



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials
Safety Administration**

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West Trenton, NJ 08628
609.771.7800

WARNING LETTER

OVERNIGHT EXPRESS DELIVERY

February 15, 2024

Mr. Stephen Ratcliff
President and Chief Executive Officer
Cook Inlet Natural Gas Storage Alaska
188 West Northern Lights Blvd, Suite 510
Anchorage, Alaska 99503

CPF 1-2024-012-WL

Dear Mr. Ratcliff:

From June 13 to June 15, 2023, representatives of the Pipeline and Hazardous Materials Safety Administration (PHMSA) pursuant to Chapter 601 of 49 United States Code (U.S.C.) inspected Cook Inlet Natural Gas Storage Alaska's (CINGSA) procedures and records for the Cook Inlet Natural Gas Storage Alaska Facility in Kenai Peninsula, Alaska.

As a result of the inspection, it is alleged that you have committed probable violations of the Pipeline Safety Regulations, Title 49, Code of Federal Regulations (CFR). The items inspected and the probable violations are:

1. **§ 192.12 Underground natural gas storage facilities.**
 - (a) ...
 - (b) *Depleted hydrocarbon and aquifer reservoir UNGSFs.*
 - (1) ...
 - (2) Each UNGSF that uses a depleted hydrocarbon reservoir or an aquifer reservoir for natural gas storage and was constructed on or before July 18, 2017, must meet the provisions of API RP 1171 (incorporated by reference, see § 192. 7), sections 8, 9, 10, and 11, and paragraph (c) of this section, by January 18, 2018, and must meet all provisions of paragraph (d) of this section by March 13, 2021.

CINGSA failed to meet the provisions of API RP 1171, Section 9. Specifically, CINGSA failed to perform production casing downhole inspections for the initial mechanical integrity assessment of storage wells in accordance with API RP 1171, Section 9.3.1 (Section 9.3.1).

Section 9.3.1 states in part, “Active well mechanical integrity evaluations shall include initial and subsequent evaluations as determined using the risk assessment and the information derived from the initial evaluation.”

CINGSA’s *Storage Integrity Management Program (Well and Reservoir)*, Standard 2847 Well Integrity Inspection, section 5.1 (Well Integrity Evaluation [API RP 1171 9.3.1]) stated in part “Well integrity evaluation methods typically used by the Company include but are not limited to review of design, completion, and well work records; wellhead and **downhole inspection**; well pressure monitoring and testing; and gas and liquid sampling.”

CINGSA’s *Storage Integrity Management Program (Well and Reservoir)*, Standard 2847 Well Integrity Inspection, section 9 (Frequency of Inspection [API RP 1171 6.9.2]) stated in part “If a well has not previously been subjected to any kind of downhole inspection, a baseline inspection of casing will be scheduled and prioritized on a data-informed, risk-driven basis.”

During the inspection, PHMSA requested to review CINGSA’s well integrity evaluations. CINGSA indicated that baseline integrity management risk assessments had been completed for all wells. However, there were no well records of initial production casing downhole inspections and no baseline inspection of this casing had been conducted. The inspection results are required to be used along with the well’s risk assessment to determine frequency of subsequent mechanical integrity evaluations of the casing in accordance with § 192.12(d)(3).

Therefore, CINGSA failed to meet the provisions of Section 9.3.1.

2. § 192.12 Underground natural gas storage facilities.

(a) ...

(b) ***Depleted hydrocarbon and aquifer reservoir UNGSFs.***

(1) ...

(2) **Each UNGSF that uses a depleted hydrocarbon reservoir or an aquifer reservoir for natural gas storage and was constructed on or before July 18, 2017, must meet the provisions of API RP 1171 (incorporated by reference, see § 192. 7), sections 8, 9, 10, and 11, and paragraph (c) of this section, by January 18, 2018, and must meet all provisions of paragraph (d) of this section by March 13, 2021.**

CINGSA failed to meet the provisions of API RP 1171, Section 9. Specifically, CINGSA records did not demonstrate that the operation of the master valve and wellhead pipeline isolation valve indicated ability to isolate the well in accordance with API RP 1171, Section 9.3.2 (Section 9.3.2).

Section 9.3.2 states in part “The operator shall test the operation of the master valve and wellhead pipeline isolation valve at least annually for proper function and ability to isolate the well.”

During the inspection, PHMSA reviewed CINGSA’s records of wellhead valve testing. These records did not include isolation testing of the storage wells in 2018, 2019, and 2020. CINGSA stated valve isolation testing was being done from 2018 to 2020 but was added into records as of 2021.

Therefore, CINGSA failed to meet the provisions of Section 9.3.2.

3. § 192.12 Underground natural gas storage facilities.

(a) ...

(b) *Depleted hydrocarbon and aquifer reservoir UNGSFs.*

(1) ...

