



National Fuel

Ramon P. Harris, Jr.
Vice President

May 13, 2022

US Department of Transportation
Pipeline and Hazardous Materials Safety Administration
840 Bear Tavern Road, Suite 300
West Trenton, New Jersey 08628
ATTN: Robert Burrough, Director, Eastern Region

Re: CPF 1-2022-025-WL

Dear Mr. Burrough,

National Fuel Gas Supply Corporation ("National Fuel") is in receipt of and has reviewed the Warning Letter, dated February 24, 2022, CPF No. 1-2022-025-WL. Between August 23rd and 27th, PHMSA representatives inspected National Fuel's procedures, records, and facilities in New York. The resulting Warning Letter alleges that National Fuel committed two probable violations of 49 CFR § 192.12(b)(2). Below please find National Fuel's response to the findings and its ongoing commitment to safety.

PHMSA Finding

- 1. § 192.12(b)(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.**

PHMSA alleged that National Fuel did not meet the requirements of API RP 1171 Section 9.2.2 stating "Risk assessments shall be used as a basis for developing the integrity demonstration, verification, and monitoring tasks and evaluating their frequency requirements." The warning letter states that because National Fuel did not have a cement bond log record to demonstrate integrity nor a schedule for future casing inspections that it failed to meet the provisions of section 9.2.2.

Operator Response

National Fuel contends that there is no probable violation. Contrary to the allegation, National Fuel has been using risk assessments as a basis for developing the integrity demonstration, verification and monitoring tasks and evaluating their frequency as further described in this response. National Fuel instituted a risk-based casing

inspection logging program years before PHMSA began regulating underground natural gas storage wells. This logging program carried over into and is now memorialized in National Fuel's Storage Integrity Management Plan (STIMP); it prioritizes wells which lack surface casing and other items, including consequence area.

By 2015, all nineteen (19) Perrysburg wells known to lack surface casing had been logged. Using an earlier risk assessment process, two of the wells were identified for accelerated relogging due to indications of metal loss.¹ Because these wells received a high priority for logging based on the risk evaluation, all of these wells were logged early in the program and then re-categorized based on the data provided with results of the casing inspection logging suite, including one or more high resolution magnetic flux leakage tools.

The Warning Letter also asserts that the wells lack "intermediate casing", however National Fuel uses the term "surface casing" to describe the ground water protective string used primarily during the initial drilling and completion of a well. As described above, National Fuel prioritized wells reworked in this manner for the first phase of high-resolution casing inspection logs to verify the integrity of the production casing. Overall, the results showed no correlation between metal loss features in wells with or without surface casing. The 19 wells in Perrysburg do not exhibit elevated metal loss indications.

In addition to the risk-based casing inspection logging program, question WSSL09 of the Risk Model contained within National Fuel's STIMP takes into consideration wells lacking surface casing and assigns them a maximum risk score of 10 and a weight of 8 (out of a possible 10), thus elevating the risk score for these wells.

API RP 1171 does not provide prescriptive language regarding how integrity is to be demonstrated. There is no direct requirement to run a cement bond log for existing facilities. Nevertheless, National Fuel has bolstered its risk-based approach to verifying well integrity with a monitoring and mitigative approach. Since a cement bond log can only provide an indication of the expected barrier performance, National Fuel's annular vent monitoring program, which includes a requirement of action following discovery of any level of detectable gas, has been employed to provide a means to verify the expected barrier performance in preventing vertical migration of gas venting to the atmosphere. Additionally, the updated casing inspection re-log matrix expedites the integrity logging of wells lacking surface casing.

We expect to complete another round of casing inspection logs on the 19 identified wells by 2027 based on the data collected in previous logging and each well's risk assessment. The vent monitoring methodology, coupled with our updated casing inspection logging program, provide the data needed to maintain and continuously improve our well integrity program in an efficient manner.

PHMSA Finding

¹ National Fuel notes that it initially reported 21 Perrysburg wells without surface casing, however, the well count was inadvertently overstated due to double counting of these two re-logs. To clarify, there are only nineteen (19) wells without surface casing within the Perrysburg Storage Field.

1. **§ 192.12(b)(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.**

PHMSA alleged that National Fuel did not meet the requirements of API RP 1171 Section 11.9.1 which states in part that "The operator shall develop programs incorporating safeguards to the environment, site security, and safety and health into storage design, construction, and operations." PHMSA stated National Fuel "failed to demonstrate adequate site security was provided at each well location in accordance with API RP 1171, Section 11.9.1".

Operator Response

Prior to the inspection, National Fuel completed a risk assessment of the Derby Storage Field. During this meeting occurring on 4/15/2021, the potential for collision by farming equipment for well 1331-I was discussed. One action item resulting from the meeting was for Operations to evaluate the need for a barrier and/or flag at the well site. The result of that evaluation was to install protective barriers and flag on the referenced well in two stages. As outlined in a prior response, National Fuel allocated monies to purchase and install the referenced barriers. In an effort to enhance safety while minimizing damages to the landowner's crops, a flag was installed in fall of 2021 prior to the harvest. The concrete barriers were installed in mid-March of 2022 to minimize damage to field drainage but prior to the planting season. Please see the enclosed picture illustrating the barriers and flag now in place at Derby. National Fuel is committed to engaging in practices such as described above to enhance safety and work closely with our stakeholders to protect their interests as well.

National Fuel thanks PHMSA for the opportunity to respond to this warning letter and highlight its ongoing commitment to underground natural gas storage safety.

Respectfully submitted,



Ramon P. Harris, Jr.

National Fuel Gas Supply Corp.

Enclosures