

**U.S. EPA REGION 1  
HEARING CLERK**

## CONSENT AGREEMENT AND FINAL ORDER

5. As discussed below, the CAFO resolves the following violations that Complainant alleges occurred in connection with Respondent's storage and handling of anhydrous ammonia at its manufacturing, packaging, and distribution facility in East Hartford, Connecticut:

- a. Failure to design and maintain a safe facility, taking such steps as are necessary to prevent such releases, in violation of Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1); and
- b. Failure to minimize the consequences of a release should one occur, in violation of Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1).

**A. JURISDICTION**

6. This Consent Agreement and Final Order is entered into under Sections 113(a)(3)(A) and 113(d) of the CAA, 42 U.S.C. §§ 7413(a)(3)(A) and 7413(d), and the Consolidated Rules of Practice, 40 C.F.R. Part 22.

7. EPA and the U.S. Department of Justice jointly determined that this matter, although it involves alleged violations that occurred more than one year before the initiation of this proceeding, is appropriate for administrative penalty assessment. 42 U.S.C. § 7413(d)(1); 40 C.F.R. § 19.4 (containing the inflation adjustment for the administrative penalty cap set out in 42 U.S.C. § 7413(d)(1)).

8. The Regional Judicial Officer is authorized to ratify this CAFO, which memorializes a settlement between Complainant and Respondent. 40 C.F.R. §§ 22.4(b) and 22.18(b).

## II. STATUTORY AND REGULATORY AUTHORITY

9. Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1), states that the purpose of Section 112(r) and its implementing regulations is “to prevent the accidental release and to minimize the consequences of any such release” of an “extremely hazardous substance.”

10. Pursuant to Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1), owners and operators of stationary sources producing, processing, handling, or storing substances listed pursuant to Section 112(r)(3) of the CAA, 42 U.S.C. § 7412(r)(3), or any other extremely hazardous substance, have a general duty, in the same manner and to the same extent as 29 U.S.C. § 654, to (a) identify hazards which may result from accidental releases of such substances using appropriate hazard assessment techniques; (b) design and maintain a safe facility taking such steps as are necessary to prevent releases; and (c) minimize the consequences of accidental releases which do occur. This section of the CAA is referred to as the “General Duty Clause.”

11. The extremely hazardous substances listed pursuant to Section 112(r)(3) include, among others, anhydrous ammonia.

12. The term “accidental release” is defined by Section 112(r)(2)(A) of the CAA, 42 U.S.C. § 7412(r)(2)(A), as an unanticipated emission of a regulated substance or other extremely hazardous substance into the ambient air from a stationary source.

13. The term “stationary source” is defined by Section 112(r)(2)(C) of the CAA, 42 U.S.C. § 7412(r)(2)(C), in pertinent part, as any buildings, structures, equipment, installations, or substance-emitting stationary activities, located on one or more contiguous properties under the control of the same person, from which an accidental release may occur.

14. The term “have a general duty in the same manner and to the same extent as section 654 of title 29 [of the U. S. Code]” means owners and operators must comply with the General Duty Clause in the same manner and to the same extent as employers must comply with the Occupational Safety and Health Act (“OSH Act”) administered by the Occupational Safety and Health Administration (“OSHA”). Section 654 of the OSH Act provides, in pertinent part, that “[e]ach employer shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees” and “shall comply with occupational safety and health standards promulgated under this act.” 29 U.S.C. § 654.

15. The intent of Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1), is for facility owners and operators to implement all feasible means to reduce the threat of death, serious injury, or substantial property damage to satisfy the requirements of the General Duty Clause. S. Rep. 101-228, 1990 U.S.C.C.A.N. 3385, 3595 (1989).

16. EPA routinely consults codes, standards, and guidance issued by chemical manufacturers, trade associations, and fire prevention associations (collectively, “industry standards”) to understand the hazards posed by using various extremely hazardous substances. The industry standards also are evidence of the standard of care that industry itself has recognized to be appropriate for managing those hazards. These industry standards are consistently relied upon by industry safety and fire prevention experts and are sometimes incorporated into state building, fire, and mechanical codes.

17. Sections 113(a) and (d) of the CAA, 42 U.S.C. §§ 7413(a) and (d) allow EPA to assess civil penalties for violations of the General Duty Clause. Forty C.F.R. Part 19 sets out the statutory penalties as adjusted for inflation.

### **III. GENERAL ALLEGATIONS**

18. At all times relevant to the violations alleged herein, Respondent operated a manufacturing, packaging, and distribution facility located at 451 Main Street, East Hartford, Connecticut (the “Facility”).

19. The Facility is located immediately across the street from a residential neighborhood, less than a half mile from a high school and several businesses, and approximately a mile from US. Routes 5 and 84 and the Connecticut River.

20. Respondent Coca Cola Beverages Northeast, Inc. is a corporation organized under the laws of the State of Connecticut.

21. As a corporation, Respondent is a “person” within the meaning of Section 302(e) of the CAA, 42 U.S.C. § 7602(e), against whom an administrative penalty order may be issued under Section 113(a)(3) of the CAA, 42 U.S.C. § 7413(a)(3).

22. The Facility is a “stationary source” as that term is defined at Section 112(r)(2)(C) of the CAA, 42 U.S.C. § 7412(r)(2)(C).

23. At all times relevant to the violations alleged herein, Respondent was the “owner or operator” of the Facility, within the meaning of Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1).

24. At all times relevant to the violations alleged herein, the Facility’s ammonia refrigeration system (“System”) used approximately 9,076 pounds of anhydrous ammonia.

Accordingly, Respondent “stored” and “handled” anhydrous ammonia, which, as indicated in paragraphs 10 and 11 above, is subject to the General Duty Clause.

25. Accordingly, at the time of the violations alleged herein, Respondent operated a stationary source that handled and stored anhydrous ammonia and thus was subject to the General Duty Clause found in Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1).

26. Anhydrous ammonia is a clear, colorless gas at atmospheric pressure and temperature with a strong odor. It is often stored and shipped under pressure as a liquid. It presents a significant health hazard because it is corrosive to the skin, eyes, and lungs. Inhalation of ammonia may cause irritation and burns of the respiratory tract, laryngitis, shortness of breath, high-pitched respirations, chest pain, pulmonary edema, and pneumonia. Ammonia vapors may be fatal if inhaled. Ingestion of ammonia may cause nausea, vomiting, and oral, esophageal, and stomach burns. If ammonia has contacted the eyes, irritation, pain, conjunctivitis, tearing, and corneal erosion may occur, and loss of vision is possible. Dermal exposure may result in severe burns and pain. Exposure to 300 parts per million of ammonia by volume is immediately dangerous to life and health.

27. Ammonia gas is generally regarded as nonflammable but burns at concentrations of approximately 15.5% to 27% by volume in air with strong ignition. It can explode if released in an enclosed space with a source of ignition present or if a vessel containing anhydrous ammonia is exposed to fire. The fire hazard increases in the presence of oil or other combustible materials.

28. Due to the dangers associated with anhydrous ammonia, the ammonia refrigeration industry has developed industry standards to control the risks associated with the

use of ammonia, specified in Appendix A. These standards are consistently relied upon by refrigeration experts and are sometimes incorporated by reference into state building and mechanical codes.

29. On August 22, 2023, three duly authorized EPA inspectors and one contract inspector (collectively, the “EPA Inspectors”) conducted an inspection at the Facility (the “Inspection”). The purpose of EPA’s Inspection was to determine whether Respondent was complying with Section 112(r) of the CAA and Sections 302-313 of the Emergency Planning and Community Right-to-Know Act (“EPCRA”).

30. The EPA inspectors toured the Facility’s perimeter, primary ammonia machinery room (“AMR”), outdoor ammonia equipment, and the production building.

31. During the Inspection, EPA observed numerous potentially dangerous conditions. These potentially dangerous conditions were explained (1) in EPA’s out-brief meeting with Respondent via Microsoft Teams on September 27, 2023; (2) in EPA’s Inspection Report, which was provided to Respondent; and (3) during an April 23, 2024, meeting between EPA and Respondent.

32. The potentially dangerous conditions identified by EPA are listed in the chart attached to and made a part of this CAFO as Appendix A. Appendix A also explains how each of the conditions could lead to an ammonia release or inhibit the Facility’s ability to minimize the consequences of any release that might occur and provides examples of recognized industry standards of care that feasibly could reduce or eliminate the hazard.

#### IV. VIOLATIONS

##### COUNT I – FAILURE TO DESIGN AND MAINTAIN A SAFE FACILITY

33. The allegations in paragraphs 1 through 32 are hereby realleged and incorporated herein by reference.

34. Pursuant to the General Duty Clause, Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1), owners and operators of stationary sources producing, processing, handling, or storing extremely hazardous substances have a general duty, in the same manner and to the same extent as Section 654 of Title 29, to, among other things, design and maintain a safe facility, taking such steps as are necessary to prevent releases.

35. The recommended industry practice and standard of care for designing and maintaining a safe facility so as to prevent releases of extremely hazardous substances is to base design considerations upon applicable design codes, federal and state regulations, and industry guidelines to prevent releases or minimize their impacts as well as to develop and implement standard operating procedures, maintenance programs, personnel training programs, management of change practices, incident investigation procedures, self-audits, and preventative maintenance programs. EPA's *Guidance for Implementation of the General Duty Clause: Clean Air Act Section 112(r)(1)* (May 2000) ("EPA's GDC Guidance") explains broad categories of measures appropriate for preventing releases of extremely hazardous substances, and the International Institute of Ammonia Refrigeration and others have developed more specific standards and guidelines for preventing releases of ammonia, set out in Appendix A.

36. The instances in which EPA alleges that Respondent failed in its general duty to design and maintain the Facility in a safe manner, taking such steps as are necessary to prevent



a release of an extremely hazardous substance, are listed under Conditions 1-8 and 15-21 of Appendix A, which is incorporated by reference into this CAFO. They include, for example, the failure to provide impact protection and adequate supports for piping and other equipment and to address areas of corrosion on piping.