(2) **Each UNGSF that uses a depleted hydrocarbon reservoir or an aquifer reservoir for natural gas storage and was constructed on or before July 18, 2017, must meet the provisions of API RP 1171 (incorporated by reference, see § 192. 7), sections 8, 9, 10, and 11, and paragraph (c) of this section, by January 18, 2018, and must meet all provisions of paragraph (d) of this section by March 13, 2021.**

CINGSA failed to meet the provisions of § 192.12(c) by January 18, 2018. Specifically, several of CINGSA's operations and maintenance manuals within its Storage Integrity Management Plan were not created until 2021, past the January 18, 2018, deadline required by § 192.12(b)(2).

Section 192.12(c) requires in part that "each operator of a UNGSF must prepare and follow for each facility one or more manuals of written procedures for conducting operations, maintenance, and emergency preparedness and response activities under paragraphs (a) and (b) of this section."

During the inspection, CINGSA's O&M Manuals were reviewed such as CINGSA Inventory Verification SOP 2837 and CINGSA Well Integrity Inspection SOP 2847. PHMSA determined that these manuals had not been reviewed in 2019 and 2020 due to the fact they were not created until 2021. In addition, CINGSA was unable to provide review and update record of CINGSA Well Pad Integrity Inspections SOP 2805 during 2021.

Therefore, CINGSA failed to meet the requirements of § 192.12(c) by January 18, 2018, as required by § 192.12(b)(2).

4. § 192.12 Underground natural gas storage facilities.

(a) ...

(b) *Depleted hydrocarbon and aquifer reservoir UNGSFs.*

(1) ...

(2) **Each UNGSF that uses a depleted hydrocarbon reservoir or an aquifer reservoir for natural gas storage and was constructed on or before July 18, 2017, must meet the provisions of API RP 1171 (incorporated by reference, see § 192. 7), sections 8, 9, 10, and 11, and paragraph (c) of this section, by January 18, 2018, and must meet all provisions of paragraph (d) of this section by March 13, 2021.**

CINGSA failed to meet the provisions of API RP 1171, Section 8. Specifically, CINGSA failed to assess threat and hazard interaction in accordance with API RP 1171, Section 8.3.2 (Section 8.3.2).

Section 8.3.2 states in part:

The operator shall use available information such as performance data collected through the field history, operations and maintenance (O&M) activities, geotechnical data such as well logs, engineering data, and completion reports to determine susceptibility to threat and hazard-related events and to assess threat and hazard interaction.

During the inspection, CINGSA's risk management model was reviewed. CINGSA's Risk Model V8, March 2023 had no categories considering threat and hazard interactions within it.

Therefore, CINGSA failed to meet the provisions of Section 8.3.2.

5. § 192.12 Underground natural gas storage facilities.

(a) ...

(b) *Depleted hydrocarbon and aquifer reservoir UNGSFs.*

(1) ...

(2) **Each UNGSF that uses a depleted hydrocarbon reservoir or an aquifer reservoir for natural gas storage and was constructed on or before July 18, 2017, must meet the provisions of API RP 1171 (incorporated by reference, see § 192. 7), sections 8, 9, 10, and 11, and paragraph (c) of this section, by January 18, 2018, and must meet all provisions of paragraph (d) of this section by March 13, 2021.**

CINGSA failed to meet the provisions of API RP 1171, Section 8. Specifically, CINGSA failed to assess the effectiveness of risk monitoring and risk management programs in accordance with API RP 1171, Section 8.7.1 (Section 8.7.1).

Section 8.7.1 states in part, "The operator shall assess the effectiveness of risk monitoring and risk management programs and maintain a continual review and improvement cycle in risk management activities to provide functional integrity of the storage operation."

During the inspection, CINGSA failed to provide any records demonstrating that a risk management effectiveness review and improvement cycles had been performed from 2019 to 2022.

Therefore, CINGSA failed to meet the provisions of Section 8.7.1.

6. § 192.12 Underground natural gas storage facilities.

(a) ...

(c) ***Procedural manuals.* Each operator of a UNGSF must prepare and follow for each facility one or more manuals of written procedures for conducting operations, maintenance, and emergency preparedness and response activities under paragraphs (a) and (b) of this section. Each operator must keep records necessary to administer such procedures and review and update these manuals at intervals not exceeding 15 months, but at least once each calendar year. Each operator must keep the appropriate parts of these manuals accessible at locations where UNGSF work is being performed. Each operator must have written procedures in place before commencing operations or beginning an activity not yet implemented.**

CINGSA failed to follow its manual of written procedures for conducting activities under § 192.12(b)(2). Specifically, CINGSA failed to follow its Standard Operating Procedures Manual, ENSTAR Emergency Operating Plan, SOP #1105 (SOP 1105) regarding performing annual training.

API RP 1171, Section 10.6.2 states in part, "Storage operations and applicable staff shall receive training in the use of the emergency preparedness/response plan." CINGSA's SOP 1105 stated in part

under policy “All ENSTAR personnel will be trained annually, and their knowledge evaluated on this plan.”

