Hilcorp Alaska, LLC

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8/9/2022 Via E-Mail to Mr. Robert Burrough

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

Re: Underground Natural Gas Storage Facilities: Swanson River, Kenai Gas Field, Pretty Creek
Response to PHMSA Warning Letter
CPF No. 1-2022-040-WL

Dear Mr. Burrough:

During the weeks of July 13 and August 10, 2021, representatives of the Pipeline and Hazardous Materials Safety Administration (PHMSA), performed a records and field inspection of Hilcorp Alaska, LLC's (Hilcorp) Kenai Gas Field (KGF) Storage, Swanson River Field (SRF) Storage, and Pretty Creek Unit (PCU) natural gas storage fields.

As a result of the inspection, PHMSA issued a Warning Letter dated March 22, 2022, identifying seven (7) alleged violations of the pipeline safety regulations in 49 C.F.R. Part 192.12, Underground Natural Gas Storage Facilities. On May 27, 2022, Hilcorp representatives met with the Eastern Region to obtain additional clarifications.

Hilcorp files this response to provide additional clarifying information for each of the seven allegations.

Please let us know if you require any additional information.

Sincerely,
Hilcorp Alaska, LLC

Ben Wasson

Ben Wasson, PE
Pipeline Risk & Compliance Manager

1) § 191.17 Transmission systems; gathering systems; liquefied natural gas facilities; and underground natural gas storage facilities: Annual report.

Hilcorp failed to include required information on its Underground Natural Gas Storage Facilities (UNGSF) annual reports submitted in 2019 and 2021 pursuant to§ 191.17(c). During the inspection, PHMSA reviewed Hilcorp's submitted UNGSF annual reports and found that the Kenai Gas Field information was omitted from the 2018 annual report submitted on 3/12/2019. Additionally, one new well drilled at the Swanson River Field was not included in the 2020 annual report submitted on 3/15/2021.

Hilcorp did include the new well as an active well in the 2019 and 2020 annual reports. However, the company included this well under annual report question C7 and neglected to identify it as being drilled that year, under question C9. This was discussed during the inspection and a supplemental report was filed at that time.

Hilcorp did not include the Kenai Gas Field on the 2018 annual report since Hilcorp had not identified these facilities as DOT-regulated. At the time, Hilcorp was involved in jurisdictional discussions with PHMSA to establish the scope and scale of the § 192.12 regulations on the comingled production and transmission facilities.

2) § 192.12(a)(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, 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.

During the inspection, PHMSA reviewed Hilcorp' s OMER and risk model. PHMSA found that a risk management program had not been fully developed, implemented, and documented according to Section 8.2. Hilcorp had not identified the threats and hazards to the storage operation that would be used for risk analysis. Also, Hilcorp had not estimated the likelihood of occurrence of events related to threats nor the likelihood of potential severity of the consequences of such events in the form of a developed risk model.

At the time of the inspection, Hilcorp presented their UNGSF Integrity and Risk Management program for wells and reservoirs for review. Hilcorp's program was developed in accordance with API RP 1171. A brief excerpt from the table of contents is shown below for reference.

Although PHMSA stated that Hilcorp's program did not identify threats and hazards, Hilcorp's program did include the identification of the threats and hazards that will be used in the risk analysis as shown in Table 6.1 of Hilcorp's Operations, Maintenance, and Emergency Response Manual. This same table coincides with Table 1 of API RP 1171.

PHMSA also stated that "Hilcorp had not estimated the likelihood of occurrence of events related to threats nor the likelihood of potential severity of the consequences of such events in the form of a developed risk model." However, Hilcorp included a preliminary risk ranking model and it was reviewed during the 2021 UNGSF inspection. The preliminary risk ranking model was used to prioritize the risk assessments for each storage well prior to the March 13, 2024 deadline.

As included in an excerpt from Section 6 below, Hilcorp utilizes a subject matter expert risk assessment process. Hilcorp's risk assessment process utilizes situational scenarios and SME estimates of the likelihood and consequence of failure to assess risk.

- In accordance with Section 6.5 of Hilcorp's OMER:

  "Based on the available information and actual data reviewed during the risk assessment, the risk management team will determine how significant each threat is to the asset (Likelihood), and how significant the release impact would be (Severity). In order to be consistent across Hilcorp's pipeline risk management program, Hilcorp utilizes their 7 x 7 (Likelihood x Consequence) Risk Matrix (included in Appendix G of the Hilcorp IMP) to evaluate risk across Health and Safety, Environmental, Property Damage, and Reputational Severity categories".