37. Examples of industry standards associated with each instance in which Respondent failed in its general duty to design and maintain a safe facility (identified in Appendix A) demonstrate that the hazard is recognized by the ammonia refrigeration industry and that the industry has identified a feasible means by which Respondent could have eliminated or reduced the hazard. Further, Appendix A identifies, for each condition, how the failure to address the hazard could lead to or exacerbate a release of anhydrous ammonia and cause harm.

38. Accordingly, from at least January 15, 2020 through August 13, 2024, EPA alleges that Respondent failed to design and maintain a safe facility, taking such steps as were necessary to prevent a release of an extremely hazardous substance, in violation of the General Duty Clause, Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1).

## **COUNT II – FAILURE TO MINIMIZE THE CONSEQUENCES OF ACCIDENTAL RELEASES THAT MIGHT OCCUR**

39. The allegations in paragraphs 1 through 38 are hereby realleged and incorporated herein by reference.

40. Pursuant to the General Duty Clause, Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1), owners and operators of stationary sources producing, processing, handling, or storing extremely hazardous substances (including anhydrous ammonia) have a general duty, in

the same manner and to the same extent as Section 654 of Title 29, to, among other things, minimize the consequences of any accidental releases that do occur.

41. Industry standards and guidelines for minimizing the consequence of an accidental release from ammonia refrigeration systems are found, among other places, in the industry standards referenced in Appendix A. They include emergency planning and preparedness measures, as well as design and maintenance measures to minimize the severity and duration of releases that do occur.

42. The recommended industry practice and standard of care for emergency response planning at ammonia refrigeration systems of this size is to, *inter alia*, design and implement an emergency response plan that specifically addresses release scenarios developed from hazard analyses and facility-based knowledge, identifies emergency response equipment and its whereabouts, includes communication with and involvement of emergency planning and response officials, incorporates accident training for employees, and involves conducting periodic exercises to ensure that the plan is adequate to address emergency scenarios. EPA's GDC Guidance at 16-18. The ammonia refrigeration industry has developed standards and guidelines for emergency planning purposes. For example, Chapter 7 of Standard 9: Standard for Minimum System Safety Requirements for Existing Closed-Circuit Ammonia Refrigeration Systems ("ANSI/IIAR 9") provides that refrigeration facilities should provide directions for the emergency shutdown of the system at a location that is readily accessible to trained refrigeration system staff and trained emergency responders. Such documentation should include, among other items, instructions with details and steps for shutting down the system in an emergency, the name and telephone numbers of the refrigeration operating and

maintenance staff, the names and telephone numbers of all local, state, and federal agencies to be contacted as required in the event of a reportable incident, the quantity of ammonia in the system, and emergency facility contact title and phone number to call in the event of an alarm or ammonia release. IIAR 9-2020, Chapter 7.

43. The instances in which EPA alleges that Respondent failed in its general duty to minimize the consequences of a release should one occur are listed under Conditions 9-14 and 15-21 of Appendix A, which is incorporated by reference into this CAFO. They include, for example, the failure to provide adequate ventilation in the ammonia machinery room, lack of an eyewash station in the outdoor ammonia processing area, and inadequate labeling of emergency shutoff valves or the primary (King) valve.

44. Examples of industry standards associated with each instance in which Respondent failed in its general duty to minimize the consequences of a release (identified in Appendix A) demonstrate that the hazard is recognized by the ammonia refrigeration industry and that the industry has identified a standard means by which Respondent could have eliminated or reduced the hazard. Further, Appendix A identifies, for each condition, how the failure to address the hazard could lead to or exacerbate a release of anhydrous ammonia and cause harm.

45. Accordingly, from at least January 15, 2020 through August 13, 2024, EPA alleges that Respondent failed to minimize the consequences of an accidental release of an extremely hazardous substance should one occur, in violation of the General Duty Clause, Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1).

**V. TERMS OF SETTLEMENT**

46. For the purpose of this proceeding, as required by 40 C.F.R. §§ 22.18(b)(2) and 22.34 and CAA Section 113(d)(2)(A), 42 U.S.C. § 7413(d)(2)(A), Respondent:

- a. Admits that EPA has jurisdiction over the subject matter alleged in this CAFO;
- b. Neither admits nor denies the specific factual allegations contained in this CAFO;
- c. Consents to the assessment of a civil penalty as stated below;
- d. Consents to the issuance of any specified compliance or corrective action order;
- e. Consents to the conditions specified in this CAFO;
- f. Consents to any stated Permit Action;
- g. Waives any right to contest the alleged violations of law set forth in Section IV of this CAFO and its right to a hearing afforded by Section 113(d)(2)(A) of the Act, 42 U.S.C. § 7413(d)(2)(A); and
- h. Waives its right to appeal the Final Order accompanying this Consent Agreement.

47. For the purpose of this proceeding, Respondent also:

- a. Agrees that this CAFO states a claim upon which relief can be granted against Respondent;

- b. Acknowledges that this CAFO constitutes an enforcement action for purposes of considering Respondent' compliance history in any subsequent enforcement actions;
- c. Waives any and all remedies, claims for relief, and otherwise available rights to judicial or administrative review that Respondent may have with respect to any issue of fact or law set forth in this CAFO, including any right of judicial review under Section 307(b)(1) of the Clean Air Act, 42 U.S.C. § 7607(b)(1);
- d. Consents to personal jurisdiction in any action to enforce this Consent Agreement or Final Order, or both, in any United States District Court appropriate under 42 U.S.C. § 7413(b);
- e. Waives any rights it may possess at law or in equity to challenge the authority of the EPA to bring a civil action in a United States District Court to compel compliance with the Consent Agreement or Final Order, or both, and to seek an additional penalty for such noncompliance, and agrees that federal law shall govern in any such civil action;
- f. Waives any rights or defenses that Respondent has or may have for this matter to be resolved in federal court, including but not limited to any right to a jury trial, and waives any right to challenge the lawfulness of the final order accompanying the consent agreement. *Securities & Exchange Commission v. Jarkesy*, No. 22–859, (June 27, 2024).

48. Respondent certifies to the best of its knowledge based upon reasonable belief that it has corrected the violations alleged in this CAFO and is currently in compliance with the General Duty Clause at the Facility. Respondent further certifies that its compliance at the Facility includes compliance with ANSI/IIAR Standard 9.

49. Pursuant to Sections 113(a)(3)(A), (d)(2)(B) and (e) of the CAA, 42 U.S.C. § 7413(a)(3)(A), (d)(2)(B) and (e), and taking into account the relevant statutory penalty criteria, the applicable penalty policies, and Respondent's cooperation in agreeing to perform the non-penalty obligations in this CAFO, EPA has determined that it is fair and proper to assess a civil penalty of \$36,000 for the violations alleged in this matter. Respondent consents to the issuance of this CAFO and consents for purposes of settlement to:

- a. Pay the penalty cited in paragraph 50 below; and
- b. Perform the Supplemental Environmental Projects ("SEPs") described in paragraphs 58 through 72 below.

#### **Penalty Payment**

50. Respondent agrees to pay a civil penalty in the amount of **\$36,000** ("Assessed Penalty") within thirty (30) days after the date the Final Order ratifying this Agreement is filed with the Regional Hearing Clerk.

51. Respondent shall pay the Assessed Penalty and any interest, fees, and other charges due using any method, or combination of appropriate methods, as provided on the EPA website: <https://www.epa.gov/financial/makepayment>. For additional instructions see: <https://www.epa.gov/financial/additional-instructions-making-payments-epa>.

52. When making a payment, Respondent shall:

a. Identify every payment with Respondent's name and the docket number of this Agreement [CAA-01-2025-0012];

b. Concurrently with any payment or within 24 hours of any payment, Respondent shall serve proof of such payment to the following person(s):

Catherine Smith  
Senior Enforcement Counsel  
U.S. Environmental Protection Agency, Region 1  
[smith.catherine@epa.gov](mailto:smith.catherine@epa.gov)

and

Chelsey Carel  
Law Clerk  
U.S. Environmental Protection Agency, Region 1  
[carel.chelsey@epa.gov](mailto:carel.chelsey@epa.gov)

And

Wanda I. Santiago  
Regional Hearing Clerk  
U.S. Environmental Protection Agency, Region 1  
[santiago.wanda@epa.gov](mailto:santiago.wanda@epa.gov)

and

[R1\\_Hearing\\_Clerk\\_Filings@epa.gov](mailto:R1_Hearing_Clerk_Filings@epa.gov)

and

EPA's finance office at [CINWD\\_AcctsReceivable@epa.gov](mailto:CINWD_AcctsReceivable@epa.gov).

53. "Proof of payment" means, as applicable, a copy of the check, confirmation of credit card or debit card payment, or confirmation of wire or automated clearinghouse transfer, and any other information required to demonstrate that payment has been made according to EPA requirements, in the amount due, and identified with the appropriate docket number and Respondent's name.

54. **Interest, Charges, and Penalties on Late Payments.** Pursuant to 42 U.S.C. § 7413(d)(5), 31 U.S.C. § 3717, 31 C.F.R. § 901.9, and 40 C.F.R. § 13.11, if Respondent fails to timely pay any portion of the Assessed Penalty per this Agreement, the entire unpaid balance of the Assessed Penalty and all accrued interest shall become immediately due and owing, and EPA is authorized to recover the following amounts.

- a. Interest. Interest begins to accrue from the Filing Date. If the Assessed Penalty is paid in full within thirty (30) days, interest accrued is waived. If the Assessed Penalty is not paid in full within thirty (30) days, interest will continue to accrue until any unpaid portion of the Assessed Penalty as well as any interest, penalties, and other charges are paid in full. Per 42 U.S.C. § 7524(c)(6), interest will be assessed pursuant to 26 U.S.C. § 6621(a)(2), that is the IRS standard underpayment rate, equal to the Federal short-term rate plus 3 percentage points.
- b. Handling Charges. The United States' enforcement expenses including, but not limited to, attorneys' fees and costs of handling collection.
- c. Late Payment Penalty. A ten percent (10%) quarterly non-payment penalty.

55. **Late Penalty Actions.** In addition to the amounts described in the prior paragraph, if Respondent fails to timely pay any portion of the Assessed Penalty per this Agreement, EPA may take additional actions. Such actions EPA may take include, but are not limited to, the following.

- a. Refer the debt to a credit reporting agency or a collection agency, per 40 C.F.R. §§ 13.13 and 13.14.