During the inspection, CINGSA was not able to provide emergency operating plan training records of staff personnel conducted annually in 2018. Additionally, although this training was conducted annually in 2022, the records indicated that 1 person was missing from the training.

Therefore, CINGSA failed to follow its manual of written procedures as required by § 192.12(c).

7. **§ 192.12 Underground natural gas storage facilities.**

(a) ...

(d) *Integrity management program—*

(1) ...

(4) *Integrity management procedures and recordkeeping.* Each UNGSF operator must establish and follow written procedures to carry out its integrity management program under API RP 1171 (incorporated by reference, see § 192.7), section 8 ("Risk Management for Gas Storage Operations"), and this paragraph (d). The operator must also maintain, for the useful life of the UNGSF, records that demonstrate compliance with the requirements of this paragraph (d). This includes records developed and used in support of any identification, calculation, amendment, modification, justification, deviation, and determination made, and any action taken to implement and evaluate any integrity management program element.

CINGSA failed to maintain records demonstrating compliance with the requirements of § 192.12(d). Specifically, CINGSA risk management records did not demonstrate that potential threats and hazards impacting storage wells were adequately evaluated in accordance with API RP 1171, Section 8.4.2 (Section 8.4.2).

Section 8.4.2 states in part, “The operator shall evaluate the potential threats and hazards impacting storage wells and reservoirs.”

During the inspection, PHMSA reviewed CINGSA’s risk model. CINGSA Risk Model V8 March 2023 broke down risk into 3 categories: Well risk, Reservoir risk and Surface risk. Each category had several threats/hazards and consequences that were not able to be reviewed to determine if adequate evaluation of them was done, such as the factors or data leading to their scoring. CINGSA Risk Management Plan stated subject matter experts (SME) were used for qualitative scoring for these but did not have details on how components within each threat/hazard or consequence were evaluated and what scores were obtained for them. There were no records of SME meeting minutes pertaining to these discussions of threat/hazard and consequence evaluation. Some examples of components within threats/hazards for which scoring was not able to be reviewed were: Well Threats- Corrosion, Well Components, Natural Forces; Reservoir Threats- Third Party Damage, Natural forces; Surface risk Threats- Natural forces such as earthquake; Reservoir Third Party Damage- third party drilling, third party production and third-party injection.

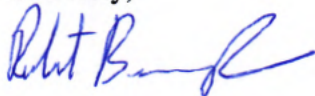
Therefore, CINGSA failed to maintain records demonstrating compliance with the requirements of § 192.12(d).

Under 49 U.S.C. § 60122 and 49 CFR § 190.223, you are subject to a civil penalty not to exceed \$257,664 per violation per day the violation persists, up to a maximum of \$2,576,627 for a related series of violations. For violation occurring on or after March 21, 2022 and before January 6, 2023, the maximum penalty may not exceed \$239,142 per violation per day the violation persists, up to a maximum of \$2,391,142 for a related series of violations. For violation occurring on or after May 3, 2021 and before March 21, 2022, the maximum penalty may not exceed \$225,134 per violation per day the violation persists, up to a maximum of \$2,251,334 for a related series of violations. For violation occurring on or after January 11, 2021 and before May 3, 2021, the maximum penalty may not exceed \$222,504 per violation per day the violation persists, up to a maximum of \$2,225,034 for a related series of violations. For violation occurring on or after July 31, 2019 and before January 11, 2021, the maximum penalty may not exceed \$218,647 per violation per day the violation persists, up to a maximum of \$2,186,465 for a related series of violations. For violation occurring on or after November 27, 2018 and before July 31, 2019, the maximum penalty may not exceed \$213,268 per violation per day, with a maximum penalty not to exceed \$2,132,679. For violation occurring on or after November 2, 2015 and before November 27, 2018, the maximum penalty may not exceed \$209,002 per violation per day, with a maximum penalty not to exceed \$2,090,022.

We have reviewed the circumstances and supporting documents involved in this case, and have decided not to conduct additional enforcement action or penalty assessment proceedings at this time. We advise you to correct the items identified in this letter. Failure to do so will result in Cook Inlet Natural Gas Storage Alaska being subject to additional enforcement action.

No reply to this letter is required. If you choose to reply, in your correspondence please refer to **CPF 1-2024-012-WL**. Be advised that all material you submit in response to this enforcement action is subject to being made publicly available. If you believe that any portion of your responsive material qualifies for confidential treatment under 5 U.S.C. § 552(b), along with the complete original document you must provide a second copy of the document with the portions you believe qualify for confidential treatment redacted and an explanation of why you believe the redacted information qualifies for confidential treatment under 5 U.S.C. § 552(b).

Sincerely,



Robert Burrough
Director, Eastern Region, Office of Pipeline Safety
Pipeline and Hazardous Materials Safety Administration