



Northern Natural Gas Company
1111 South 103rd Street
Omaha, NE 68124-1000
(402) 398-7000

April 26, 2024

Robert Burrough
Director, Eastern Region, Office of Pipeline Safety
Pipeline and Hazardous Materials Administration
840 Bear Tavern Road, Suite 300
West Trenton, NJ 08628

Re: CPF No. 1-2024-021-WL

Dear Mr. Burrough,

Northern Natural Gas Company (Northern) received the Pipeline and Hazardous Materials Safety Administration (PHMSA) Warning Letter issued on March 29, 2024, in the above-captioned matter.

The Warning Letter indicated a response was not required, but I wanted to confirm that Northern is addressing PHMSA's concerns. The PHMSA issues noted from the Warning Letter are quoted in italics with the Northern response following in plain text.

Item 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.

Northern Response:

Northern is working to modify the referenced wells to allow monitoring for the presence of annular gas by measuring the annular pressure. Northern has a project in place to modify well heads to install casing to casing annulus monitoring ports to the wells in 2024.

Item 2

§ 192.12 Underground natural gas storage facilities.

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(c) Depleted hydrocarbon and aquifer reservoir UNGSFs.

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(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 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.

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

Northern Response:

Northern revised a record form for Operating Procedure 190.325 on December 13, 2023, to include the monthly site security review and leak detection results; the updated form was provided to the inspector. The completed forms will be submitted to the company records management system annually with a maintenance control system task reminder.

Item 3

§ 192.12 Underground natural gas storage facilities.

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NNG failed to meet the provisions of API RP 1171, 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.

Northern Response:

While Northern previously had a reservoir risk white paper that addressed well reservoir threats, this information was not developed into a risk model. Northern is now incorporating these potential threats and hazards impacting reservoirs into a reservoir risk management model. Northern will establish a reservoir risk scoring system by the end of 2024.

Item 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).

Northern Response:

Northern has provided follow-up training to all employees who were absent for the referenced training. Processes have been updated to ensure that all personnel are included in follow-up training sessions if they are not present for the initial meeting.

Item 4

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Northern Response:

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Northern shares PHMSA's commitment to underground natural gas storage safety and appreciates the opportunity to update our efforts in this area.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas Correll". The signature is fluid and cursive, with the first name "Thomas" and last name "Correll" clearly distinguishable.

Thomas Correll

Vice President

Pipeline Safety and Risk