- b. Collect the debt by administrative offset (i.e., the withholding of money payable by the United States government to, or held by the United States government for, a person to satisfy the debt the person owes the United States government), which includes, but is not limited to, referral to the Internal Revenue Service for offset against income tax refunds, per 40 C.F.R. Part 13, Subparts C and H.
- c. Suspend or revoke Respondent's licenses or other privileges, or suspend or disqualify Respondent from doing business with EPA or engaging in programs EPA sponsors or funds, per 40 C.F.R. § 13.17.

56. Request that the Attorney General bring a civil action in the appropriate district court to enforce the Final Order and recover the full remaining balance of the Assessed Penalty, in addition to interest and the amounts described above, pursuant to 42 U.S.C. § 7413(d)(5). In any such action, the validity, amount, and appropriateness of the Assessed Penalty and Final Order shall not be subject to review.

57. Pursuant to 26 U.S.C. § 6050X and 26 C.F.R. § 1.6050X-1, EPA is required to send to the Internal Revenue Service ("IRS") annually, a completed IRS Form 1098-F ("Fines, Penalties, and Other Amounts") with respect to any court order or settlement agreement (including administrative settlements), that requires a payor to pay an aggregate amount that EPA reasonably believes will be equal to, or in excess of, \$50,000 for the payor's violation of any law or the investigation or inquiry into the payor's potential violation of any law, including amounts paid for "restitution or remediation of property" or to come "into compliance with a law." EPA is further required to furnish a written statement, which provides the same information provided to the IRS, to each payor (i.e., a copy of IRS Form 1098-F). Failure to

comply with providing IRS Form W-9 or Tax Identification Number (“TIN”), as described below, may subject Respondent to a penalty, per 26 U.S.C. § 6723, 26 U.S.C. § 6724(d)(3), and 26 C.F.R. § 301.6723-1. In order to provide EPA with sufficient information to enable it to fulfill these obligations, EPA herein requires, and Respondent herein agrees, that:

- a. Respondent shall complete an IRS Form W-9 (“Request for Taxpayer Identification Number and Certification”), which is available at <https://www.irs.gov/pub/irs-pdf/fw9.pdf>;
- b. Respondent shall therein certify that its completed IRS Form W-9 includes Respondent’s correct TIN or that Respondent has applied and is waiting for issuance of a TIN;
- c. Respondent shall email its completed Form W-9 to EPA’s Cincinnati Finance Center at [chalifoux.jessica@epa.gov](mailto:chalifoux.jessica@epa.gov), within 30 days after the Final Order ratifying this Agreement is filed, and EPA recommends encrypting IRS Form W-9 email correspondence; and
- d. In the event that Respondent has certified in its completed IRS Form W-9 that it does not yet have a TIN but has applied for a TIN, Respondent shall provide EPA’s Cincinnati Finance Center with Respondent’s TIN, via email, within five (5) days of Respondent’s receipt of a TIN issued by the IRS.

#### **Non-Penalty Conditions**

58. In response to the alleged violations of Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1), and in settlement of this matter, although not required by 42 U.S.C. § 7412(r)(1) or

any other federal, state or local law, Respondent agrees to implement supplemental environmental projects (SEPs), as described below in paragraphs 59 –72 below.

59. By one year after the effective date of this CAFO, Respondent shall provide a first responder drone and at least 116 firefighter emergency escape system kits to the East Hartford Fire Department, the SEP recipient, to enhance emergency response capabilities, including those for an ammonia release, for local responders and the Capitol Region Hazardous Materials Response Team. The SEPs are more specifically described in Appendix B and incorporated herein by reference.

60. Respondent shall spend no less than \$97,746 on implementing the SEPs. The estimated costs of the SEPs are \$55,000 for the Drone SEP and \$42,746 for the Emergency Escape Equipment SEP. Respondent shall include documentation of the expenditures made in connection with the SEPs as part of the SEP Completion Report.

61. Respondent shall complete the SEPs within one year of the effective date of the CAFO.

62. Identification of SEP Recipient

- a. SEP Recipient: Respondent has selected the East Hartford Fire Department to receive the SEPs.

63. The EPA had no role in the selection of any SEP implementer, SEP recipient, or specific equipment identified in the SEP, nor shall this CAFO be construed to constitute EPA approval or endorsement of any SEP implementer, SEP recipient, or specific equipment identified in this CAFO.

64. The SEPs are consistent with applicable EPA policy and guidance, specifically EPA's *2015 Update to the 1998 Supplemental Environmental Projects Policy* (March 10, 2015). The SEPs advance at least one of the objectives of CAA Section 112(r) by helping to minimize the consequences of chemical releases through the enhancement of emergency responders' hazardous materials response capabilities. The SEPs are not inconsistent with any provisions of CAA Section 112(r). The SEPs relate to the alleged violations, and are designed to reduce the overall risk to public health and/or the environment potentially affected by the alleged violations by enhancing local responders' ability to respond to releases.

65. Respondent certifies the truth and accuracy of each of the following:
- a. That the SEPs were voluntarily proposed by Respondent;
  - b. That all cost information provided to the EPA in connection with the EPA's approval of the SEPs is complete and accurate and that the Respondent in good faith estimates that the costs to implement the SEPs, exclusive of administrative or oversight costs, is \$97,476;
  - c. That, as of the date of executing this CAFO, neither Respondent nor SEP Recipient is required to perform or develop the SEPs by any federal, state, or local law or regulation and is not required to perform or develop the SEPs by agreement, grant, or as injunctive relief awarded in any other action in any forum;
  - d. That the SEPs are not a projects that Respondent was planning or intending to construct, perform, or implement other than in settlement of the claims resolved in this CAFO;

- e. That Respondent has not received and will not have received credit for the SEPs in any other enforcement action;
- f. That Respondent will not receive reimbursement for any portion of the SEPs from another person or entity;
- g. That for federal income tax purposes, Respondent agrees that it will neither capitalize into inventory or basis nor deduct any costs or expenditures incurred in performing the SEPs; and
- h. That Respondent is not a party to any open federal financial assistance transaction that is funding or could fund the same activity as the SEPs described in paragraph 59.
- i. That Respondent has inquired of the East Hartford Fire Department whether it is party to an open federal financial assistance transaction that is funding or could fund the same activity as the SEPs and has been informed by the recipient that neither is a party to such a transaction.

66. For the purposes of this certification, the term “open federal financial assistance transaction” refers to a grant, cooperative agreement loan, federally-guaranteed loan guarantee, or other mechanism for providing federal financial assistance whose performance period has not yet expired.

67. Any public statement, oral or written, in print, film, or other media, made by Respondent or a representative of Respondent making reference to a SEP under this CAFO from the date of its execution of this CAFO shall include the following language: “This project was undertaken in connection with the settlement of an enforcement action, *In the Matter of Coca*

*Cola Beverages Northeast, Inc.*, taken by the U.S. Environmental Protection Agency for alleged violations of federal laws.”

### **SEP Reports**

68. Respondent shall submit a SEP Completion Report to EPA within seven (7) days of completing both SEPs. The SEP Completion Report shall contain the following information, with supporting documentation:

- a. A detailed description of each SEP as implemented, including the number of attendees of the training from each organization;
- b. A description of any operating problems encountered and the solutions thereto;
- c. Itemized costs;
- d. Certification that the SEPs have been fully implemented pursuant to the provisions of this CAFO; and
- e. A description of the environmental and public health benefits resulting from implementation of the SEPs (with a quantification of the benefits and pollutant reductions, if feasible).

69. Respondent agrees that failure to submit the SEP Completion Report required by paragraph 68 above shall be deemed a violation of this CAFO and Respondent shall become liable for stipulated penalties pursuant to paragraph 76 below.

70. Within seven (7) days of completing each SEP described in Appendix B, Respondent shall send an electronic mail message to confirm that the SEP has been completed.

71. Respondent shall submit all notices and reports required by this CAFO to Len Wallace ([wallace.len@epa.gov](mailto:wallace.len@epa.gov)), Chelsey Carel ([carel.chelsey@epa.gov](mailto:carel.chelsey@epa.gov)), and Catherine Smith ([smith.catherine@epa.gov](mailto:smith.catherine@epa.gov)).

72. In itemizing its costs in the SEP Completion Report, Respondent shall clearly identify and provide acceptable documentation for all eligible SEP costs. Where the SEP Completion Report includes costs not eligible for SEP credit, those costs must be clearly identified as such. For purposes of this paragraph, “acceptable documentation” includes invoices, purchase orders, or other documentation that specifically identifies and itemizes the individual costs of the goods and/or services for which payment is being made. Canceled drafts do not constitute acceptable documentation unless such drafts specifically identify and itemize the individual costs of the goods and/or services for which payment is being made.

### **Notifications**

73. Submissions required by this Agreement shall be in writing and shall be sent to the following recipients by electronic mail:

Len Wallace  
Waste and Chemical Compliance Unit Inspector  
U.S. Environmental Protection Agency, Region 1  
[wallace.len@epa.gov](mailto:wallace.len@epa.gov)

and

Chelsey Carel  
Law Clerk  
U.S. Environmental Protection Agency, Region 1  
[carel.chelsey@epa.gov](mailto:carel.chelsey@epa.gov)

and

Catherine Smith  
Senior Enforcement Counsel  
U.S. Environmental Protection Agency, Region 1  
smith.catherine@epa.gov

74. EPA will send all written communications to the following representative(s) for Respondent:

Krystle G. Tadesse, Esq.  
Locke Lord LLP  
krystle.tadesse@lockelord.com

75. All documents submitted to EPA in the course of implementing this Agreement shall be available to the public unless identified as confidential by Respondent pursuant to 40 C.F.R. Part 2 Subpart B and determined by EPA to merit treatment as confidential business information, in accordance with applicable law.

#### **Stipulated Penalties**

76. Respondent's failure to comply with each of the provisions in paragraphs 59 through 75 above shall become liable for stipulated penalties as set forth in paragraphs 77 through 79 below.

