



Wild Goose Storage, LLC
A Rockpoint Gas Storage Company

PO Box 8, 2780 West Liberty Road
Gridley, California 95948
T 530.846.7351
rockpointgs.com

December 2, 2022

Terence Eng, P.E.
Program Manager
Gas Safety and Reliability Branch
Safety and Enforcement Division
California Public Utilities Commission
505 Van Ness Avenue, 2nd Floor
San Francisco, CA 94102-3298
terence.eng@cpuc.ca.gov

VIA ELECTRONIC MAIL

RE: General Order 112-F Inspection of Wild Goose Storage

Dear Mr. Eng:

Wild Goose Storage, LLC (WGS) submits this written response to the Safety and Enforcement Division (SED) of the California Public Utilities Commission (Commission). On behalf of the SED, James Zhang, Hengyao Chen, and Nicholas Peno conducted a General Order 112-F inspection of WGS's Operations and Maintenance Plan (O&M), Operator Qualification Program (OQ), Control Room Management Program (CRM), and PIPES Act of 2020 Section 114 procedures on May 23 – May 27, 2022 and July 18 – July 22, 2022. The inspection findings identified by SED were provided to WGS on November 2, 2022. WGS addresses the inspection findings as noted by SED in the "Post-Inspection Written Findings" in the following enclosed documents:

- **Attachment #1** – WGS Responses to "Post-Inspection Written Findings"
- **Attachment #2** – Excerpt from WGS O&M Plan highlighting revisions to address regulatory reporting.
- **Attachment #3** – Excerpt from WGS O&M Plan highlighting revisions to address external corrosion control.

If you have any questions, or require more information, please contact me at greg.clark@rockpointgs.com or at (209) 368-9277.

Sincerely,



Gregory N. Clark
Senior Compliance Manager

Enclosures

cc: C. Almengor (claudia.almengor@cpuc.ca.gov)
D. Lee (dennis.lee@cpuc.ca.gov)
J. Zhang (james.zhang@cpuc.ca.gov)
A. Anderson, G. Bozarth, M. Fournier (via e-mail)

Attachment #1





Post-Inspection Written Findings – O&M Plan

Unsatisfactory Results

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

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))

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).

WGS Response:

WGS has updated its O&M Plan to include the recommended notification requirements in Section 2.1. Please see Attachment #2.

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

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))

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).

WGS Response:

WGS has updated its O&M Plan to include the recommended training requirements in Section 2.1. Please see Attachment #2.



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

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))

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).

WGS Response:

WGS shall consider SED’s recommendation regarding improvements to procedures for atmospheric corrosion during the next annual O&M Plan review and update. Please note that the O&M Plan provides the following guidance for identifying atmospheric corrosion (Scope/Applicability – page#101):

- Disbonded coating with visible rust and pitting of the metal underneath.
- Disbonded coating with surface rust not no pitting or significant metal loss underneath.
- Coating is bonded but has small surface blemishes.

Please note that the O&M Plan provides the following guidance for protecting above ground pipe from atmospheric corrosion (Procedure – page#101):

- Maintaining a continuing program of painting based upon results of the external inspection program.
- Ensuring repairs and preventive maintenance actions necessitated by these inspections are completed prior to the next inspection.

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

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))

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).

WGS Response:

WGS shall consider SED’s recommendation regarding improvements to procedures for CP monitoring during the next annual O&M Plan review and update. Please note that the



O&M Plan provides the following guidance to assure adequate cathodic protection for steel pipelines, as required by 49 CFR Part 192 Appendix D (Procedure – page#116-117):

- 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.
- A negative (cathodic) potential of a least 850 mV with the cathodic protection applied. This potential is measured with respect to a saturated Cu/CuSo₄ reference electrode containing the electrolyte. Voltage drops other than those across the structure to electrolyte boundary must be considered for valid interpretation of this voltage measurement (see NACE RP0169-2002) without current interruption.

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

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))

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).

WGS Response:

WGS has updated its O&M Plan to improve the procedure for the installation of test leads in Section 3.5 per SED’s recommendation. Please see Attachment #3.

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

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))

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).

WGS Response:

WGS shall consider SED’s recommendation regarding improvements to procedures for external protective coating during the next annual O&M Plan review and update. Please



note that the O&M Plan provides the following guidance regarding external protective coating (Procedure – page#109):

- The coating must have properties compatible with the applications of cathodic protection to the pipeline.