PHMSA stated in the preamble to the Underground Natural Gas Storage Final Rule issued on February 12, 2020, that operators needed to have an IM framework in place

by January 18, 2018. However, that framework "[did] not need to be fully fleshed out but must be sufficient for putting the program in place over the long term."[1] PHMSA also acknowledged that operators had until 2024 to complete the baseline risk assessments for 40% of its wellbores, wellheads, and associated components and all of their reservoirs and caverns.

Hilcorp's existing Integrity and Risk Management program was developed and in place at the time of the audit. Hilcorp will continue to work towards completing the required risk assessments by March of 2024.

3) § 192.12(a)(b)(2) – [As per Item #2]

Hilcorp failed to meet the provisions of API RP 1171, Section 9. Specifically, Hilcorp failed to perform annual visual inspection of each wellhead assembly for leaks during 2018 and 2019 in accordance with API RP 1171, Section 9.3.2. During the inspection, Hilcorp was not able to provide records of visual inspection of each wellhead assembly for leaks for 2018 and 2019.

Hilcorp did not perform visual inspection of each wellhead assembly in 2018 and 2019 since Hilcorp did not identify these facilities as DOT-regulated and was in jurisdictional discussions with PHMSA during that time period to establish the scope and scale of the § 192.12 regulations on the comingled production and transmission facilities.

4) § 192.12(a)(b)(2) - [As per Item #2]

Hilcorp failed to meet the provisions of API RP 1171, Section 9. Specifically, Hilcorp failed to 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 2018 and 2019 in accordance with API RP 1171, Section 9.3.2 (Section 9.3.2). During the inspection, Hilcorp was not able to provide records of master valve and wellhead pipeline isolation valve tests for 2018 and 2019.

Hilcorp did not inspect the master valve and wellhead pipeline isolation valves in 2018 and 2019 since Hilcorp did not identify these facilities as DOT-regulated and was in discussions with PHMSA during that time period to establish the scope and scale of the § 192.12 regulations on their comingled production and transmission facilities.

5) § 192.12(a)(b)(2) - [As per Item #2]

Hilcorp failed to meet the provisions of API RP 1171, Section 8. Specifically, Hilcorp did not review the results of the risk assessment to determine whether the risk assessment, resulting prioritization, or ranking represents its facilities and characterizes the risks in accordance with API

[1] Pipeline Safety: Safety of Underground Natural Gas Storage Facilities 85 Fed. Reg. 8110, 8112 (Feb. 12, 2020).

RP 1171, Section 8.5.2 (Section 8.5.2). Section 8.5.2 states in part, "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." During the inspection, Hilcorp did not provide any records of the reviews of its risk assessment results for 2019 and 2020.

Per Hilcorp's UNGSF Integrity and Risk Management program Section 6.5, risk assessment results are to be reviewed:

"to determine whether the risk assessment, resulting prioritization accurately represents the facilities and adequately characterizes the risk"

Hilcorp did not review the results of the UNGS risk assessment in 2019 and 2020 as the risk assessments had not yet been completed at the time of the inspection. In accordance with § 191.12, the deadline to complete the baseline risk assessments is not until March 2024.

6) § 192.12(c) Procedural manuals. Each operator of a UNGSF must prepare and follow for each facility one or more manuals of written procedures or 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.

Hilcorp failed to follow its manual of written procedures for conducting operations, maintenance and emergency preparedness and response activities. Specifically, Hilcorp failed to follow its OMER, Section 7.3 regarding documenting the well annulus pressure each day for all storage wells. During the inspection, Hilcorp's OMER was reviewed. The OMER, Section 7.3 stated in part, "To confirm continued mechanical integrity, Hilcorp shall record the pressure in the well and annulus during storage operations each day for all storage wells." When requested, Hilcorp presented annulus pressure records that showed that annulus pressures were not recorded daily in the Kenai Storage Field for the following wells: Well 005L (March to October in 2020), Well 44030 (2018), Well 43-006RD (2018 to 2020).

Though not required by DOT regulations, Hilcorp monitors well annulus pressures daily on each UNGSF well. There were several days over the 3-year period where well readings were missed. Hilcorp has since added the annulus pressure monitoring to their Work Order tracking system to ensure compliance moving forward.

7) § 192.12(c) - [As per Item #6]

Hilcorp failed to review and update its Emergency Action Plan (EAP) manual at intervals not to exceed 15 months, but at least once each calendar year. During the inspection, PHMSA requested Hilcorp's EAP documentation and the reviews for Swanson River and Pretty Creek emergency plans. Records of a review of the EAP were not available for 2020. Therefore, Hilcorp failed to review its EAP manual at least once each calendar year.

Hilcorp did not review and update the Emergency Action Plan (EAP) manual at intervals not to exceed 15 months, but at least once each calendar year. Hilcorp has since added the EAP reviews and updates to their Work Order tracking system to ensure compliance moving forward.