77. *Late Performance of the SEPs Themselves*: Except as provided in paragraphs 78 and 79 below, if Respondent fails to satisfactorily complete the requirements regarding the SEP specified in paragraphs 59 through 67 by the deadline in paragraph 59, Respondent agrees to pay, in addition to the civil penalty in paragraph 50, the following per day per violation stipulated penalty for each day the Respondent is late meeting the applicable SEP requirements:

- a. \$200 per day for days 1-30.
- b. \$250 per day for days 31-60.



78. *Late Submittal of SEP Reports:* If Respondent fails to timely submit any SEP reports, such as those referred in paragraph 68, in accordance with the timelines set forth in this CAFO, Respondent agrees to the following per day stipulated penalty for each day after the report was due until Respondent submits the report in its entirety:

- a. \$200 per day for days 1-30
- b. \$250 per day for days 31-60.

79. *Failure to Complete SEPs:* If Respondent does not satisfactorily complete the SEPs, including spending the minimum total amount on the SEPs set forth in paragraph 60 above, Respondent shall pay a stipulated penalty to the United States in the amount of \$107,233. “Satisfactory completion” of the SEPs is defined as Respondent spending no less than \$97,476 to provide the East Hartford Fire Department with an emergency response drone and at least 116 firefighter emergency escape system kits, according to the requirements, specifications, and deadlines described above and in Appendix B, and within one year of the effective date of this CAFO. The determinations of whether the SEP has been satisfactorily completed shall be in the sole discretion of EPA.

80. EPA retains the right to waive or reduce a stipulated penalty at its sole discretion.

81. Respondent shall pay stipulated penalties not more than fifteen (15) days after receipt of written demand by EPA for such penalties. The method of payment shall be in accordance with the provisions of paragraph 51 above. Interest and late charges shall be paid as stated in paragraph 82.

82. *Collection of Unpaid Stipulated Penalty for Failure to Perform Non-Penalty*

*Conditions:* Pursuant to 31 U.S.C. § 3717, EPA is entitled to assess interest and penalties on debts owed to the United States and a charge to cover the cost of processing and handling a delinquent claim. In the event that Respondent fail to timely pay any portion of the stipulated penalty relating to the performance of the Non-Penalty Conditions, the penalty shall be payable, plus accrued interest, without demand. Interest shall be payable at the IRS large corporate underpayment rate and shall accrue from the original date on which the penalty was due to the date of payment. In addition, a penalty charge of six percent per year will be assessed on any portion of the debt which remains delinquent more than ninety (90) days after payment is due. Should assessment of the penalty charge on the debt be required, it will be assessed as of the first day payment is due under 31 C.F.R. § 901.9(d). In any such collection action, the validity, amount, and appropriateness of the penalty shall not be subject to review.

83. EPA may, in the unreviewable exercise of its discretion, reduce or waive stipulated penalties otherwise due under this Consent Agreement and Final Order.

## **VI. ADDITIONAL PROVISIONS**

84. The terms, conditions, and compliance requirements of this CAFO may not be modified or amended except upon the written agreement of all parties and approval of the Regional Judicial Officer, except that the Regional Judicial Officer need not approve written agreements between the parties modifying the SEP schedule described in Appendix B. The Manager of EPA Region 1's Waste and Chemical Compliance Section shall have the authority to extend the deadlines in Appendix B for good cause.

85. The provisions of this Agreement shall apply to and be binding upon Respondent and its officers, directors, employees, agents, trustees, servants, authorized representatives,

successors, and assigns.

86. By signing this CAFO, Respondent acknowledges that this CAFO will be available to the public and agrees that this CAFO does not contain any confidential business information or personally identifiable information.

87. By signing this CAFO, the undersigned representative of Complainant and the undersigned representative(s) of Respondent each certify that he or she is fully authorized to execute and enter into the terms and conditions of this CAFO and has the legal capacity to bind the party he or she represents.

88. By signing this CAFO, the party agrees that the party's obligations under this CAFO and EPA's compromise of statutory maximum penalties constitute sufficient consideration for the other party's obligations.

89. By signing this CAFO, Respondent certifies that the information is has supplied concerning this matter was at the time of submission true, accurate, and complete for each such submission, response, and statement. Respondent acknowledges that there are significant penalties for submitting false or misleading information, including the possibility of fines and imprisonment for knowing submission of such information, under 18 U.S.C. § 1001.

90. Complainant and Respondent, by entering into this CAFO, each consents to accept digital signatures hereupon. Respondent further consents to accept electronic service of the fully executed CAFO, by e-mail, at [bmisenheimer@cokenortheast.com](mailto:bmisenheimer@cokenortheast.com) and [krystle.tadesse@lockelord.com](mailto:krystle.tadesse@lockelord.com). Respondent understands that these e-mail addresses may be made public when the CAFO and Certificate of Service are filed and uploaded to a searchable database. Complainant has provided Respondent with a copy of the EPA Region 1 Regional

Judicial Officer's Authorization of EPA Region 1 Part 22 Electronic Filing System for Electronic Filing and Service of Documents Standing Order, dated June 19, 2020. Electronic signatures shall comply with and be maintained in accordance with that Order.

**VII. EFFECT OF CONSENT AGREEMENT AND ATTACHED FINAL ORDER**

91. In accordance with 40 C.F.R. § 22.18(c), completion of the terms of this CAFO resolves only Respondent's liability for federal civil penalties for the violations specifically alleged above.

92. This CAFO constitutes a settlement by EPA of all claims for civil penalties pursuant to Section 113(d) of the CAA for the violations alleged herein. Compliance with this CAFO shall not be a defense to any other actions subsequently commenced pursuant to federal laws and regulations administered by EPA for matters not addressed in this CAFO, and it is the responsibility of Respondent to comply with all applicable provisions of federal, state, or local law.

93. The civil penalty provided under this CAFO, and any interest, nonpayment penalties, and charges described in this CAFO, shall represent penalties assessed by EPA within the meaning of 26 U.S.C. § 162(f) and are not tax deductible for purposes of federal, state or local law. Accordingly, Respondent agrees to treat all payments made pursuant to this CAFO as penalties within the meaning of 26 C.F.R. § 1.162-21, and further agrees not to use these payments in any way as, or in furtherance of, a tax deduction under federal, state, or local law.

94. This CAFO constitutes the entire agreement and understanding of the parties and supersedes any prior agreements or understandings, whether written or oral, among the parties with respect to the subject matter hereof.

95. Nothing in this CAFO shall relieve Respondent of the duty to comply with all applicable provisions of the Act and other federal, state, or local laws or statutes, nor shall it restrict the EPA's authority to seek compliance with any applicable laws or regulations, or be construed to be a ruling on, or determination of, any issue related to any federal, state, or local permit.

96. EPA reserves the right to revoke this CAFO and settlement penalty if and to the extent that EPA finds, after signing this CAFO, that any information provided by Respondent was materially false or inaccurate at the time such information was provided to EPA, and EPA reserves the right to assess and collect any and all civil penalties for any violation described herein. EPA shall give Respondent notice of its intent to revoke, which shall not be effective until received by Respondent in writing.

97. This CAFO in no way relieves Respondent or its employees of any criminal liability, and EPA reserves all its other criminal and civil enforcement authorities, including the authority to seek injunctive relief and the authority to undertake any action against Respondent in response to conditions which may present an imminent and substantial endangerment to the public health, welfare, or the environment.

98. Except as qualified by paragraphs 76-83 (stipulated penalty collection), each party shall bear its own costs and fees in this proceeding including attorney's fees. Respondent specifically waives any right to recover such costs from EPA pursuant to the Equal Access to Justice Act, 5 U.S.C. § 504, or other applicable laws.

#### **VIII. EFFECTIVE DATE**

99. Respondent and Complainant agree to issuance of the attached Final Order.

Upon filing, EPA will electronically transmit a copy of the filed CAFO to Respondent. This CAFO shall become effective after execution of the Final Order by the Regional Judicial Officer, on the date of filing with the Regional Hearing Clerk.

The foregoing Consent Agreement, *In the Matter of Coca Cola Beverages Northeast, Inc.*, Docket No. CAA-01-2025-0012, is hereby stipulated, agreed, and approved for entry.

FOR U.S. ENVIRONMENTAL PROTECTION AGENCY:

\_\_\_\_\_  
James Chow, Director  
Enforcement and Compliance Assurance Division  
U.S. Environmental Protection Agency, Region 1

Date: \_\_\_\_\_

The foregoing Consent Agreement, *In the Matter of Coca Cola Beverages, Inc.*, Docket No. CAA-01-2025-0012, is hereby stipulated, agreed, and approved for entry.

FOR RESPONDENT:



Bryan Misenheimer, Plant Manager  
Coca Cola Beverages Northeast, Inc.

Date: 1/9/25

**FINAL ORDER**

Pursuant to 40 C.F.R. §§ 22.18(b) and (c) of EPA's Consolidated Rules of Practice; Sections 113(d)(1) and (d)(2)(B) of the Clean Air Act, 42 U.S.C. §§ 7413(d)(1) and (d)(2)(B), the foregoing Consent Agreement resolving this matter is incorporated by reference into this Final Order and is hereby ratified. Respondent is ordered to pay the civil penalty amount specified in the Consent Agreement and complete the Supplemental Environmental Projects, in the manner indicated. The terms of the Consent Agreement will become effective on the date it is filed with the Regional Hearing Clerk.

Date: \_\_\_\_\_

\_\_\_\_\_  
LeAnn Jensen  
Regional Judicial Officer  
U.S. Environmental Protection Agency, Region 1



## Appendix A

### **Recognized and Generally Accepted Good Engineering Practices**

In collaboration with the American National Standards Institute, the International Institute of Ammonia Refrigeration (“IIAR”) has issued and updates, among others:

- Standard 2: *Standard for Safe Design of Closed-Circuit Ammonia Refrigeration Systems (“ANSI/IIAR 2”)* (e.g., 2014 version, with Addendum A published in July 2019, and the 2021 version);
- Standard 4: *Installation of Closed-Circuit Ammonia Mechanical Refrigeration Systems (“ANSI/IIAR 4”)*,
- Standard 5: *Start-up and Commissioning of Closed Circuit Ammonia Refrigeration Systems* (2013 with subsequent edition published on 9/9/2019) (“ANSI/IIAR 5”);
- Standard 6: *Standard for Testing, Inspection, and Maintenance of Closed-Circuit Ammonia Refrigeration Systems (“ANSI/IIAR 6”)*,
- Standard 7: *Developing Operating Procedures for Closed-Circuit Ammonia Mechanical Refrigerating Systems (“ANSI/IIAR 7”)*, and
- Standard 9: *Standard for Minimum System Safety Requirements for Existing Closed-Circuit Ammonia Refrigeration Systems (“ANSI/IIAR 9”)*, *inter alia*, along with other applicable standards and guidance.

