLETE.P

Question 16. Do processes address all operational modes and operational collaboration/control?

References 192.631(h)(6)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed the following WGS' documents listed below and did not find any related language that covers team training contents, which needs to address all operational modes (normal, abnormal, emergency). Therefore, WGS is in violation of 49 CFR 192.631(h)(6).

1. CRM Plan, Section X - "Training", Part A - 6. (Page#34)

2. Operator Qualification Manual, section 4.1 "Evaluation" (Page#16)

3. O&M Manual, Section 5.2 (Page#206) & 6.0 (Page#208-210)

Question Title, Control Room Team Training - Operational Experience,
ID CR.CRMTRAIN.TEAMTRAINEXPERIENCE.P

Question 17. Do processes include incorporation of lessons learned from actual historical events and other oil-gas industry events?

References 192.631(h)(6)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section IX. "Operating Experience" (Page# 32-33) and found it inadequate, since they only referenced the code language of 49 CFR 192.631(h)(6) and its FAQs. The processes do not include incorporation of lessons learned from actual historical events and other oil-gas industry events. Therefore, WGS is in violation of 49 CFR 192.631(h)(6).

Question Title, Control Room Team Training - Exercises,
ID CR.CRMTRAIN.TEAMTRAINEXERCISE.R

Question 18. Do records indicate that training exercises were adequate and involved at least one qualified controller?

References 192.631(h)(6)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS controllers' Emergency Response Drills/Exercises for 2022 but found no records prior to 2021. Therefore, WGS is in violation of 49 CFR 192.631(h)(6).

Question Title, Control Room Team Training - Identified Individuals,
ID CR.CRMTRAIN.TEAMTRAINIDENTINDIVIDUAL.R

Question 20. Do records demonstrate that individuals identified as of January 23, 2018 received team training by January 23, 2019?

References 192.631(h)(6)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary WGS could not provide sufficient records of training and exercises, such as attendance list, course title, date, duration, content of training including, effectiveness evaluation results, to demonstrate compliance with regulations for 2019 - 2021. Therefore, WGS is in violation of 49 CFR 192.631(h)(6).

CRM, SCADA, and Leak Detection: Compliance Validation and Deviations (CR.CRMCOMP)

Question Title, CRM Records Management, CR.CRMCOMP.RECORDS.P
ID

Question 4. Are records management processes adequate to assure records are sufficient to demonstrate compliance with the CRM rule?

References 192.631(j)(1)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section XII. "Compliance and Deviations" (Page#37) and found it inadequate, since they only referenced the code language of 49 CFR 192.631(j)(1) and its FAQs. The records management processes are not adequate to assure records are sufficient to demonstrate compliance with the CRM rule. Therefore, WGS is in violation of 49 CFR 192.631(j)(1).

Question Title, CRM Records, CR.CRMCOMP.RECORDS.R
ID

Question 5. Are records sufficient to demonstrate compliance with the CRM rule?

References 192.631(j)(1)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED found that numerous records were missing or found to be problematic, such as shift change, Management of Change (MOC), Job Performance Evaluation (JPE), Team Training, etc... WGS shall ensure that all necessary documentation (forms, procedures, checklists, reports, and other records) for compliance with the CRM rule is completed and retained, for at least a period of five years. Therefore, WGS is in violation of 49 CFR 192.631(j)(1).

Question Title, CRM Deviations, CR.CRMCOMP.DEVIATIONS.P
ID

Question 7. Are there processes to demonstrate and provide a documented record that every deviation from any CRM rule requirement was necessary for safe operation?

References 192.631(j)(2)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section XII. "Compliance and Deviations" (Page#37) and found it inadequate, since they only referenced code language of 49 CFR 192.631(j)(2) and its FAQs. There are no processes to demonstrate and provide a documented record that every deviation from any CRM rule requirement was necessary for safe operation. Therefore, WGS is in violation of 49 CFR 192.631(j)(2).

Concerns

CRM, SCADA, and Leak Detection: CRM Roles and Responsibilities (CR.CRMRR)

Question Title, Roles and Responsibilities, CR.CRMRR.QUALCONTROL.P
ID

Question 2. Are there provisions in place to assure that only qualified individuals may assume control at any console/desk?

References 192.631(b)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary WGS CRM procedure should include measures such as SCADA login passwords, and/or controlled access to the control room. Such measures should address periods when the control room is unmanned.

Question Title, Shift Change Process, CR.CRMRR.HANDOVER.O
ID

Question 12. Do observations indicate adequate hand-over of responsibility to the oncoming shift?

References 192.631(b)(4) (192.631(c)(5))

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS "Shift Change Briefing Form" and found it does not indicate morning or night shift time (AM or PM) and the durations of the hand-over.

Question Title, Authority to Supersede Controller Action Disallowed - Controllers,
ID CR.CRMRR.OTHERAUTHORITYDISALLOW.P

Question 19. Do processes disallow others to have authority to direct or supersede the specific technical actions of a controller?

References 192.631(b)(5)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section III. Roles and Responsibilities B. Control Room Supervisor and found "The Lead Operator has access to the SCADA view screens and is deemed the Control Room Supervisor. Each of the controllers report directly to the Lead Operator." WGS should

clarify the Lead Operator should not supersede the technical actions of a controller.

CRM, SCADA, and Leak Detection: Alarm Management (CR.CRMAM)

Question Title, Alarm Procedures, CR.CRMAM.ALARM.P
ID

Question 1. Is the alarm management plan a formal process that specifically identifies critical topical areas included in the program?

References 192.631(e)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary SED reviewed WGS CRM Plan, Section VII. Alarm Management and Appendix 6 - Wild Goose SCADA Alarm Management Plan, and found it missing the definition of ghost alarm.

Question Title, Alarm Management Plan Review, CR.CRMAM.PLANREVIEW.R
ID

Question 13. Do records indicate review of the alarm management plan at least once each calendar year, but at intervals not exceeding 15 months, in order to determine the effectiveness of the plan?

References 192.631(e)(4)

Assets Covered Wild Goose Storage (88673 (36))

Issue Summary There are no records of metrics of alarm management effectiveness in WGS CRM Plan.

Post-Inspection Written Findings

Dates of Inspection: 05/23/2022 – 05/27/2022

Operator: WILD GOOSE STORAGE LLC

Operator ID: 31287 (primary)

Inspection Systems: GT

Assets (Unit IDs) with results in this report:

System Type: GT

Inspection Name: 2022 Wild Goose Storage OQ

Lead Inspector: James Zhang

Operator Representative: Greg Clark

Unsatisfactory Results

No Preliminary Findings.

Concerns

No Preliminary Concerns.

Post-Inspection Written Findings

Dates of Inspection: 05/23/2022 – 05/27/2022

Operator: WILD GOOSE STORAGE LLC

Operator ID: 31287 (primary)

Inspection Systems: GT

Assets (Unit IDs) with results in this report:

System Type: GT

Inspection Name: 2022 Wild Goose Storage Section 114

Lead Inspector: James Zhang

Operator Representative: Greg Clark

Unsatisfactory Results

No Preliminary Findings.

Concerns

No Preliminary Concerns.