U.S. Department
of Transportation

**Pipeline and
Hazardous Materials
Safety Administration**

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WARNING LETTER

OVERNIGHT EXPRESS DELIVERY

February 15, 2024

Mr. John Bremner
Vice President, Midstream
Leaf River Energy Center LLC
2500 City West Blvd, Suite 1050
Houston, Texas 77042

CPF 1-2024-013-WL

Dear Mr. Bremner:

From August 15 to August 17, 2023, of the on-site inspection, representatives of the Pipeline and Hazardous Materials Safety Administration (PHMSA) pursuant to Chapter 601 of 49 United States Code (U.S.C.) inspected Leaf River Energy Center LLC's (LREC) Leaf River Energy Center Underground Natural Gas Storage Facility in Smith County, Mississippi.

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. **§ 191.22 National Registry of Operators.**

(a) ...

(c) *Changes.* Each operator of a gas pipeline, gas pipeline facility, UNGSF, LNG plant, or LNG facility must notify PHMSA electronically through the National Registry of Operators at https://portal.phmsa.dot.gov of certain events.

(1) An operator must notify PHMSA of any of the following events not later than 60 days before the event occurs:

(i) ...

(iv) Maintenance of a UNGSF 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, including its wellhead. If 60-days' notice is not feasible due to an emergency, an operator must

promptly respond to the emergency and notify PHMSA as soon as practicable.

LREC failed to provide electronic notification to PHMSA of certain maintenance activities, including well work that required a workover rig and costs $200,000 or more, not later than 60 days before that activity started as required by § 191.22(c).

During the inspection, PHMSA reviewed the annual reports submitted by LREC for its underground natural gas storage facility for calendar years 2019, 2020, 2021 and 2022. The calendar year 2022 annual report noted there was maintenance done on well CW #2 that included wellhead remediation and new production tubing installation. The initial cost assessment for this was over $200,000, thereby requiring notification to PHSMA pursuant to § 191.22(c). LREC stated notification of this was not filed with PHMSA.

Therefore, LREC failed to provide required electronic notification of changes to its system to PHMSA, as required by § 191.22(c).

2. **§ 192.12 Underground natural gas storage facilities.**

(a) *Salt cavern UNGSFs.*

(1) …

(3) Each UNGSF that uses a solution-mined salt cavern for natural gas storage and was constructed on or before July 18, 2017, must meet the provisions of API RP 1170 (incorporated by reference, *see* §192.7), sections 9, 10, and 11, and paragraph (c) of this section, by January 18, 2018, and must meet all provisions of section 8 of API RP 1171 (incorporated by reference, *see* §192.7) that are applicable to the physical characteristics and operations of a solution-mined salt cavern UNGSF, and paragraph (d) of this section, by March 13, 2021.

LREC failed to meet the provisions of API RP 1171, Section 8. Specifically, LREC failed to include and adequately evaluate potential threats and hazards impacting the cavern storage field in its risk management model in accordance with API RP 1171, Section 8.4.2 (Section 8.4.2).

Section 8.4.2 states in part that "The operator shall evaluate the potential threats and hazards impacting storage wells and reservoirs."

During the inspection, PHSMA reviewed LREC's risk management model within its Gas Storage Cavern and Well Risk Workbook. Based on its review, it was determined that potential threats and hazards impacting monitor well MW-01 had not been incorporated into the risk management model. Likelihood scoring and descriptors were also missing or inaccurate for multiple threats within the risk model. Finally, threats to the caverns from third party producing wells had not been adequately evaluated within the risk management model.

Therefore, LREC failed to meet the provisions of API RP 1171, Section 8.4.2.

3. § 192.12 Underground natural gas storage facilities.

(a) ***Salt cavern UNGSFs.***

(1) …

(3) Each UNGSF that uses a solution-mined salt cavern for natural gas storage and was constructed on or before July 18, 2017, must meet the provisions of API RP 1170 (incorporated by reference, *see* §192.7), sections 9, 10, and 11, and paragraph (c) of this section, by January 18, 2018, and must meet all provisions of section 8 of API RP 1171 (incorporated by reference, *see* §192.7) that are applicable to the physical characteristics and operations of a solution-mined salt cavern UNGSF, and paragraph (d) of this section, by March 13, 2021.

LREC failed to meet the provisions of section 8 of API RP 1171 and 192.12(d) by March 13, 2021. Specifically, LREC's risk management procedure, risk management model and integrity management program elements were created past the March 13, 2021, deadline required by § 192.12(a)(3).

Section 192.12(d) requires in part that:

> The integrity management program for each UNGSF under this paragraph (d) must consist, at a minimum, of a framework developed under API RP 1171 (incorporated by reference, *see* § 192.7), section 8 ("Risk Management for Gas Storage Operations")…

The integrity management program must include the following elements:

> …
> (iv) A plan for how staff will be trained in awareness and application of the procedures required by this paragraph (d);
> …

LREC's Storage Integrity Management Program (SIMP), section 1.11.3 Training in SIMP Procedures and Assessment of SIMP Procedure Adequacy and Effectiveness, states in part:

> *The SVP Engineering and Operations shall verify that the SIMP procedures training program implementation schedules include: The SIMP procedures on which specific roles and/or personnel are to be trained and the initial and refresh period for training.*

During the inspection, LREC's SIMP and procedures required as part of it were reviewed. Its *Underground Storage Integrity Management Program Plan* was effective on January 1, 2023. The plan prior to this, *Asset Management Plan* Revision 0 was effective December 2021, but was not in compliance with all the requirements of API RP 1171 Section 8 and the elements required within § 192.12(d) Integrity management program. The procedures used to meet provisions of section 8 of API RP 1171 such as the Cavern *and Well Risk Management Procedure* SOP 192.12 (e) 19 Revision 1 were effective on 12/1/22.

