

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
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May 5, 2021

Mr. Mathieu Fournier
VP Storage of Eng/Ops (mathieu.fournier@rockpointgs.com)
Lodi Gas Storage, LLC.
P.O. Box 230
Acampo, CA 95220

GI-2020-12-LGS-37

SUBJECT: SED's Closure Letter for General Order (GO) 112-F Gas Inspection of Lodi Gas Storage, LLC

Dear Mr. Fournier:

The Safety and Enforcement Division (SED) of the California Public Utilities Commission reviewed Lodi Gas Storage's (LGS) response letter dated April 22, 2021 for the findings identified during the General Order 112-F inspection of LGS's Operation and Maintenance procedure, Emergency Preparedness Program, Public Awareness Program, and Control Room Management Program from December 7 to 18, 2020, and from February 24 to 26, 2021.

A summary of the inspection findings documented by the SED, LGS's response to our findings, and SED's evaluation of LGS's response taken for each identified Violation and Area of Concern is attached.

This letter serves as the official closure for this portion of the 2020 GO 112-F Gas Inspection of LGS and any matters that are being recommended for enforcement will be processed through the Commission's Citation Program or a formal proceeding.

Thank you for your cooperation in this inspection. If you have any questions, please contact Wai Yin (Franky) Chan at (415) 703-2482 or by email at wai-yin.chan@cpuc.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Dennis Lee".

Dennis Lee, P.E.
Program and Project Supervisor
Gas Safety and Reliability Branch
Safety and Enforcement Division

Enclosure: Post-Inspection Written Preliminary Findings

cc: Greg Clark, LGS (greg.clark@rockpointgs.com)
Andy Anderson, LGS (andy.anderson@rockpointgs.com)
Harold Gold, LGS (harold.gold@rockpointgs.com)
Terence Eng, SED
Mahmoud Intably, SED

Post-Inspection Written Preliminary Findings

Dates of Inspection: 12/7/2020 to 12/18/2020 and 2/24/2021 to 2/26/2021

Operator: LODI GAS STORAGE, LLC

Operator ID: 31697 (primary)

Inspection Systems: Lodi Gas Storage (86920)

Assets (Unit IDs) with results in this report: GI-2020-12-LGS-37-03-04-05-10 (86920)

System Type: GT

Inspection Name: 2020 Lodi Gas Storage - O&M, Emergency Plan, Control Room, and Public Awareness

Lead Inspector: Wai-Yin Chan

Operator Representative: Greg Clark, Andy Anderson, and Harold Gold

Unsatisfactory Results

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)

Assets Covered GI-2020-12-LGS-37-03-04-05-10 (86920 (37))

Issue Summary 192.631(h)(6) states that:

"Control room team training and exercises that include both controllers and other individuals, defined by the operator, who would reasonably be expected to operationally collaborate with controllers (control room personnel) during normal, abnormal or emergency situations. Operators must comply with the team training requirements under this paragraph by no later than January 23, 2018."

SED reviewed Lodi Gas Storage's Control Room Management Plan and did not find any procedures or records on the Control Room Team Training requirement that became effective on January 23, 2018 per 192.631(h)(6). According to Lodi Gas Storage, they currently have the Annual Emergency Response Tabletop Exercises in place. According to section 1.2.2 of Lodi Gas Storage's Emergency Response Plan, the tabletop exercises are "meant to be a realistic simulation of an emergency response and conducted to assess the capabilities and readiness of operations personnel to respond to an emergency, interact with emergency equipment and ability to contact 3 rd -party service providers that supply said equipment." Therefore, Lodi Gas Storage is in violation of 192.631(h)(6).

SED recommends Lodi Gas Storage to update its Control Room Management Plan to include the Control Room Team Training requirement and reference to its Annual Emergency Response Tabletop Exercises if the exercises will be used to fulfill the Control Room Team Training requirement. SED also recommends Lodi Gas Storage to review the PHMSA Control Room Management Frequently Asked Questions (FAQs) H.05, H.06, H.07, H.08, H.09, and J.06 (listed below) to ensure its current Annual Emergency Response Tabletop Exercises can address all of the applicable elements in the FAQs. If the Annual Emergency Response Tabletop Exercises does not address all of the applicable elements in the FAQs, SED recommends Lodi Gas Storage to develop a new Control Room Team Training exercise or make modification to the current Annual Emergency Response Tabletop Exercises.