Bulletins and guidance include, without limitation:

- IIAR Bulletin No. 109, *Guidelines for IIAR Minimum Safety Criteria for a Safe Ammonia Refrigeration System* (1997, and in effect until 2019 when ANSI/IIAR 6 replaced it) (“IIAR Bull. 109”);
- IIAR Bulletin No. 110, *Guidelines for Start-Up, Inspection, and Maintenance of Ammonia Mechanical Refrigerating Systems* (1993, most recently updated in 2007, and in effect until 2019 when ANSI/IIAR 6 replaced it) (“IIAR Bull. 110”);
- IIAR Bulletin No. 114, *Guidelines for Identification of Ammonia Refrigeration Piping and Components* (1991, most recently updated in 2018) (“IIAR Bull. 114”);
- IIAR Bulletin No. 116, *Guidelines for Avoiding Component Failure in Industrial Refrigeration Systems Caused by Abnormal Pressure or Shock* (1992) (“IIAR Bull. 116”); and
- The Ammonia Refrigeration Management Program (2005, most recently updated in 2019) (“IIAR ARM Program”), which is intended to provide streamlined guidance to systems that have less than 10,000 pounds of ammonia.

Also in collaboration with the American National Standards Institute, the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (“ASHRAE”) has issued (and updates):

- “Standard 15: Safety Standard for Refrigeration Systems.” Addendum A to ASHRAE Standard 15-2016 (published 2018) modifies ASHRAE Standard 15 to defer regulation of ammonia refrigeration systems to ANSI/IIAR 2. Standard 15 and ANSI/IIAR 2 have historically served as additive standards for regulation of ammonia systems, with ASHRAE addressing general design and IIAR addressing ammonia-specific topics.

These standards are consistently relied upon by refrigeration experts and are often incorporated into state building and mechanical codes.

The chart cites to the standards of care that were in effect in 2023, when the inspection occurred.

Alleged Hazards/Dangerous Condition	GDC Violation	How Condition Could Lead to or Exacerbate the Consequences of a Release, Causing Harm	Examples of Industry Standards of Care, Showing that (1) Hazard is Recognized by Owner/Operator's Industry, and (2) There are Way(s) to Eliminate or Reduce the Hazard
<p><u>Condition 1</u></p> <p>The High Pressure Receiver (HPR) was not properly bolted down to the pad it was sitting on.</p>	<p>Failure to design and maintain a safe facility taking such steps as are necessary to prevent releases.</p>	<p>Inadequately mounted machinery can result in detrimental vibration or movement that might make the equipment fail and release ammonia. This equipment was located in an exit area, where snow removal equipment could inadvertently hit the equipment.</p>	<p>The recommended industry practice and standard of care for ammonia refrigeration systems of this size is to provide adequate supports to prevent excessive vibration or movement of equipment. <i>See, e.g.,</i> ANSI/IIAR 2-2014, ANSI/IIAR 2-2014, Add. A (2019), and ANSI/IIAR 2-2021 §§ 5.11.1 (Supports and anchorage for refrigeration equipment shall be designed in accordance with the building code.), 5.11.5 (Supports and foundations shall be designed to prevent excessive vibration or movement of piping, tubing, and equipment.), 6.2.4 (Machinery shall be mounted in a manner that prevents excessive vibration from being transmitted to the building structure or connected equipment.); ANSI/IIAR 9-2020 §§ 7.2.7.1 (Piping, tubing, and equipment shall be supported to prevent excessive vibration and movement.), 7.3.2.3 (Supports and foundations shall be adequate to prevent movement of the equipment.), 7.3.2.4 (Supports and foundations shall be adequate to prevent excessive vibration of the equipment.).</p>

<p><u>Condition 2</u></p> <p>The HPR, adjacent piping, and King Valve in the outdoor ammonia processing area lacked adequate bump protection.</p>	<p>Failure to design and maintain a safe facility taking such steps as are necessary to prevent releases.</p>	<p>Lack of adequate bump protection risks accidental impacts from equipment to system components that can result in an accidental release of ammonia.</p>	<p>The recommended industry practice and standard of care for ammonia refrigeration systems of this size is to adequately safeguard ammonia system components to minimize possible accidental damage or rupture due to external sources. <i>See, e.g., ANSI/IIAR 2-2014 and ANSI/IIAR 2-2014, Add. A (2019) §§ 5.16.1 (Enclosures for ammonia equipment shall be suitable for the installation location and shall be provided with protection from physical and environmental damage as required for the installed location.), 5.17.1 (Guarding or barricading shall be provided for ammonia-containing equipment installed in a location subject to physical damage.), 7.2.4 (Equipment shall be protected where a risk of physical damage exists.), 13.4.2 (Refrigerant piping shall be isolated and supported to prevent damage from vibration, stress, corrosion, and physical impact.); ANSI/IIAR 4-2020 § 4.8.2 (All components and piping shall be installed in such a manner that they are protected from physical and environmental damage in accordance with IIAR 2.); ANSI/IIAR 9-2020, § 7.2.12.1 (Where ammonia-containing equipment is installed in a location subject to physical damage, guarding or barricading shall be provided.); ANSI/IIAR 2-2021 § 5.15.1 (Enclosures for ammonia equipment shall be suitable for the installation location and shall be provided with protection from physical and environmental damage as required for the installed location.), 7.2.4 (Where ammonia equipment is installed in a location subject to physical damage from powered vehicles normally operating in the area, guarding or barricading shall be provided.).</i></p>
<p><u>Condition 3</u></p> <p>There were signs of surface corrosion on piping associated with</p>	<p>Failure to design and maintain a safe facility taking such</p>	<p>Corrosion can weaken piping and vessels to the point where it fails, causing a release. Risks</p>	<p>The recommended industry practice and standard of care for ammonia refrigeration systems of this size is to regularly inspect piping for degradation of the protective coating and corrosion, clean down and repaint areas where corrosion has not yet materially reduced the wall thickness, and measure wall thickness and evaluate the potential for safe</p>

the evaporative condenser.	steps as are necessary to prevent releases.	release of ammonia from system components if corrosion continues to point of failure.	further use for areas where corrosion has materially reduced wall thickness. <i>See, e.g.</i> , ANSI/IIAR 9-2020 § 5.1 (All equipment and system components shall be inspected, tested, and maintained in accordance with ANSI/IIAR 6 (2019)); ANSI/IIAR 6-2019 §§ 10.1 (calling for annual visual inspection for pitting or surface damage and degradation of protective coating, i.e., paint, on uninsulated pressure vessels), 10.1.1 (Where pitting, surface damage, general corrosion, or a combination thereof, is visually observed on a metal surface of the pressure vessel, deficient areas shall be further evaluated.), 10.1.1.1 (Where such corrosion is suspected to have materially reduced the vessel wall thickness beyond its permitted corrosion allowance, the remaining wall thickness shall be measured using appropriate techniques.), 10.1.1.1.1 (Where such corrosion has not materially reduced the vessel wall thickness beyond its permitted corrosion allowance, the pressure vessel metal surface shall be cleaned and recoated to arrest further deterioration.), 10.1.1.1.2 (Where such corrosion has materially reduced the vessel wall thickness beyond its permitted corrosion allowance, the owner shall proceed in a timely manner with an analysis using specified criteria to determine suitability for continued operation); ANSI/IIAR 2-2021 §§ 5.10.1 (Piping and equipment surfaces not intended for heat exchange shall be insulated, treated, or otherwise protected to mitigate effects of condensation and excessive frost buildup that interferes with valve operation or creates damage to piping, equipment, or supports.).
<u>Condition 4</u> Ammonia Pipes supporting pipes.	Failure to design and maintain a safe facility taking such steps as are	Lack of adequate piping supports can weaken piping to the point where it fails, causing a release.	The recommended industry practice and standard of care is to provide adequate supports to prevent excessive vibration or movement of piping. <i>See, e.g.</i> , ANSI/IIAR 2-2014, ANSI/IIAR 2-2014, Add. A (2019), and ANSI/IIAR 2-2021 §§ 13.4.2 (Refrigerant piping shall be isolated and supported to prevent damage from vibration, stress, corrosion, and physical impact.); ANSI/IIAR 4-2020 § 4.8.2 (All components and piping

Alleged Hazards/Dangerous Condition	GDC Violation	How Condition Could Lead to or Exacerbate the Consequences of a Release, Causing Harm	Examples of Industry Standards of Care, Showing that (1) Hazard is Recognized by Owner/Operator's Industry, and (2) There are Way(s) to Eliminate or Reduce the Hazard
	necessary to prevent releases.		shall be installed in such a manner that they are protected from physical and environmental damage in accordance with IIAR 2.); ANSI/IIAR 9-2020 §§ 7.3.2.2 (Piping supports shall carry the weight of the piping system including contents and insulation; if necessary, provide sway bracing to minimize vibration.), 7.3.2.3 (Supports and foundations shall be adequate to prevent movement of the equipment.).
<u>Condition 5</u>  The AMR relief valve header was being supported by evaporative condenser process piping.	Failure to design and maintain a safe facility taking such steps as are necessary to prevent releases.	Inadequately mounted machinery can result in detrimental vibration or movement that might make the equipment fail and release ammonia.	The recommended industry practice and standard of care for ammonia refrigeration systems of this size is to adequately safeguard ammonia system components to minimize possible accidental damage or rupture due to external sources. <i>See, e.g.,</i> ANSI/IIAR 2-2014, ANSI/IIAR 2-2014, Add. A (2019), and ANSI/IIAR 2-2021, §§ 13.4.2 (Refrigerant piping shall be isolated and supported to prevent damage from vibration, stress, corrosion, and physical impact.), 13.4.4 (Anchors, their attachment points, and attachment methods shall be designed to support applied loads.); ANSI/IIAR 9-2020 § 7.3.2.2 (Piping supports shall carry the weight of the piping system including contents and insulation.).