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

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))

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).

WGS Response:

WGS shall consider SED’s recommendation regarding improvements to procedures for inspection and testing of coating during the next annual O&M Plan review and update. Please note that the O&M Plan provides procedures for the inspection and testing of coating in Section 3.5 Corrosion Control – Internal and External Examination of Buried Pipelines (Procedure – pages#112-113).

Concerns

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

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))

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.

WGS Response:

WGS shall consider SED’s recommendation regarding procedures for MAOP during the next annual O&M Plan review and update.



Post-Inspection Written Findings – CRM

Unsatisfactory Results

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

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)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.

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

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))

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).

WGS Response:

WGS is focused on continuous improvement of CRM Plan recordkeeping and shall endeavor to properly document its shift change.



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

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)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.

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

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)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.



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

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

References 192.631(c)(2)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.

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

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

References 192.631(c)(2)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.



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

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

References 192.631(c)(2)

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).

WGS Response:

WGS is focused on continuous improvement of CRM Plan recordkeeping and shall endeavor to properly document its point-to-point verification.

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

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

References 192.631(d)

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).

WGS Response:

The process requiring that the potential contribution of controller fatigue to incidents and accidents be quantified during investigations is contained within Appendix C of the Rockpoint Incident Reporting and Investigation Procedure. This procedure was provided to SED during the inspection as "Document Request #8" in a PDF format.

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

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

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

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).



WGS Response:

WGS is focused on continuous improvement of CRM Plan recordkeeping and shall endeavor to properly document its fatigue mitigation training for controllers.

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

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)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.

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

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)

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).



WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED’s finding and shall occur during the next annual CRM Plan review and update.

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

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

References 192.631(e)(2)

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).

WGS Response:

WGS is focused on continuous improvement of CRM Plan recordkeeping and shall endeavor to properly document its alarm reviews and analysis.

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

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

References 192.631(e)(3)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED’s finding and shall occur during the next annual CRM Plan review and update.



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

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)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.

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

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)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.



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

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)

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).

WGS Response:

WGS has engaged a third-party consultant (Circadian Technologies, Inc.) to assist with performing a schedule analysis and workload analysis to address SED’s finding. Once complete, these analyses shall be incorporated into the WGS CRM Plan.

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

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

References 192.631(e)(5)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED’s finding and shall occur during the next annual CRM Plan review and update.



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

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)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED’s finding and shall occur during the next annual CRM Plan review and update.

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

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

References 192.631(e)(5)

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

WGS Response:

WGS has engaged a third-party consultant (Circadian Technologies, Inc.) to assist with performing a schedule analysis and workload analysis to address SED’s finding. Once complete, these analyses shall be incorporated into the WGS CRM Plan.

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

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)

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).



WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED’s finding and shall occur during the next annual CRM Plan review and update.

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

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)

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).

WGS Response:

WGS is focused on continuous improvement of CRM Plan recordkeeping and shall endeavor to properly document its records of deficiencies.

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

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)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED’s finding and shall occur during the next annual CRM Plan review and update.



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

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))

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED’s finding and shall occur during the next annual CRM Plan review and update.

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

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)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED’s finding and shall occur during the next annual CRM Plan review and update.



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

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)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED’s finding and shall occur during the next annual CRM Plan review and update.

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

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)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED’s finding and shall occur during the next annual CRM Plan review and update.



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

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

References 192.631(g)(1)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED’s finding and shall occur during the next annual CRM Plan review and update.

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

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)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED’s finding and shall occur during the next annual CRM Plan review and update.



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

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))

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED’s finding and shall occur during the next annual CRM Plan review and update.

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

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))

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).

WGS Response:

WGS is focused on continuous improvement of CRM Plan recordkeeping and shall endeavor to properly document its training.



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

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)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.

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

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)

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).

WGS Response:

WGS is focused on continuous improvement of CRM Plan recordkeeping and shall endeavor to properly document its training.

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

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)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.

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

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)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.

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

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)

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).



WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.

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

Question 14. Do processes establish who, regardless of location, operationally collaborates with control room personnel?

References 192.631(h)(6)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.

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

Question 15. Do processes define the frequency of new and recurring team training?

References 192.631(h)(6)

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)



WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.

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

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

References 192.631(h)(6)

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)

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.

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

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

References 192.631(h)(6)

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).



WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.

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

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

References 192.631(h)(6)

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).

