

WARNING LETTER

OVERNIGHT EXPRESS DELIVERY

March 16, 2023

Mr. Ronald Kraemer
President and Chief Executive Officer
National Fuel Gas Supply Corp
6363 Main Street
Williamsville, New York 14221

CPF 1-2023-020-WL

Dear Mr. Kraemer:

From July 27 through July 29 and August 2 through August 3, 2022, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA) pursuant to Chapter 601 of 49 United States Code (U.S.C.) inspected National Fuel Gas Supply Corp's (NFG) East Independence Storage, West Independence Storage, and Beech Hill Storage fields in Allegany, New York.

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.

NFG failed to meet the provisions of API RP 1171, Section 8. Specifically, NFG failed to include and adequately evaluate risk related to storage operation using wellhead equipment rated below

the maximum allowable operating pressure of pipeline in accordance with API RP 1171, Section 8.3.2 Data Sources (Section 8.3.2).

Section 8.3.2 states:

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 field inspection of East Independence, West Independence, and Beech Hill storages, the pressure rating of master gate(s) and/or side gate(s) of certain wells were found to be below the field stated maximum allowable operating pressure of the pipelines, 2300 psi, that serve those wells. This was evident for 5 of 11 wells at East Independence, 10 of 24 wells at West Independence, and 6 of 26 wells at Beech Hill. For East Independence, the wells were 564, 434, 438, 430, 437. For West Independence, the wells were 567, 544, 557, 448, 543, 583, 570, 451, 571, 552. For Beech Hill, the wells were 576, 558, 541, 542, 569, 578. There is a risk to well integrity if pipeline pressure is set higher than the wellhead equipment pressure rating. Wellhead equipment must have operating pressure ratings sufficient to exceed the maximum allowable operating pressure of the pipeline that feeds it. Based upon PHMSA's review of its risk model and risk management plan, it was identified that this threat was not included in NFG's risk management program.

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

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.**

NFG failed to meet the provisions of API RP 1171, Section 9. Specifically, NFG failed to perform annual master valve function tests of Beech Hill wells EC523 and EC525 in 2020 and 2021 in accordance with Section 9.3.2.

Section 9.3.2 states in part that "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, NFG was not able to provide records of annual master valve function tests of Beech Hill wells EC523 and EC525 in 2020 and 2021. Therefore, NFG 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.**

NFG failed to meet the provisions of API RP 1171, Section 11. Specifically, at the time of installation of a new production casing, NFG failed to include in its manuals a procedure for location and quality of cement bond between the production casing and formation pursuant to API RP 1171, Section 11.2.1 (Section 11.2.1).

Section 11.2.1 states in part that “The operator shall develop and follow procedures for the construction, operation, and maintenance of natural gas storage wells and reservoirs to establish and maintain functional integrity.” API RP 1171 Section 6.4.6 states in part that “The location and quality of the cement bond or seal between the production casing, or liner if applicable, and formation shall be evaluated to determine whether adequate formation and pipe bonding has been achieved to prevent the migration of gas and fluids between zones. Cement placement and bond quality shall be evaluated with a cement bond log or other means that can demonstrate the sealing potential of the cement.”

During the inspection, PHMSA reviewed procedures and records relative to the new production casing installation of East Independence storage well EC433. A new 4.5" production casing was installed and cemented to surface during the 2018-2019 calendar years. NFG was not able to provide records of cement bond log done to determine quality of cement bond between the production casing and well bore formation. NFG did not have a requirement in its procedures for doing so at the time of the well construction. This requirement was later added to NFG's procedure, *Well Construction and Design Manual* (Version: V2022.001), in 2/28/2022 under section 5.1.6 (*Cement Evaluation and Location*). The evaluation of the cement was needed within their procedure during well EC433 construction to determine whether adequate formation and pipe bonding had been achieved to prevent the migration of gas and fluids between zones.

Therefore, NFG failed to meet the provisions of Section 11.2.1.

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 National Fuel Gas Supply Corp 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 1-2023-020-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