



U.S. Department
of Transportation

Pipeline and
Hazardous Materials
Safety Administration

840 Bear Tavern Road, Suite 300
West Trenton, NJ 08628
609.771.7800

NOTICE OF AMENDMENT

OVERNIGHT EXPRESS DELIVERY

April 23, 2024

Ms. Patricia Poppe
Chief Executive Officer
Pacific Gas & Electric Company
300 Lakeside Drive, 5th Floor
Oakland, California 94612

CPF 1-2024-030-NOA

Dear Ms. Poppe:

From June 5, 2023 to June 9, 2023, a State Inspector from the California Geologic Energy Management Division (CalGEM), acting as an Agent for the Pipeline and Hazardous Materials Safety Administration (PHMSA) pursuant to Chapter 601 of 49 United States Code (U.S.C.) inspected Pacific Gas & Electric Company's (PGE) procedures for Los Medanos, McDonald Island and Pleasant Creek Underground Natural Gas Storage Facilities (UNGSF) in Contra Costa, San Joaquin, and Yolo counties, California, respectively.

As a result of the inspection, PHMSA has identified the apparent inadequacies found within PG&E's plans or procedures. The items inspected and the inadequacies are described below:

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.**

PG&E's written procedures for underground natural gas storage were inadequate to assure safe

operation of a pipeline facility. Specifically, PG&E's construction procedures required by American Petroleum Institute Recommended Practice 1171 (2015) (API RP 1171), Section 11.2.1, failed to adequately address API RP 1171, Section 6.2.3.

Section 11.2.1 of API RP 1171 states, in part, "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."

Section 6.2.3 of API RP 1171 states, in part, "Wellhead equipment shall have operating pressure ratings sufficient to exceed the maximum anticipated operating pressure."

During the inspection, PHMSA reviewed PG&E's *Wellhead Equipment Design Standard UGS-E1A-S*. The process stated "Wellhead equipment operating pressure ratings shall exceed maximum anticipated operating pressure [MAOP]" but did not detail the MAOPs and pressure ratings for their assets or refer to the document that contained the information. PG&E also presented *q05_multi-bowl_wellhead_design_whitepaper* that included both the field MAOPs and field-specific minimum pressure ratings for wellhead components but was not referred to by the procedure.

Therefore, PG&E's construction procedures required by § 192.12(b)(2) and API RP 1171, Section 11.2.1 were inadequate regarding the requirements of API RP 1171, Section 6.2.3. PG&E must revise its procedures to address the deficiency outlined above.

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.**

PG&E's written procedures for underground natural gas storage were inadequate to assure safe operation of a pipeline facility. Specifically, PG&E's construction procedures required by API RP 1171, Section 11.2.1, failed to adequately address API RP 1171, Section 6.7.3.

Section 11.2.1 of API RP 1171 states, in part, "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."

Section 6.7.3 of API RP 1171 states, in part, "The operator shall repair a failed plug; the operator shall repair a well with any leak indication that may suggest a lack of isolation of the storage reservoir."

During the inspection, PHMSA reviewed PG&E's *UGS-E1D-S_Well Abandonment Standard* and *UGS-AG-S_Well Work Requirements_20220201*. The procedure paraphrased API RP 1171, Section 6.7.3 but did not provide any detail of the plug repair or well repair process and did not refer to the document that included the detailed process.

Therefore, PG&E's construction procedures required by § 192.12(b)(2) and API RP 1171, Section 11.2.1 were inadequate regarding the requirements of API RP 1171, Section 6.7.3. PG&E must revise its procedures to address the deficiency outlined above.

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.**

PG&E's written procedures for underground natural gas storage were inadequate to assure safe operation of a pipeline facility. Specifically, PG&E's construction procedures required by API RP 1171, Section 11.2.1, failed to adequately address API RP 1171, Section 6.7.2.

Section 11.2.1 of API RP 1171 states, in part, "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."

Section 6.7.2 of API RP 1171 states, in part, "The operator shall verify the presence and location of a cement plug after the plug is set and has reached a sufficient compressive strength; the operator shall correct deviations which may threaten isolation objectives of the plug."

During the inspection, PHMSA reviewed PG&E's *UGS-E1D-S_Well Abandonment Standard* section 3.5. The procedure paraphrases API RP 1171, Section 6.7.2 but did not include the process of how the location of the cement plug and how the sufficient compressive strength of the cement plug would be verified nor included a reference to a document that included the process.

Therefore, PG&E's construction procedures required by § 192.12(b)(2) and API RP 1171, Section 11.2.1 were inadequate regarding the requirements of API RP 1171, Section 6.7.2. PG&E must revise its procedures to address the deficiency outlined above.

4. § 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.

PG&E's written procedures for underground natural gas storage were inadequate to assure safe operation of a pipeline facility. Specifically, PG&E's construction procedures required by API RP 1171, Section 11.2.1, failed to adequately address API RP 1171, Section 6.7.2.

Section 11.2.1 of API RP 1171 states in part, "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."

Section 6.7.2 of API RP 1171 states in part, "The operator shall use cement plugs (see 6.4.3) and/or mechanical plugs to isolate the storage zone from fluid migration. The use of hydrostatic pressure as a sole means of isolation shall not be acceptable."

During the inspection, PHMSA reviewed PG&E's *UGS-E1D-S_Well Abandonment Standard*. The procedure paraphrases API RP 1171, Section 6.7.2 but does not include detailed information of cement or mechanical plugs to be used or refer to the document that included the specific of the plugs to be used.

Therefore, PG&E's construction procedures required by § 192.12(b)(2) and API RP 1171, Section 11.2.1 were inadequate regarding the requirements of API RP 1171, Section 6.7.2. PG&E must revise its procedures to address the deficiency outlined above.

Response to this Notice

This Notice is provided pursuant to 49 U.S.C. § 60108(a) and 49 C.F.R. § 190.206. Enclosed as part of this Notice is a document entitled Response Options for Pipeline Operators in Enforcement Proceedings.

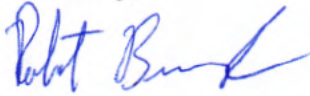
Please refer to this document and note the response options. Be advised that all material you submit in response to this enforcement action is subject to being made publicly available. If you believe that any portion of your responsive material qualifies for confidential treatment under 5 U.S.C. § 552(b), 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).

Following the receipt of this Notice, you have 30 days to submit written comments, revised procedures, or a request for a hearing under § 190.211. If you do not respond within 30 days of receipt of this Notice, this constitutes a waiver of your right to contest the allegations in this Notice and authorizes the Associate Administrator for Pipeline Safety to find facts as alleged in this Notice without further notice to you and to issue an Order Directing Amendment. If your plans or procedures are found inadequate as alleged in this Notice, you may be ordered to amend your plans

or procedures to correct the inadequacies (49 C.F.R. § 190.206). If you are not contesting this Notice, we propose that you submit your amended procedures to my office within 30 days of receipt of this Notice. This period may be extended by written request for good cause. Once the inadequacies identified herein have been addressed in your amended procedures, this enforcement action will be closed.

It is requested (not mandated) that PG&E maintain documentation of the safety improvement costs associated with fulfilling this Notice of Amendment (preparation/revision of plans, procedures) and submit the total to Robert Burrough, Director, Eastern Region, Pipeline and Hazardous Materials Safety Administration. In correspondence concerning this matter, please refer to **CPF 1-2024-030-NOA** and, for each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,

A handwritten signature in blue ink, appearing to read "Robert Burrough", is written over a light blue horizontal line.

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

Enclosure: *Response Options for Pipeline Operators in Enforcement Proceedings*