WGS Response:

WGS is focused on continuous improvement of CRM Plan recordkeeping and shall endeavor to properly document its training.

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

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)

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).

WGS Response:

WGS is focused on continuous improvement of CRM Plan recordkeeping and shall endeavor to properly document its training.



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

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

References 192.631(j)(1)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.

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

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

References 192.631(j)(1)

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).

WGS Response:

WGS is focused on continuous improvement of CRM Plan recordkeeping and shall endeavor to properly document its compliance with the CRM rule.



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

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)

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).

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED’s finding and shall occur during the next annual CRM Plan review and update.

Concerns

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

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

References 192.631(b)

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.

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED’s finding and shall occur during the next annual CRM Plan review and update.



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

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

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

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.

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.

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

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)

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.

WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.

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

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

References 192.631(e)

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.



WGS Response:

In an effort to harmonize its compliance manuals, Rockpoint Gas Storage shall make wholesale changes to the Wild Goose Storage, LLC CRM Plan so that it becomes equivalent in content and format to the Lodi Gas Storage, L.L.C. CRM Plan. This revision should address SED's finding and shall occur during the next annual CRM Plan review and update.

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

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)

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

WGS Response:

WGS is focused on continuous improvement of CRM Plan recordkeeping and shall endeavor to properly document its alarm management effectiveness and review.

Attachment #2



**Excerpt from WGS O&M Plan
highlighting revisions to address regulatory reporting**

SECTION 2.0 – NORMAL OPERATIONS

2.1 Pipeline Reporting

PURPOSE: The purpose of this procedure is to establish responsibilities for preparing and submitting of pipeline reports.

SCOPE/APPLICABILITY:

The Compliance Manager, and/or their designate, is responsible for communicating information and data to State and Federal agencies regarding pipeline annual reports of transmission and gathering pipeline facilities (**DOT Form PHMSA F 7100.2.1**).

The G.O. 112-F report is to be prepared by the Compliance Manager, and/or their designate, and submitted to the CPUC no later than March 15 of each year for the preceding calendar year.

PROCEDURE:

Responsibility/Authority: The Compliance Manager shall ensure annual reports are delivered to the applicable State and Federal agencies.

The procedure for submitting the report shall include collecting data, such as number and kind of leaks, cause of the leaks, their disposition, etc., for preparation and submitting of the annual pipeline report.

The following regulated lines should be included in the report:

- Gas transmission lines, distribution lines, branch lines, sales lines, and associated facilities, such as compressor stations, meter stations, regulator stations, etc.
- Onshore gas gathering lines in an area within the limits of any incorporated or unincorporated city, town or village and any distributed residential or commercial area such as a subdivision business or shopping center, or community development.
- Underground natural gas storage facility: WGS shall submit an annual report on DOT PHMSA Form 7100.4–1 by March 15, for the preceding calendar year except for the first report, which must be submitted by July 18, 2017.

Online submission via PHMSA Portal is required unless an alternative reporting method is granted by PHMSA. The completed form must be submitted no later than March 15 of each year for the preceding calendar year.

Incident and annual reports for intrastate pipeline transportation subject to the jurisdiction of a State agency pursuant to a certification under section 5(a) of the Natural Gas Pipeline Safety Act of 1968 may be submitted in duplicate to that State agency if the regulations of that agency require submission of these reports and provide for further transmittal of

one copy within 10 days of receipt for incident reports and not later than March 15 for annual reports to the Information Resources Manager.

NOTE: Operators must have an Office of Pipeline Safety (OPS) Operator ID (OPID) and Personal Identification Number (PIN) to complete the Portal enrollment process. If the company does not have an OPID, go to the following URL <http://opsweb.phmsa.dot.gov> and select "**request an Operator ID**" which should be the third bullet in the bulleted list on the page. If you already have an OPID but do not have a PIN, navigate to the same URL and select "**request a PIN**" and one will be sent to the email address listed in your request.

If electronic reporting imposes an undue burden and hardship, an operator may submit a written request for an alternative reporting method to the:

Information Resources Manager,
Office of Pipeline Safety,
Pipeline and Hazardous Materials Safety Administration,
PHP-20, 1200 New Jersey Avenue,
SE Washington DC 20590.