Alleged Hazards/Dangerous Condition	GDC Violation	How Condition Could Lead to or Exacerbate the Consequences of a Release, Causing Harm	Examples of Industry Standards of Care, Showing that (1) Hazard is Recognized by Owner/Operator's Industry, and (2) There are Way(s) to Eliminate or Reduce the Hazard
<p><u>Condition 6</u></p> <p>Ammonia Compressor #2 and associated piping was observed to be vibrating significantly.</p>	<p>Failure to design and maintain a safe facility taking such steps as are necessary to prevent releases.</p>	<p>Detrimental equipment vibration or movement might make the equipment fail and release ammonia.</p>	<p>The recommended industry practice and standard of care for ammonia refrigeration systems of this size is to provide adequate supports to prevent excessive vibration or movement of equipment. <i>See, e.g.,</i> ANSI/IIAR 2-2014, ANSI/IIAR 2-2014, Add. A, and ANSI/IIAR 2-2021 §§ 5.11.5 (Supports and foundations shall be designed to prevent excessive vibration or movement of piping, tubing, and equipment.), 6.2.4 (Machinery shall be mounted in a manner that prevents excessive vibration from being transmitted to the building structure or connected equipment.), 13.4.2 (Refrigerant piping shall be isolated and supported to prevent damage from vibration, stress, corrosion, and physical impact.); ANSI/IIAR 9-2020 §§ 7.2.7.1 (Piping, tubing, and equipment shall be supported to prevent excessive vibration and movement.), 7.3.2.3 (Supports and foundations shall be adequate to prevent movement of the equipment.), 7.3.2.4 (Supports and foundations shall be adequate to prevent excessive vibration of the equipment.).</p>

Alleged Hazards/Dangerous Condition	GDC Violation	How Condition Could Lead to or Exacerbate the Consequences of a Release, Causing Harm	Examples of Industry Standards of Care, Showing that (1) Hazard is Recognized by Owner/Operator's Industry, and (2) There are Way(s) to Eliminate or Reduce the Hazard
<p><u>Condition 7</u></p> <p>Lower ammonia piping under high pressure near SV-181NH3 and other piping and valve needs bump protection.</p>	<p>Failure to design and maintain a safe facility taking such steps as are necessary to prevent releases.</p>	<p>Lack of adequate bump protection risks ammonia release from accidental damage to system components.</p>	<p>The recommended industry practice and standard of care is to install guarding or barricading to prevent ammonia piping and equipment from being subject to physical impact. <i>See, e.g.</i>, ANSI/IIAR 2-2014, ANSI/IIAR 2-2014, Add. A (2019) §§ 5.17.1 (Where ammonia-containing equipment is installed in a location subject to physical damage, guarding or barricading shall be provided.), 13.4.2 (Refrigerant piping shall be isolated and supported to prevent damage from vibration, stress, corrosion, and physical impact.), 16.2.2 (visual liquid level indicators . . . shall be designed and specified for installation in a manner that provides protection from physical damage); ANSI/IIAR 4-2020, § 4.8.2 (All components and piping shall be installed in such a manner that they are protected from physical and environmental damage in accordance with IIAR 2.); ANSI/IIAR 9-2020 § 7.2.12.1 (Where ammonia-containing equipment is installed in a location subject to physical damage, guarding or barricading shall be provided.); ANSI/IIAR 2-2021 §§ 5.15.1 (Enclosures for ammonia equipment shall be suitable for the installation location and shall be provided with protection from physical and environmental damage as required for the installed location.), 13.4.2 (same); ANSI/IIAR 2-2014 § 5.16.1 (Enclosures for ammonia equipment shall be suitable for the installation location and shall be provided with protection from physical and environmental damage as required for the installed location.).</p>



<p><u>Condition 8</u></p> <p>There were signs of surface corrosion on ammonia piping associated with the heat exchangers on the other two chiller lines.</p>	<p>Failure to design and maintain a safe facility taking such steps as are necessary to prevent releases.</p>	<p>Corrosion can weaken piping and vessels to the point where it fails, causing a release. Risks release of ammonia from system components if corrosion continues to point of failure.</p>	<p>The recommended industry practice and standard of care for ammonia refrigeration systems of this size is to regularly inspect piping for degradation of the protective coating and corrosion, clean down and repaint areas where corrosion has not yet materially reduced the wall thickness, and measure wall thickness and evaluate the potential for safe further use for areas where corrosion has materially reduced wall thickness. <i>See, e.g.</i>, ANSI/IIAR 9-2020 § 5.1 (All equipment and system components shall be inspected, tested, and maintained in accordance with ANSI/IIAR 6 (2019).); ANSI/IIAR 6-2019 §§ 10.1 (calling for annual visual inspection for pitting or surface damage and degradation of protective coating, i.e., paint, on uninsulated pressure vessels), 10.1.1 (Where pitting, surface damage, general corrosion, or a combination thereof, is visually observed on a metal surface of the pressure vessel, deficient areas shall be further evaluated.), 10.1.1.1 (Where such corrosion is suspected to have materially reduced the vessel wall thickness beyond its permitted corrosion allowance, the remaining wall thickness shall be measured using appropriate techniques.), 10.1.1.1.1 (Where such corrosion has not materially reduced the vessel wall thickness beyond its permitted corrosion allowance, the pressure vessel metal surface shall be cleaned and recoated to arrest further deterioration.), 10.1.1.1.2 (Where such corrosion has materially reduced the vessel wall thickness beyond its permitted corrosion allowance, the owner shall proceed in a timely manner with an analysis using specified criteria to determine suitability for continued operation).</p>
<p><u>Condition 9</u></p> <p>The emergency safety shower in the outdoor ammonia processing</p>	<p>Failure to minimize the consequences of releases</p>	<p>Makes it difficult for emergency responders and workers to wash off this corrosive, toxic</p>	<p>The recommended industry practice and standard of care for ammonia refrigeration systems of this size is to provide at least one easily accessible eyewash/safety shower unit in each machinery room and one easily accessible eyewash/safety shower unit outside each machinery room. <i>See, e.g.</i>, ANSI/IIAR 2-2014 and ANSI/IIAR 2-2014, Add. A (2019) §§</p>

Alleged Hazards/Dangerous Condition	GDC Violation	How Condition Could Lead to or Exacerbate the Consequences of a Release, Causing Harm	Examples of Industry Standards of Care, Showing that (1) Hazard is Recognized by Owner/Operator's Industry, and (2) There are Way(s) to Eliminate or Reduce the Hazard
area lacked an accompanying emergency eyewash station.	which do occur.	chemical in the event of exposure.	6.7.1 (requiring a minimum of two eyewash/safety shower units—one located inside the AMR, and one located outside the AMR), 6.7.3 (Emergency eyewash/safety shower unit installations shall comply with ANSI/ISEA Z358.1.); ANSI/ISEA Z358.1 (2009) § 5.4.2 (It is the installer's responsibility to ensure that emergency eyewashes shall be in accessible locations that require no more than 10 seconds to reach. The eyewash shall be located on the same level as the hazard and the path of travel shall be free of obstructions that may inhibit its immediate use.); ANSI/IIAR 9-2020 § 7.3.7.1 (Each machinery room shall have access to a minimum of two eyewash/safety shower units, one located inside the machinery room and one located outside of the machinery room, each meeting the requirements in Section 7.3.7.3.); ANSI/IIAR 2-2021 § 6.7.2 (A minimum of one eyewash/safety shower unit shall be located outside the machinery room and shall be no further than 55 ft. From the outside of the machinery room door.), Appendix A.6.7.1 (In some scenarios, personnel may need to exit the machinery room after the initial use of the units installed inside the machinery room due to an on-going emergency situation. To account for these scenarios, Section 6.7.3 specifies that at least one eyewash/safety shower unit be installed outside a machinery room door. Additional eyewash/safety showers might be required based on a process hazard analysis and/or hazard review.).

Alleged Hazards/Dangerous Condition	GDC Violation	How Condition Could Lead to or Exacerbate the Consequences of a Release, Causing Harm	Examples of Industry Standards of Care, Showing that (1) Hazard is Recognized by Owner/Operator's Industry, and (2) There are Way(s) to Eliminate or Reduce the Hazard
<p><u>Condition 10</u></p> <p>There was no emergency safety shower/eyewash station outside the primary AMR egress door.</p>	<p>Failure to minimize the consequences of releases which do occur.</p>	<p>Makes it difficult for emergency responders and workers to wash off this corrosive, toxic chemical in the event of exposure.</p>	<p>The recommended industry practice and standard of care is to provide at least one easily accessible eyewash/safety shower unit in each machinery room and one easily accessible eyewash/safety shower unit outside each machinery room. <i>See, e.g.,</i> ANSI/IIAR 2-2014 and ANSI/IIAR 2-2014, Add. A (2019) §§ 6.7.1 (A minimum of one eyewash/safety shower unit shall be located outside of the machinery room. Eyewash/safety shower units shall meet the requirements in Section 6.7.3.), 6.7.3 (Emergency eyewash/safety shower unit installations shall comply with ANSI/ISEA Z358.1.); ANSI/IIAR 2-2021 § 6.7.2 (A minimum of one eyewash/safety shower unit shall be located outside the machinery room and shall be no further than 55 ft. From the outside of the machinery room door.), Appendix A.6.7.1 (In some scenarios, personnel may need to exit the machinery room after the initial use of the units installed inside the machinery room due to an on-going emergency situation. To account for these scenarios, Section 6.7.3 specifies that at least one eyewash/safety shower unit be installed outside a machinery room door. Additional eyewash/safety showers might be required based on a process hazard analysis and/or hazard review.).</p>

