

## NOTICE OF AMENDMENT

### VIA ELECTRONIC MAIL

January 25, 2023

Todd Dunn  
Vice President Operations – HYCO  
Linde, Inc.  
1585 Saw Dust Road  
Suite 300  
The Woodlands, TX 77300

CPF 4-2023-004-NOA

Dear Mr. Dunn:

From March 30 to September 6, 2022, representatives of the Pipeline and Hazardous Materials Safety Administration (PHMSA) pursuant to Chapter 601 of 49 United States Code (U.S.C.), inspected Linde, Inc.'s (Linde) written operations and maintenance procedures.

Based on the inspection, PHMSA has identified the apparent inadequacies found within Linde's plans and procedures, as described below:

**1. § 192.605 Procedural manual for operations, maintenance, and emergencies.**

**(a) . . . .**

**(b) *Maintenance and normal operations.* The manual required by paragraph (a) of this section must include procedures for the following, if applicable, to provide safety during maintenance and operations.**

**(1) . . . .**

**(2) Controlling corrosion in accordance with the operations and maintenance requirements of subpart I of this part.**

**§ 192.481 Atmospheric corrosion control: Monitoring.**

**(a) Each operator must inspect and evaluate each pipeline or portion of the pipeline that is exposed to the atmosphere for evidence of atmospheric corrosion, as follows:**

|                                              |                                                                                                                                               |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Pipeline type:</b>                        | <b>Then the frequency of inspection is:</b>                                                                                                   |
| <b>(1) Onshore other than a Service Line</b> | <b>At least once every 3 calendar years, but with intervals not exceeding 39 months.</b>                                                      |
| <b>(2) Onshore Service Line</b>              | <b>At least once every 5 calendar years, but with intervals not exceeding 63 months, except as provided in paragraph (d) of this section.</b> |
| <b>(3) Offshore</b>                          | <b>At least once each calendar year, but with intervals not exceeding 15 months.</b>                                                          |

**(b) During inspections the operator must give particular attention to pipe at soil-to-air interfaces, under thermal insulation, under disbonded coatings, at pipe supports, in splash zones, at deck penetrations, and in spans over water.**

**(c) If atmospheric corrosion is found during an inspection, the operator must provide protection against the corrosion as required by § 192.479.**

**(d) If atmospheric corrosion is found on a service line during the most recent inspection, then the next inspection of that pipeline or portion of pipeline must be within 3 calendar years, but with intervals not exceeding 39 months.**

Linde's written procedures for controlling corrosion were inadequate to assure safe operation of a pipeline facility in accordance with § 192.402(b)(2). Specifically, Linde's written procedures for controlling corrosion failed to use a uniform evaluation system for identifying the extent of corrosion in accordance with § 192.481(a)-(d).

As listed below, Linde uses three different evaluation systems throughout its procedures to identify the extent of corrosion. Linde must use a uniform corrosion evaluation system throughout its written procedures to ensure consistent evaluation and proper remediation.

1. Linde's O&M Procedure "SMP-188: Pipeline Aboveground Piping Inspection," (effective January 31, 2015) section 3.3 discusses the types of coating failures and notes that "[t]he area affected by corrosion or coating failure should be considered in the decision to repair or replace the coating system. As a rule of thumb, when 20 percent or more of the surface area of the aboveground structure is corroded or has damaged coating, the coating should be replaced. If the coating is peeling excessively or is brittle and cracking, it should be replaced."

2. Linde Americas Practices standard, "SMP-320: Underground Plant Piping and Pipeline Corrosion Control Program Attachment 1: CP Survey" section 2.0 notes that the "[e]valuation of pipe riser interface coating: During the annual cathodic protection survey the air-to-soil interface coating of all pipe risers shall be inspected to ensure proper coating exists and is in acceptable condition to mitigate corrosion for this environment. Describe the size of the riser and the coating condition per the following code: (1) coating is non-existent; (2) coating is present but requires maintenance; or (3) coating is satisfactory, no further action necessary."

**3. During the inspection, PHMSA reviewed Linde's forms for the inspection of aboveground pipe for atmospheric corrosion, "Pipeline Aboveground Piping Inspection and the Quarterly Pipeline ROW Patrol Log." These forms include references to the evaluation of exposed piping. Specifically, the Quarterly Pipeline ROW Patrol Logs state that "Paint Levels should be noted as: (1) Satisfactory; (2) Light Maintenance and (3) Requires Attention."**

Therefore, Linde's written procedures for controlling corrosion were inadequate to assure safe operation of a pipeline facility in accordance with § 192.402(b)(2). Linde must revise its procedures to address the requirements in § 192.481.

#### 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 Compliance 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 Linde, Inc. maintain documentation of the safety improvement costs associated with fulfilling this Notice of Amendment (preparation/revision of plans, procedures) and submit the total to Bryan Lethcoe, Regional Director, Southwest, Pipeline and Hazardous Materials Safety Administration. In correspondence concerning this matter, please refer to **CPF 4-2023-004-NOA** and, for each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,

Bryan Lethcoe  
Director, Southwest Region  
Pipeline and Hazardous Materials Safety Administration

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

cc: John Maitino, National Pipeline Compliance Mgr., Linde, Inc., [john.maitino@linde.com](mailto:john.maitino@linde.com)