The request must describe the undue burden and hardship. PHMSA will review the request and may authorize, in writing, an alternative reporting method. An authorization will state the period for which it is valid, which may be indefinite. An operator must contact PHMSA at 202-366-8075, or electronically to informationresourcesmanager@dot.gov or make arrangements for submitting a report that is due after a request for alternative reporting is submitted but before an authorization or denial is received. Operators should request and receive authorization from PHMSA prior to the use of alternative reporting methods.

A copy of the report shall also be sent to the CPUC.

CPUC Written Incident Reports:

WGS shall submit to DOT a written report on any safety-related condition that causes or has caused a significant change or restriction in the operation of a pipeline facility or a condition that is a hazard to life, property or the environment.

WGS shall submit to the CPUC on DOT Form PHMSA F7100.1 <http://ops.dot.gov/library/forms/forms.htm#7100.1> for distribution systems and on DOT Form PHMSA F7100.2 <http://ops.dot.gov/library/forms/forms.htm#7100.2> for transmission and gathering systems a report describing any incident that requires notice as described in the Incident Criteria below. WGS shall submit DOT Form PHMSA F7100.2 as soon as practicable but not more than 30 days after detection of an incident required to be reported under § 191.5.

Together with the form required above, WGS shall furnish a letter of explanation giving a more detailed account of the incident unless such letter is deemed not necessary by the CPUC staff. WGS may confirm the necessity of a letter of explanation while making the telephonic report. If, subsequent to the initial report or letter, WGS discovers significant additional information related to the incident, WGS shall furnish a supplemental report to the CPUC as soon as practicable, with a clear reference by date and subject to the original report. These letters, forms, and reports shall be held confidential under the provisions of Paragraph 2, Exclusions, of General Order 66 C and Public Utilities Code Section 315.

An operator of a distribution system serving less than 100,000 customers need not submit the DOT forms required by paragraph (1) above; however, WGS must submit the letter of explanation required by (2) above, subsequent to any telephonic report to the CPUC, unless such letter is deemed unnecessary by the CPUC staff.

National Pipeline Mapping System (NPMS) (Section 191.29)

WGS must supply the following geospatial data (described in the paragraph below) to PHMSA for pipelines or facilities, unless no changes have occurred since the prior year's report. If no changes have occurred, then WGS must comply with the guidance provided in the NPMS Operator Standards manual available at www.npms.phmsa.dot.gov or contact the PHMSA Geographic Information Systems Manager at (202) 366-4595.

Required Geospatial Data:

Geospatial data, attributes, metadata and transmittal letter appropriate for use in the National Pipeline Mapping System. Acceptable formats and additional information are specified in the NPMS Operator Standards Manual available at www.npms.phmsa.dot.gov or by contacting the PHMSA Geographic Information Systems Manager at (202) 366-4595.

Quarterly Summary Reports

SCOPE/APPLICABILITY:

The Compliance Manager is responsible and/or their designate for producing Quarterly Summary Reports to the CPUC. The Quarterly Summary Report is a summary of all reportable and non-reportable incidents that happened in the preceding quarter. The report must be submitted to the CPUC no later than the following month of the end of the quarter.

A summary of all CPUC reportable and non-reportable incidents which occurred in the preceding quarter as follows:

1. Incidents that were reported through the Commission's Emergency Reporting website.
2. Incidents for which either a **DOT Form PHMSA F7100.1 or F7100.2** was submitted.

3. Incidents which involved escaping gas from the utility's facilities and property damage including loss of gas in excess of \$1,000.
4. Incidents which included property damage between \$0 and \$1,000, and involved fire, explosion, or excavation related damage.
5. Incidents where the failure of a pressure relieving and limiting stations, or any other unplanned event, results in pipeline system pressure exceeding its established Maximum Allowable Operating Pressure (MAOP) plus the allowable build up set forth in 49 CFR § 192.201.
6. Incidents in which an under-pressure condition, caused by the failure of any pressure controlling device, or any other unplanned event other than excavation related damage, results in any part of the gas pipeline system losing service or being shut-down.

California Public Utilities Commission

Commission's Docket Office

505 Van Ness Avenue
San Francisco, California 94102

415.703.2782

800.848.5580 (Toll Free)

415.703.1758 Fax

PROCEDURE:

Responsibility/Authority:

The Compliance Manager shall ensure and produce the GO-112F Quarterly Summary Report to the CPUC no later than one month after the quarter has ended.