<p><u>Condition 11</u></p> <p>The Piping and Instrumentation Diagram (P&amp;ID) on the door did not have the critical emergency shutoff valves clearly identified.</p>	<p>Failure to minimize the consequences of releases which do occur.</p>	<p>Being able to quickly identify the location of emergency shutdown valves on a system diagram allows operators and responders to more quickly execute emergency shutdown procedures. Releases are less likely, and their consequences less severe, when this information is available.</p>	<p>The recommended industry practice and standard of care is to clearly identify the critical emergency shutoff valves at the valve itself and in the system schematic drawings. <i>See e.g.</i>, ANSI/IIAR 5-2019 § 5.3.1 (All system documentation from the planning, design, and installation phases of the project shall be assembled and readily available.), Appendix A.5.3.1 (System design documents, including those for equipment, provide the information necessary to safely and successfully startup and an ammonia refrigeration system. System design documents may include but are not limited to system specifications, performance specifications, P&amp;IDs, as-built installation drawings, safety systems, regulatory documents, standard operating procedures (SOPs), refrigeration equipment lists, valve lists, relief valve data and relief system design basis, and manufacturer’s instruction manuals. P&amp;IDs and flow diagrams should be a system schematic showing every system component.); ANSI/IIAR 2-2014, Add. A (2019) and ANSI/IIAR 2-2021 § 5.14.4 (Valves required for emergency shutdown of the system shall be clearly and uniquely identified at the valve itself and in the system schematic drawings); ANSI/IIAR 9-2020 § 7.2.9.3 (same); ANSI/IIAR 2-2014 § 5.14.2 (Refrigeration machinery shall be provided with labels.); ANSI/IIAR 2-2014, Add. A (2019) § 5.14.3 (same); ANSI/IIAR 2-2021 § 5.14.3 (Refrigeration equipment shall be uniquely labeled in a manner that is consistent with system documentation.); ANSI/IIAR 6-2019, Table 11.1.6, item h (calling for regular inspection to ensure that system emergency shut-off valves are clearly and uniquely identified at each valve and in the system schematic diagram).</p>
<p><u>Condition 12</u></p>	<p>Failure to minimize the consequences of releases</p>	<p>The king valve can be used to quickly shut off flow of ammonia from the ammonia</p>	<p>The recommended industry practice and standard of care is for critical valves to be clearly identified. <i>See e.g.</i>, ANSI/IIAR 2-2014, ANSI/IIAR 2-2014, Add. A (2019), and ANSI/IIAR 2-2021 § 5.14.4 (Emergency shut down valves must be clearly and uniquely identified at the valve itself.);</p>

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The HPR's King Valve signs were faded and partially painted over.	which do occur.	receiver to the rest of the system. Any impediment to its use can lengthen the time of a release, endangering workers, emergency responders, and people off site.	ANSI/IIAR 9-2020, § 7.2.9.3 (same); ANSI/IIAR 6-2019, Table 11.1.6, item h (calling for regular inspection of system emergency shut-off valves to ensure they are clearly and uniquely identified at each valve).

Alleged Hazards/Dangerous Condition	GDC Violation	How Condition Could Lead to or Exacerbate the Consequences of a Release, Causing Harm	Examples of Industry Standards of Care, Showing that (1) Hazard is Recognized by Owner/Operator's Industry, and (2) There are Way(s) to Eliminate or Reduce the Hazard
<p><u>Condition 13</u></p> <p>The HPR's King Valves were not clearly marked which one was the primary valve.</p>	<p>Failure to minimize the consequences of releases which do occur.</p>	<p>Labeling the King valve allows responding personnel the ability to easily identify the valve associated with the storage of ammonia in the system.</p> <p>The use of this valve provides responders a means of isolated a large quantity of ammonia during a release situation.</p> <p>In the event of a release, being able to access critical valves is necessary for emergency response.</p>	<p>The recommended industry practice and standard of care is to ensure critical valves are well labeled at the valve itself. <i>See, e.g.</i>, ANSI/IIAR 2-2014 and ANSI/IIAR 2-2014, (Add. A) § 5.14.3 (Refrigeration machinery shall be provided with labels.); ANSI/IIAR 2-2014, ANSI/IIAR 2-2014, Add. A (2019), and ANSI/IIAR 2-2021 § 5.14.4 (Emergency shut down valves must be clearly and uniquely identified at the valve itself.); ANSI/IIAR 9-2020, § 7.2.9.3 (same); ANSI/IIAR 6-2019, Table 11.1.6, item h (calling for regular inspection to ensure that system emergency shut-off valves are clearly and uniquely identified at each valve).</p>

Alleged Hazards/Dangerous Condition	GDC Violation	How Condition Could Lead to or Exacerbate the Consequences of a Release, Causing Harm	Examples of Industry Standards of Care, Showing that (1) Hazard is Recognized by Owner/Operator's Industry, and (2) There are Way(s) to Eliminate or Reduce the Hazard
<p><u>Condition 14</u></p> <p>The High-Pressure Relief (HPR) valve header near the top of the evaporative condenser was equipped with a rain hat which would force ammonia relief discharge downward in the event of a release.</p>	<p>Failure to minimize the consequences of releases which do occur.</p>	<p>Failing to remove permanent, fixed rain caps may limit the vertical flow of ammonia during a release and may allow the spraying of ammonia on persons in the vicinity.</p>	<p>The recommended industry practice and standard of care for ammonia refrigeration systems is to not limit the vertical flow of ammonia during a release and to avoid spraying ammonia on persons in the vicinity. <i>See, e.g., ANSI/IIAR 2-2014, ANSI/IIAR 2-2014, Add. A (2019), and ANSI/IIAR 2-2021 § 15.5.1.5 (The termination of the discharge shall be directed upward and arranged to avoid spraying ammonia on persons in vicinity.), Appendix A.15.5.1.5 (re. acceptable designs for limiting rain and snow incursions, including a "double 45 degree" diffuser, a "bull's horn" diffuser, a "self-closing flapper cap," or a "sock hood cover.").</i></p>

<p><u>Condition 15</u></p> <p>The placement of the make-up air intake vent is near the top of the wall and not at ground-level which may inhibit proper ventilation to the AMR.</p>	<p>Failure to design and maintain a safe facility taking such steps as are necessary to prevent releases.</p> <p>Failure to minimize the consequences of releases which do occur.</p>	<p>Without adequate ventilation, vapors are more likely to build up to levels that are significant inhalation and dermal hazards or that risk causing fire or explosion. Also, where emergency ventilation function is hampered, the buildup of dangerous levels of toxic/flammable vapors in a machinery room can delay the entry of emergency response personnel to shut off the system, resulting in a prolonged release.</p>	<p>The recommended industry practice and standard of care is for machinery room exhaust to discharge vertically upward and for make-up air intakes to be positioned to draw uncontaminated outdoor air. <i>See, e.g.,</i> ANSI/IIAR 2-2014 and ANSI/IIAR 2-2014, Add. A (2019) § 6.14.5.4 (Intakes for make-up air shall be positioned to draw uncontaminated outdoor air.); ANSI/IIAR 2-2014, Add. A (2019) and ANSI/IIAR 2-2021 §§ 6.14.3.4 (Machinery room exhaust shall discharge vertically upward with a minimum discharge velocity of 2,500 ft/min (762 m/min) at the required emergency ventilation flow rate.), 6.14.5.1 (Outdoor make-up air shall be provided to replace air being exhausted.), 6.14.5.2 (Make-up air supply locations in the machinery room shall be positioned to prevent short circuiting of the make-up air directly to the exhaust.); ANSI/IIAR 2-2014 §§ 6.14.3.5 (Machinery room exhaust shall discharge vertically upward with a minimum discharge velocity of 2,500 ft/min (762 m/min) at the required emergency ventilation flow rate.), 6.14.5.1 (same), 6.14.5.2 (same); ANSI/IIAR 9-2020 § 7.3.14.3 (Intakes for make-up air shall draw uncontaminated outdoor air.).</p>
<p><u>Condition 16</u></p> <p>One of the emergency ventilation switches and the ammonia system emergency</p>	<p>Failure to design and maintain a safe facility taking such steps as are</p>	<p>Creates risk of harm to workers and emergency responders who cannot quickly shut down or properly</p>	<p>The recommended industry practice and standard of care is for ammonia refrigeration systems of this size is to provide clearly identified emergency stop and emergency ventilation switches immediately outside the machinery room with override capability. <i>See, e.g.,</i> ANSI/IIAR 2-2014 and ANSI/IIAR 2-2014, Add. A (2019) §§ 6.12.1 (A clearly identified emergency shut-off switch with a tamper-resistant cover shall</p>



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<p>stop actuation button outside of the boiler room entrance required keys to operate which were not immediately accessible in case of emergency. The metal cabinet had a free wire inside of the cabinet without labeling or indication of use or function.</p>	<p>necessary to prevent releases.</p> <p>Failure to minimize the consequences of releases which do occur.</p>	<p>ventilate machinery room without having required keys, which could be misplaced. The delay could also contribute to a longer ammonia release time, increasing risks to workers, emergency responders, and to people off-site and the environment.</p>	<p>be located outside and adjacent to the designated principal machinery room door. The switch shall provide off-only control of refrigerant compressors, refrigerant pumps, and normally closed automatic refrigerant valves located in the machinery room. The function of the switch shall be clearly marked by signage near the controls.), 6.12.2 (A clearly identified control switch for emergency ventilation with a tamper-resistant cover shall be located outside the machinery room and adjacent to the designated principal machinery room door. The switch shall provide "ON/AUTO" override capability for emergency ventilation. The function of the switch shall be clearly marked by signage near the controls.); ANSI/IIAR 2-2021 §§ 6.12.1 (same), 6.12.2 (same, in addition to: The switch shall be readily operable.); ANSI/IIAR 9-2020 §§ 7.3.11.1 (same), 7.3.11.2 (same); NFPA 1-2018 § 53.2.3.3.6 (Keys necessary for operation of ventilation systems shall be located in a single approved location.).</p>