Therefore, LREC failed to meet the provisions of section 8 of API RP 1171 and § 192.12(d) by March 13, 2021, as required by § 192.12(a)(3).

4. § 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.**

Leaf River Energy Center (LREC) failed to review its manuals of written procedures at intervals not exceeding 15 months, but at least once each calendar year. Specifically, LREC failed to review its blowout contingency plan during 2021 and 2022.

During the inspection, PHMSA requested records demonstrating that LREC had reviewed its manuals required by § 192.12(c). LREC stated that reviews of its Blowout Contingency Plan titled Well Control Emergency Response Plan were not done in 2021 and 2022 thereby no records of review pertaining to them.

Therefore, LREC failed to review its manuals of written procedures at least once each calendar year during 2021 and 2022, as required by § 192.12(c).

5. § 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.**

LREC failed to follow its manual of written procedures for conducting activities under § 192.12(a)(3). Specifically, LREC failed to perform an annual effectiveness review of its Integrity Monitoring Program in accordance with its *Annual API 1170 Cavern Integrity Review and*

Analysis Procedure (Annual Review Procedure), Revision 0, developed pursuant to API RP 1170, Section 10.3 (Section 10.3).

Section 10.3 states in part that "[t]he outcome of this holistic and comprehensive approach shall be a formal written Integrity Monitoring Program that shall contain, at a minimum, the following components: … periodic review of the program for effectiveness."

LREC's Annual Review Procedure, section 1 Purpose, stated in part that "This procedure is designed to formalize the steps required to prepare the Annual API 1170 Integrity Review and Analysis for all Leaf River caverns. This annual review and analysis is due in August of each calendar year." Additionally, the Annual Review Procedure, section 8 Documentation, stated in part "[t]he Annual API 1170 Cavern Integrity Review and Analysis shall be documented on LREC 192 Form 67 – API 1170 Integrity Review and Analysis. The form and the associated records shall be maintained at the following location for life of the facility."

Form 67 was used for the Integrity Monitor Program's analysis of data and periodic review for effectiveness. During the inspection, PHMSA requested records of this for each year. LREC was not able to provide records of this review for 2020 and 2021 and stated this review was only done in 2019.

Therefore, LREC failed to comply with § 192.12(c) by not following its written procedures.

6. § 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.**

LREC failed to follow its written procedures to carry out its integrity management program under API RP 1171, Section 8. Specifically, LREC failed to perform an annual review of its 2022 risk assessments in accordance with its *Leaf River Energy Center (LREC) Asset Management Plan* (AMP), Section 4.9 procedural requirement, developed pursuant to API RP 1171, Section 8.5.2.

API RP 1171 Section 8.5.2 states in part that "The operator shall review the results of the risk assessment to determine whether the risk assessment, resulting prioritization, or ranking represents its facilities and characterizes the risks." The AMP, Section 4.9 RCP Recommendations, #8 required that LREC *"[r]eview risk annually and refine the risk treatment options discussions."*

The AMP was effective in December 2021. This plan was later updated to Gas Storage Cavern and Well Risk Workbook in October 2022. During the inspection, LREC was not able to provide records of the annual review of the 2022 risk assessments for the Leaf River Energy Center salt cavern storage field along with the four wells within it. Scoring of certain well threats were not updated from maintenance work done on well CW-01 in 2021 and well CW-02 in 2022.

Therefore, LREC failed to follow its AMP, Section 4.9 as required by § 192.12(d)(4).

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.**

LREC failed to follow its written procedures to carry out its integrity management program under API RP 1171, Section 8. Specifically, LERC failed to perform risk monitoring and risk management effectiveness reviews in accordance with its Cavern and Well Risk Management Procedure, SOP 192.12 (e) 19 (Risk Management Procedure), Rev 1, developed pursuant to API RP 1171, Section 8.7.1 (Section 8.7.1).

Section 8.7.1 states in part "[t]he 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."

LREC's Risk Management Procedure, section 14.1 Risk Management Review Period, stated in part:

> *The SVP Engineering and Operations should lead a periodic review of the risk management process, at an interval of 15 months but at least once each calendar year, of the storage integrity management program effectiveness at achieving the risk management goals, objectives, and targets…*

During the inspection, LREC did not have records pertaining to calendar year 2022 demonstrating that a review had been conducted of storage management program's effectiveness at achieving risk management goals and objectives.

Therefore, LREC failed to follow its Risk Management Procedure, as required by § 192.12(d)(4).

Under 49 U.S.C. § 60122 and 49 CFR § 190.223, you are subject to a civil penalty not to exceed $266,015 per violation per day the violation persists, up to a maximum of $2,660,135 for a related series of violations. For violation occurring on or after January 6, 2023 and before December 28, 2023, the maximum penalty may not 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.

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 Leaf River Energy Center LLC 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 1-2024-013-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

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