Proposed Installation Reports

This section applies to the construction of a new pipeline, or the reconstruction or reconditioning of an existing pipeline. In addition to the requirements of this section, copies of all reports submitted to the DOT pursuant to the requirements of 49 CFR, Part 191, §191.22(c)(1) shall be submitted to the CPUC at the same time.

“Construction of a new pipeline” means the installation of pipeline that will serve as a loop or extension to an existing pipeline or as an independent or stand-alone pipeline, any of which will be placed in service for the first time by a utility who filed a Form PHMSA F-7100.1-1 for the calendar year preceding the year in which construction takes place.

"Reconstruction of an existing pipeline" means the installation of pipeline that will replace an existing pipeline or pipeline segment due to alignment interference, deteriorating or aging conditions, pressure/capacity enhancement, or other reason.

"Reconditioning of an existing pipeline" is defined as the work associated with repairing, structurally reinforcing, the replacement of fittings or short segments of pipe, or for the removal and reapplication of pipe coating.

At least 60 days prior to the construction of a new pipeline, reconstruction, or reconditioning of an existing pipeline, a report shall be filed with the CPUC setting forth the proposed route and general specifications for such pipeline. The specifications shall include but not be limited to the following items:

- a) Description and purpose of the proposed pipeline.
- b) Specifications covering the pipe selected for installation, route map segregating incorporated areas, class locations and design factors, terrain profile sketches indicating maximum and minimum elevations for each test section of pipeline, and, when applicable, reasons for use of casing or bridging where the minimum cover will be less than specified in §192.327.
- c) Maximum allowable operating pressure for which the line is being constructed.
- d) Test medium and pressure to be used during strength testing.
 - a. During strength testing of a pipeline to be operated at hoop stresses of 20 percent or more of the specified minimum yield strength of the pipe used, any failure shall be reported on appropriate forms to the CPUC.
- e) Protection of pipeline from hazards as indicated in §192.317 and §192.319.
- f) Protection of pipeline from external corrosion.
- g) Estimated cost with supporting detail.

Unless otherwise specified, if the notification is made pursuant to § 192.8(b)(2), § 192.9(g)(4)(ii) and (h), § 192.461(g), § 192.506(b), § 192.607(e)(4) and (5), § 192.619(c)(2), § 192.624(c)(2)(iii) and (c)(6), § 192.632(b)(3), § 192.710(c)(7), § 192.712(d)(3)(iv) and (e)(2)(i)(E), § 192.921(a)(7), § 192.927(b), or § 192.937(c)(7) to use a different integrity assessment method, analytical method, compliance period, sampling approach, pipeline material, or technique (i.e., "other technology") that differs from that prescribed in those sections, the operator must notify PHMSA at least 90 days in advance of using the other technology. Affected personnel should be properly trained in the use of the other technology. An operator may proceed to use the other technology 91 days after submittal of the notification unless it receives a letter from the Associate Administrator for Pipeline Safety informing the operator that PHMSA objects to the proposed use of other technology or that PHMSA requires additional time to conduct its review.

Emergency Exception

In cases of projects necessary on an emergency basis, the required report shall be filed with the CPUC as far in advance of the project as practicable, but no later than 5 business

days after the project has been initiated. Reports filed for emergency projects must also detail reasons that necessitated the project being performed on an emergency basis.

Required Notifications to PHMSA for Certain Events

PROCEDURE:

Responsibility/Authority:

The Compliance Manager shall ensure and produce notifications to PHMSA electronically through the National Registry of Pipeline, Underground Natural Gas Storage Facility, and LNG Operators via the PHMSA Portal at <http://opsweb.phmsa.dot.gov>.

PHMSA must be notified of certain events or changes according to section 191.22 (c) (1) and 191.22 (c) (2):

Applicability: gas pipeline operators, gas pipeline facility operators, underground natural gas storage facility operators, and LNG plant/facilities.

Reporting: Use the OPID issued by PHMSA for all reporting requirements and for submissions to the National Pipeline Mapping System.

Events that require PHMSA notification AT LEAST 60 Days BEFORE the Event:

1. Construction or any planned rehabilitation, replacement, modification, upgrade, uprate, or update of a facility, other than a section of line pipe, that costs \$10 million or more. If 60 day notice is not feasible because of an emergency, the Compliance Manager must notify PHMSA as soon as practicable
2. Construction of 10 or more miles of a new or replacement pipeline;
3. Construction of a new LNG plant or LNG facility; or
4. Construction of a new underground natural gas storage facility or the maintenance of an underground natural gas storage facility that involves the plugging or abandonment of a well, or that requires a workover rig and costs \$200,000 or more for an individual well (e.g., drilling or well workover, including replacement of wellhead, tubing, or a new casing, of an injection, withdrawal, monitoring, or observation well).
5. Reversal of product flow direction when the reversal is expected to last more than 30 days. This notification is not required for pipeline systems already designed for bi-directional flow; or
6. A pipeline converted for service under §192.14, or a change in commodity as reported on the annual report as required by §191.17.