Alleged Hazards/Dangerous Condition	GDC Violation	How Condition Could Lead to or Exacerbate the Consequences of a Release, Causing Harm	Examples of Industry Standards of Care, Showing that (1) Hazard is Recognized by Owner/Operator's Industry, and (2) There are Way(s) to Eliminate or Reduce the Hazard
<p><u>Condition 17</u></p> <p>There were no Ammonia audible/visible alarms located nearby the emergency station outside the boiler room.</p>	<p>Failure to design and maintain a safe facility taking such steps as are necessary to prevent releases.</p> <p>Failure to minimize the consequences of releases which do occur.</p>	<p>A lack of ammonia audible/visual alarms can delay a swift, safe emergency response and increase risks to workers, emergency responders, and people off-site, further exacerbating the consequences of a release.</p>	<p>The recommended industry practice and standard of care for ammonia refrigeration systems of this size is to provide well labeled audible and visual alarms inside and immediately outside each entrance to the machinery room. <i>See, e.g.</i>, ANSI/IIAR 2-2014, ANSI/IIAR 2-2014, Add. A (2019), and ANSI/IIAR 2-2021 §§ 6.15.2 (Requirements for machinery room: alarm signage shall be provided in accordance with Section 17.6), 7.2.3 (Requirements for nonmachinery room spaces: Level 1 detection and alarm shall be provided in accordance with Section 17.7.1. The detection and alarm system shall comply with Chapter 17.), 17.5 (The audible alarms providing notification shall provide a sound pressure level of 15 decibels (dBA) above the average ambient sound level and 5 dBA above the maximum sound level of the area in which it is installed.); NFPA 1-2012 § 53.2.3.1.2 (Audible and visual alarms shall be located inside the machinery room and outside each entrance to the room.); IIAR 9- 2020 § 7.3.12 (Audible and visual alarms shall be provided inside the room. Additional audible and visual alarms shall be located outside of each entrance to the machinery room.).</p>

Alleged Hazards/Dangerous Condition	GDC Violation	How Condition Could Lead to or Exacerbate the Consequences of a Release, Causing Harm	Examples of Industry Standards of Care, Showing that (1) Hazard is Recognized by Owner/Operator's Industry, and (2) There are Way(s) to Eliminate or Reduce the Hazard
<p><u>Condition 18</u></p> <p>Multiple entry doors from the outside of the Facility were not labeled with appropriate National Fire Protection Agency (NFPA) diamonds to provide warning.</p>	<p>Failure to design and maintain a safe facility taking such steps as are necessary to prevent releases.</p> <p>Failure to minimize the consequences of releases which do occur.</p>	<p>A lack of signs about the hazards posed by chemicals in a space increases the chance of inadvertent exposure to ammonia releases and could frustrate effort to react quickly and properly during an ammonia release.</p>	<p>The recommended industry practice and standard of care for ammonia refrigeration systems of this size is to display NFPA 704 diamonds for ammonia hazard identification on each door to the machinery room. See <i>e.g.</i>, ANSI/IIAR 2-2014, ANSI/IIAR 2-2014, Add. A (2019) and ANSI/IIAR 2-2021 § 6.15.1 (A NFPA 704 placard shall be provided...on or next to all doors through which a person can enter the machinery room.); ANSI/IIAR 9-2020, § 7.2.9.1 (Buildings and facilities with refrigeration systems shall be provided with placards in accordance with NFPA 704.); NFPA 1-2018, § 53.2.4.1 (Refrigeration units or systems shall be provided with approved hazard identification signs in accordance with NFPA 704, among other information.); NFPA 704-6 (2022) § 4.3 (As a minimum, signs shall be posted at the following locations: (1) Two exterior walls or enclosures containing a means of access to a building or facility, (2) Each access to a room or area, (3) Each principal means of access to an exterior storage area.).</p>

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<p><u>Condition 19</u></p> <p>There was no label describing the function of an orange visual strobe next to the ammonia audible/visual alarm.</p>	<p>Failure to design and maintain a safe facility taking such steps as are necessary to prevent releases.</p> <p>Failure to minimize the consequences of releases which do occur.</p>	<p>Properly identifying ammonia alarms allows employees and responders the ability to determine what chemical is being released and helps distinguish between an ammonia release and a fire. Enabling a quick response protects workers, emergency responders, and the public from a larger release.</p>	<p>The recommended industry practice and standard of care for ammonia refrigeration systems of this size is to provide well-labeled audible and visual alarms. <i>See, e.g.</i>, ANSI/IIAR 2-2014 and ANSI/IIAR 2-2014, Add. A (2019) §§ 6.13.1 Machinery rooms shall be provided with ammonia detection and alarm in accordance with Sections 17.2–17.6.), 17.6 Ammonia leak detection alarms shall be identified by signage adjacent to visual and audible alarm devices.), Appendix A.6.13.2.2 (Visual alarms can be provided by strobes or other distinctive visual signaling devices.); ANSI/IIAR 2-2021 §§ 6.15.2 (Alarm signage shall be provided in accordance with Section 17.6.), 17.6 (same), Appendix A.6.13.2.2 (same); ANSI/IIAR 9-2020 §§ 7.2.9.1.2 (The meaning of each alarm shall be clearly marked by signage near the visual and audible alarms.), 7.3.12.6 (Ammonia leak detection alarms shall be identified by signage adjacent to visual and audible alarm devices.).</p>

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<p><u>Condition 20</u></p> <p>The door from the Chemical Storage area into the AMR only had an emergency shut down button. There was no emergency air ventilation override switch.</p>	<p>Failure to design and maintain a safe facility taking such steps as are necessary to prevent releases.</p> <p>Failure to minimize the consequences of releases which do occur.</p>	<p>In the event of a release, workers and emergency responders need to be able to quickly identify and access emergency control switches without entering the room, which could contain dangerous levels of vapors. Timely use of these switches can reduce the duration and severity of an accidental release.</p>	<p>The recommended industry practice and standard of care for ammonia refrigeration systems of this size is to provide and label emergency ventilation switches immediately outside the machinery room. <i>See, e.g., ANSI/IIAR 2-2014, ANSI/IIAR 2-2014, Add. A (2019), and ANSI/IIAR 2-2021 § 6.12.2</i> (A clearly identified control switch for emergency ventilation with a tamper-resistant cover shall be located outside the machinery room and adjacent to the designated principal machinery room door unless the continuous ventilation operates at a rate at or above that required for emergency ventilation. The switch shall provide "ON/AUTO" override capability for emergency ventilation. The function of the switch shall be clearly marked by signage near the controls.); <i>ANSI/IIAR 9-2020 § 7.3.11.2</i> (same); <i>NFPA 1-2018, § 53.2.3.3.1</i> (requiring emergency ventilation switch right outside machinery room door).</p>

Alleged Hazards/Dangerous Condition	GDC Violation	How Condition Could Lead to or Exacerbate the Consequences of a Release, Causing Harm	Examples of Industry Standards of Care, Showing that (1) Hazard is Recognized by Owner/Operator's Industry, and (2) There are Way(s) to Eliminate or Reduce the Hazard
<p><u>Condition 21</u></p> <p>Areas housing elevated ammonia piping in the production area of the facility were not equipped with accompanying ammonia detectors and audible/visual alarms to provide detection of ammonia leaks at the elevation at which release may occur.</p>	<p>Failure to design and maintain a safe facility taking such steps as are necessary to prevent releases.</p> <p>Failure to minimize the consequences of releases which do occur.</p>	<p>Ammonia alarms provide early warning that a release is taking place, enabling quick response and protecting workers, emergency responders, and the public from a larger release. It is essential for detectors to be properly placed, maintained, calibrated, set at the proper set-points, and connected to alarms and other safety systems so that they can fulfill their function.</p>	<p>The recommended industry practice and standard of care for ammonia refrigeration systems of this size is to provide ammonia detectors and audible/visual alarms detectors in areas where refrigerant from a leak is likely to concentrate. <i>See, e.g.</i>, ANSI/IIAR 9-2020 § 7.3.12.1 (Audible and visual alarms shall be provided inside the room. Additional audible and visual alarms shall be located outside of each entrance to the machinery room.); ANSI/IIAR 2-2014, ANSI/IIAR 2-2014, Add. A (2019), and ANSI/IIAR 2-2021 §§ 7.2.3 (Requirements for nonmachinary room spaces: Level 1 detection and alarm shall be provided in accordance with Section 17.7.1. The detection and alarm system shall comply with Chapter 17.), 17.5 (The audible alarms providing notification shall provide a sound pressure level of 15 decibels (dBA) above the average ambient sound level and 5 dBA above the maximum sound level of the area in which it is installed.); ANSI/IIAR 2-2008, Add. B (2012) § 13.2.2.1 (The detectors shall be located in an area where refrigerant from a leak is likely to concentrate.).</p>

## **Appendix B**

### **Scope of Work for Supplemental Environmental Projects**

#### **1. East Hartford Fire Department Drone SEP**

- a. Required action: Respondent shall provide the following to the East Hartford Fire Department, to also be used by Capitol Region Hazardous Materials Response Team:

- One (1) new state-of-the-art drone to be used for fire, hazardous materials, and marine responses.

The drone to be purchased will replace the 2020 drone that the East Hartford Fire Department currently uses. The drone will act as a first responder, arriving at the scene before firefighting personnel. The drone allows the department to right-size the response to the needs of the incident based on the drone's initial observations.

Respondent shall use the Drone for emergency response purposes only (i.e., not for surveillance efforts outside of emergency response events) and must stamp the Drone with "For emergency response use only."

Respondent shall provide the above equipment by no later than one (1) year after the effective date of this CAFO. The estimated cost of this project is approximately \$55,000.

- b. Benefit: This emergency planning and preparedness project will improve the ability of East Hartford emergency responders to safely, effectively, and efficiently respond to releases of ammonia in the East Hartford community and decrease emergency responders' exposure to hazardous substances and fire.

#### **2. East Hartford Fire Department Emergency Escape Equipment SEP**

- a. Required action: Respondent shall provide the following to the East Hartford Fire Department:

- At least hundred and sixteen (116) emergency escape equipment kits for firefighters to carry to allow for a safe escape in the event of an ammonia or other emergency response situation.

Emergency escape equipment kits will contain an escape rope, a large hook to attach to structures, and a descent device that can lower the firefighter to the ground. Each firefighter carries a kit in their firefighting pants.

Respondent shall provide the above equipment by no later than one (1) year after the effective date of this CAFO. The estimated cost of this project is approximately \$42,746.

- b. Benefit: This emergency planning and preparedness project will reduce the impact to emergency responders' health and safety by helping them evacuate when responding to releases of ammonia or other hazardous materials in the East Hartford community or Capitol Region.