H.05 Who is required to participate in control room team training and exercises?

Individuals who usually provide key information or decision-making input to controllers or otherwise influence operational control decisions during normal, abnormal, or emergency situations are required to participate in control room team training and exercises. This includes individuals with authority to direct or supersede the specific technical actions of a controller and individuals that interact with controllers remotely or face-to-face inside the control room. Operators should review ADB 2014-02 and NTSB report PAR-12/01 when identifying individuals to include in control room team training.

[§§ 192.631(h)(6) and 195.446(h)(6)] Original: 01/16/2018

H.06 What skills should be included in control room team training and exercises?

Training and exercises must provide individuals, and the team as a whole, with the skills necessary to address conditions that could occur in any operational mode (normal, abnormal, or emergency conditions). Important skills include, but are not limited to, teamwork, communication, situational awareness, decision-making, leadership, professionalism, understanding roles and responsibilities (including how company leadership and executive management are involved in operational decisions),

recognition and appropriate responses to emergencies, resolution of data discrepancies, error diagnostics, error management, relevant procedures, and problem solving.

The training should specifically address scenarios when roles change, such as when an individual with authority to direct or supersede the specific technical actions of a controller assumes operational control of the pipeline, if the operator has designated such individuals.

[§§ 192.631(h)(6) and 195.446(h)(6)] Original: 01/16/2018

H.07 How should the training and exercises be conducted?

Operators have flexibility regarding the means used to deliver the training. However, the effectiveness of training should be evaluated, documented and considered when preparing future training and exercises. Operators may include computer-based (CBT) training, but since the focus is on personnel interaction and teamwork, CBT alone would not be considered sufficient. Classroom training is appropriate, but classroom training alone, without an exercise, would not be considered sufficient. On-the-job (OJT) training alone is not adequate to fulfill team training expectations.

Exercises should present realistic scenarios and situations sufficiently complex to challenge the team's collective decision-making skills. Exercises should include lessons learned from the operator's actual events, and should consider applicable events that have occurred at other oil and gas industry facilities.

Unless amended to include team training requirements, emergency procedure training or Oil Pollution Act drills alone are likely not sufficient to account for adequate team training and exercises.

[§§ 192.631(h)(6) and 195.446(h)(6)] Original: 01/16/2018

H.08 When must team training and exercises be completed and how frequently must subsequent team training exercises be conducted?

Operators must establish its team training program, including the objectives and content of both the training and exercises, no later than January 23, 2018. Those individuals identified as of January 23, 2018 are expected to have been trained no later than January 23, 2019. The team training program and associated written procedures must address the timely training of new or changing staff that assume roles requiring team training after January 23, 2018, due to circumstances such as newly hired employees, new or changing job assignments, or other reasons. The operator's written procedures should state the frequency of recurrence for full team training.

Operators are reminded that interim team activities such as team discussions of event scenarios, post-operational team critiques of recent abnormal operating conditions or incidents, team what-if analysis exercises, etc. that occur between full team training intervals can enhance pipeline safety. A change in training content would not necessarily require previously trained individuals to be re-trained on the changes until the next recurrence of full team training.

[§§ 192.631(h)(6) and 195.446(h)(6)] Original: 01/16/2018

H.09 Does every team training exercise have to include a controller?

At least one fully qualified controller must participate in all exercises and scenario practice. However, traditional classroom training on team concepts and soft skills could be accomplished without specific controller participation.

[§§ 192.631(h)(6) and 195.446(h)(6)] Original: 01/16/2018

J.06 What documentation is required for team training and exercises?

The operator must document and retain records of training and exercises that demonstrate compliance with the requirements of §§ 192.631(h)(6) and 195.446(h)(6). This includes documentation such as attendance list, course title, date, duration, content of training including, effectiveness evaluation results, and any exercise critiques and feedback from attendees. Operators may incorporate team training into their general training program to facilitate training management, including documentation aspects of team training.

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

References 192.631(h)(6)

Assets Covered GI-2020-12-LGS-37-03-04-05-10 (86920 (37))

Issue Summary Please see the issue summary in question 14 "Control Room Team Training - Personnel: Do processes establish who, regardless of location, operationally collaborates with control room personnel?"