Events that require PHMSA notification NO LATER THAN 60 Days AFTER the event:

1. A change in the primary entity responsible (i.e., with an assigned OPID) for managing or administering a safety program required by this part covering

Operations and Maintenance Procedures Manual
Gas Pipeline

pipeline facilities operated under multiple OPIDs.
2. A change in the name of the operator;
3. A change in the entity (e.g., company, municipality) responsible for an existing pipeline, pipeline segment, pipeline facility, underground natural gas storage facility, or LNG facility
4. The acquisition or divestiture of 50 or more miles of a pipeline or pipeline system subject to 49 CFR 49 CFR Part 192;
5. The acquisition or divestiture of an existing LNG plant or LNG facility subject to Part 193; or
6. The acquisition or divestiture of an existing underground natural gas storage facility subject to 49 CFR part 192.

RECORDS: The Field Office will maintain the official files on the annual pipeline report DOT Form PHMSA F 7100.2.1. The file will be kept for the life of the pipeline facilities.

RELATED CODE, PROCEDURES AND FORMS:

CODE REFERENCE: Title 49 CFR 191.1, 191.3, 191.7, 191.9, 191.11, 191.13 and 191.19, 191.29

California Public Utilities Commission General Order 112-F

Attachment #3



**Excerpt from WGS O&M Plan
highlighting revisions to address external corrosion control**

CATHODIC PROTECTION/EXTERNAL CORROSION CONTROL

PURPOSE: To prescribe the minimum installation, maintenance, survey and test requirements to monitor and control external corrosion on buried or submerged steel pipelines.

SCOPE/APPLICABILITY: Buried or submerged gas pipelines installed after July 31, 1971 must have a cathodic protection system to protect the pipeline, installed and placed in operation within one year after completion of pipeline construction unless:

- Compliance can be demonstrated by tests, investigation, or experience in the area of application that a corrosive environment does not exist. This includes at a minimum, soil resistivity measurements, and tests for corrosion accelerating bacteria. Within 6 months after installation, the line must be further tested per 192.455(b) to evaluate the potential profile along the entire pipeline. If these tests indicate that a corrosive condition exists, the pipeline must be cathodically protected.
- The pipeline is a temporary installation with an operating period of service not to exceed 5 years beyond installation and any anticipated corrosion will not be detrimental to public safety.

If any pipeline is externally coated (notwithstanding the above criteria), it must be cathodically protected along the entire area that is effectively coated. A pipeline does not have an effective external coating if its cathodic protection current requirements are substantially the same as if it were bare.

Buried or submerged gas pipelines installed before August 1, 1971 must have a cathodic protection system when active corrosion is found for the following:

- Bare or ineffectively coated pipelines.
- Bare or coated pipes at compressor or regulator stations.

Active corrosion means continuing corrosion. If not controlled, active corrosion could result in a condition that is detrimental to public safety.

The amount of cathodic protection must be controlled so as not do damage to the protective coating or the pipe.

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.

Cathodic protection test leads shall be anchored by wrapping around the pipe or providing a separate anchor to avoid straining the pipe to wire cad-weld. Each bared test lead wire and bared metallic area at the point of connection to the pipeline must be coated with an electrical insulating material compatible with the pipe coating and the insulation on the wire (Applies to all new construction after January 1, 1992.)

Pipelines receiving cathodic protection from a single CP source of current must be electrically continuous with itself and the source of current. Additionally, the structure to be protected must be electrically isolated from structures, which are not intended to be protected.

Each impressed current type or galvanic anode CP system must be designed and installed so as to minimize any adverse effects on existing adjacent underground or submerged metallic structures.

Interference effects from impressed current CP systems on foreign structures shall be minimized. Mitigation of interference effects may employ one or more of the following techniques:

- Installation of sacrificial anodes on the affected structure;
- Bonding the affected structure to the offending CP system;
- Coating the affected structure;
- Providing sacrificial anodes connected to each pipeline and buried immediately adjacent to each other in the same backfill.

