



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

March 26, 2024

Mr. Mark Hewitt
President and Chief Executive Officer
Northern Natural Gas Co
1111 South 103rd Street
Omaha, Nebraska 68124

CPF 1-2024-021-WL

Dear Mr. Hewitt:

From August 29 to August 31, and September 19 to September 21, 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 Northern Natural Gas Co's (NNG) Redfield Underground Natural Gas Storage Facility in Dallas county, Iowa.

As a result of the inspection, it is alleged that you have committed probable violation 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.

NNG failed to meet the provisions of API RP 1171, Section 9. Specifically, NNG failed to monitor for the presence of annular gas by measuring the annular pressure or annular gas flow, in accordance with API RP 1171, Section 9.3.2 (Section 9.3.2).

Section 9.3.2 states in part that “The operator shall monitor for presence of annular gas by measuring and recording annular pressure and/or annular gas flow.”

During the inspection, NNG reported that there are 36 wells not being monitored for the presence of annular gas by measuring and recording pressure and/or gas flow within the annulus. These wells do not have annulus monitoring ports on the wellhead assembly thereby making the annulus inaccessible. NNG stated construction work on the wellhead assemblies would be started in calendar year 2024 to have annulus monitoring ports installed in all 36 wells within the next 3 years.

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

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.**

NNG failed to meet the provisions of API RP1171, Section 11. Specifically, NNG failed to incorporate site security safeguards pursuant to API RP 1171, Section 11.9.1 into its operations by failing to record site security status of well sites.

Section 11.9.1 states in part “[t]he operator shall develop programs incorporating safeguards to the environment, site security, and safety and health into storage design, construction, and operations.”

During the inspection, PHMSA requested records of documentation that the site security was evaluated for each of the well sites. NNG was not able to provide records pertaining to this and did not have a requirement in its procedure for doing so. This requirement was added to NNG’s procedures after the inspection on 12/13/2023, within its Underground Storage Annulus Pressure Monitoring Rev 3 (190.325), section 5.4. Documentation of site security inspection at the wellhead site was added to Monthly Annulus Pressures – Monthly Leak Surveys form as of October 2023. Records prior to October 2023 do not have site security evaluation for each of the well sites.

Therefore, NNG failed to meet the provisions of Section 11.9.1.

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.

NNG failed to meet the provisions of API RP1171, Section 8. Specifically, NNG failed to include certain potential threats and hazards impacting the four reservoirs in its risk management model in accordance with the 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, it was noted that records did not demonstrate potential threats and hazards impacting the four reservoirs were adequately evaluated. Specifically, no risk assessments were done of the reservoirs with any considerations from API RP 1171 Table 1 (Potential Threats and Consequences) such as geologic uncertainty, reservoir fluid compatibility issues, and inventory analysis. There was no reservoir threats and hazards considerations incorporated into the risk management model.

Therefore, NNG failed to meet the provisions of Section 8.4.2.

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.

NNG failed to follow its manual of written procedures for conducting activities under § 192.12(b)(2). Specifically, NNG failed to follow its Manual of Emergency Operations (10.105) regarding performing annual training activities for its storage personnel pursuant to API RP 1171, Section 10.6.2.

API RP 1171, Section 10.6.2 states in part that “Storage operations and applicable staff shall receive training in the use of the emergency preparedness/response plan.”

NNG’s Procedure, Manual for Emergency Operations (10.105), section 6.3 stated:

In conjunction with the annual training, employees will review and confirm the emergency response booklet contents, maintained in hardcopy form in their emergency manuals, are current with the “guide material” documentation and forms for operating procedure 10.102, Emergencies.

NNG’s Procedure, Manual for Emergency Operations (10.105), section 8.5 required NNG to maintain its training records for three years.

During the inspection, PHMSA reviewed NNG’s training attendance records from Emergency Manual Reviews. For training conducted on March 4, 2021, the record indicates that 6 employees missed the training and do not appear to have attended a makeup session. For training conducted on March 18, 2022, the record indicates that 10 employees missed the training and do not appear to have attended a makeup session.

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

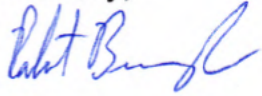
Under 49 U.S.C. § 60122 and 49 CFR § 190.223, you are subject to a civil penalty not to exceed \$266,015 per violation per day the violation persists, up to a maximum of \$2,660,135 for a related series of violations. For violation occurring on or after January 6, 2023 and before December 28, 2023, the 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 Northern Natural Gas Co 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 1-2024-021-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,

A handwritten signature in blue ink, appearing to read "Robert Burrough".

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