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

References 192.631(h)(6)

Assets Covered GI-2020-12-LGS-37-03-04-05-10 (86920 (37))

Issue Summary Please see the issue summary in question 14 "Control Room Team Training - Personnel: Do processes establish who, regardless of location, operationally collaborates with control room personnel?"

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 GI-2020-12-LGS-37-03-04-05-10 (86920 (37))

Issue Summary Please see the issue summary in question 14 "Control Room Team Training - Personnel: Do processes establish who, regardless of location, operationally collaborates with control room personnel?"

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

References 192.631(h)(6)

Assets Covered GI-2020-12-LGS-37-03-04-05-10 (86920 (37))

Issue Summary Please see the issue summary in question 14 "Control Room Team Training - Personnel: Do processes establish who, regardless of location, operationally collaborates with control room personnel?"

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 GI-2020-12-LGS-37-03-04-05-10 (86920 (37))

Issue Summary Please see the issue summary in question 14 "Control Room Team Training - Personnel: Do processes establish who, regardless of location, operationally collaborates with control room personnel?"

LGS's Response:

Lodi Gas Storage has updated its Control Room Management Plan to explicitly address the Control Room Team Training requirement. Please see Attachment #2.

SED's Conclusion:

SED has opted not to impose a fine or penalty since LGS took the appropriate remedial actions, and the violations did not create any hazardous conditions for the public or utility employees.

Concerns

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))

Assets Covered GI-2020-12-LGS-37-03-04-05-10 (86920 (37))

Issue Summary SED reviewed the shift change forms for 2019 and did not find evidence of probable violations. According to Lodi Gas Storage, the 12 hour shifts start at 6:00am and 6:00pm. In Appendix B-3 "Operator Data Form" of its CRM manual, the 12 hour shifts start times are stated as 5:30am and 5:30pm. SED recommends Lodi Gas Storage to clarify the discrepancies in the CRM manual or update the "Operator Data Form" in Appendix B-3.

LGS's Response:

Lodi Gas Storage has updated Appendix B-3 in its Control Room Management Plan to correct this discrepancy. Please see Attachment #3.

SED's Conclusion:

SED has reviewed the response from LGS and determined that the corrective actions articulated by LGS sufficiently address SED's concern.

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)

Assets Covered GI-2020-12-LGS-37-03-04-05-10 (86920 (37))

Issue Summary SED recommends Lodi Gas Storage to reference the document (<https://www.phmsa.dot.gov/pipeline/control-room-management/investigating-possible-contribution-fatigue-pipeline-mishaps-june-2011>) from PHMSA's FAQ D.12 in Lodi Gas Storage's Control Room Management Plan as another method to evaluate if controller fatigue may have contributed to an incident.

LGS's Response:

Lodi Gas Storage has updated its Control Room Management Plan to address potential contribution of controller fatigue to incidents. Please see Attachment #4.

SED's Conclusion:

SED has reviewed the response from LGS and determined that the corrective actions articulated by LGS sufficiently address SED's concern.

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)

Assets Covered GI-2020-12-LGS-37-03-04-05-10 (86920 (37))

Issue Summary SED reviewed Lodi Gas Storage's Control Room Management Plan and found that section 6.4 "Field Personnel Communication" references to the "LGS Field Personnel Communication Procedure (Appendix E-5)." Appendix E-5 was not found in the Control Room Management Plan. Lodi Gas Storage was also unable to provide Appendix E-5 when SED requested for it. According to Lodi Gas Storage, the other section in section 6 of the Control Room Management Plan addresses the requirement on Field Personnel Communication.

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 GI-2020-12-LGS-37-03-04-05-10 (86920 (37))

Issue Summary SED reviewed Lodi Gas Storage's Control Room Management Plan and found that section 6.4 "Field Personnel Communication" references to the "LGS Field Personnel Communication Procedure (Appendix E-5)." Appendix E-5 was not found in the Control Room Management Plan. Lodi Gas Storage was also unable to provide Appendix E-5 when SED requested for it. According to Lodi Gas Storage, the other section in section 6 of the Control Room Management Plan addresses the requirement on Field Personnel Communication.

LGS's Response:

Lodi Gas Storage has updated its Control Room Management Plan to address the erroneous reference to Appendix E-5. Please see Attachment #5.

SED's Conclusion:

SED has reviewed the response from LGS and determined that the corrective actions articulated by LGS sufficiently address SED's concern.