PROCEDURE:

Responsibility/Authority:

The Engineering Manager is responsible for designating a qualified person to monitor and control external corrosion on buried or submerged steel pipelines. In the event that Wild Goose assigns the corrosion monitoring to a contractor, then at least one member of the contractor's organization who performs the oversight of the activities shall at a minimum hold an up to date NACE International Institute certification of Cathodic Protection Technologist. Those individuals assigned by the contractor to measure or record information about the WGS CP system shall at a minimum hold an up to date qualification as a NACE Cathodic Protection Tester ("CP Tester").

The CP system provides a level of protection that complies with one or more of the criteria listed below.

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.
- A negative (cathodic) potential of a least 850 mV with the cathodic protection applied. This potential is measured with respect to a saturated Cu/CuSo₄ reference electrode containing the electrolyte. Voltage drops other than those across the structure to electrolyte boundary must be considered for valid interpretation of this voltage measurement (see NACE RP0169-2002) without current interruption.

Special Conditions

- In some situations, such as the presence of sulfides, bacteria, elevated temperature, acid environments and dissimilar metals, the criteria in the D.O.T. acceptable criteria section above may not be sufficient protection.

At pipeline locations where external corrosion-related leaks are discovered, a measurement of the pipe-to-soil cathodic potential shall be taken. If the level is less than that required by regulations, the Manager, Engineering & Operations shall reevaluate the CP system capacity and upgrade it as necessary prior to the next inspection.

Test and survey of CP systems according to the frequency schedule listed in Table 3.5A.

Prompt remedial action, at least prior to the next required survey, must be taken to correct condition which caused the pipeline to fail to meet the applicable criterion.

RECORDS: Record the location of cathodically protected pipeline, cathodic protection facilities, and neighboring structures bonded to cathodic protection system on **WGS Form 113 Cathodic Protection System Record** or, in the case that the work is performed by a contractor, on a mutually agreed upon document. (See pipeline drawings.)

The pipe-to-soil surveys are to be recorded or plotted on the form or charts provided for that purpose. The annual pipe-to-soil surveys, reports, and any remedial action, are to be retained for the life of the facility.

Contractor qualifications may be documented by retaining a copy of the contractor's NACE qualification record that documents their NACE qualification as CP tester, Cathodic Protection Technologist. Other records acceptable to WGS include training transcripts and individual operator qualification records provided by third party consortiums who act as clearinghouses for operator qualifications in the natural gas industry.

Except for annual pipe-to-soil surveys, these records are to be maintained for at least five years.

Annual pipe-to-soil surveys and reports, and remedial action reports, if any, shall be retained for the life of the facility in accordance with subsection 192.491.

RELATED CODE, PROCEDURES AND FORMS: Title 49 CFR Sections 192.455, 192.457(a), 192.463, 192.465, 192.469, 192.471, 192.473, 192.491, and 192.613

WGS Form 113 Cathodic Protection System Record.

**TABLE 3.5A
REQUIRED TESTS FOR CATHODIC PROTECTION**

SURVEY OR TEST	FREQUENCY
Pipe-to-Soil	Once each calendar year, but with intervals not exceeding 15 months.
Critical Bond (see Note 1)	Six times each calendar year, but with intervals not exceeding 2-1/2 months.
Non-critical Bonds	Once each calendar year, but with intervals not exceeding 15 months.
Insulation Test	Once each calendar year, but with intervals not exceeding 15 months.
Rectifier Inspection	Six times each calendar year, but with intervals not exceeding 2-1/2 months.
SUPPLEMENTAL TESTING	
Foreign Crossing Interference	Initially and as required, if survey done on recurring basis indicated the need.
Soil Resistivity	Initially for magnesium anode or impressed current ground bed installations.
Current Requirement	Initially and as required to determine current density, coating condition and cathodic protection sizing.
Deep Ground Bed Data	Initially to record all ground bed data during installation.
Deep Well Anode Performance	Initially and as required to record anode current outputs and look for ground bed deterioration.
Galvanic Anode Record	Initially to record all data during installation.

Operations and Maintenance Procedures Manual
Gas Pipeline

Rectifier Efficiency	Initially and as required.
----------------------	----------------------------

Note 1: Wild Goose Storage has verified with a certified corrosion engineering professional that WGS does not have critical interference bonds in its cathodic protection system.