United States Environmental Protection Agency / Region 4

Risk Management Program Inspection Report

Citrus World, Inc. d/b/a Florida's Natural Growers

Lake Wales, Florida
March 6, 2024

1.0 Introduction

The U.S. Environmental Protection Agency's efforts to reduce the likelihood and severity of chemical accidents includes planning and legislative initiatives such as the National Contingency Plan, the Emergency Planning and Community Right-to-Know Act (EPCRA), and the Accidental Release Prevention requirements under Section 112(r) of the Clean Air Act (CAA), as amended in 1990. This report outlines an inspection of the Risk Management Program (RMP) as mandated by Section 112(r)(7) of the CAA.

The focus of this inspection was to assess the RMP for the ammonia refrigeration process at the Citrus World, Inc. d/b/a Florida's Natural Growers (Citrus World) facility located in Lake Wales, Polk County, Florida. This facility was selected for inspection due to information the EPA received regarding a release of anhydrous ammonia on August 8, 2022. The inspection, which was conducted on March 6, 2024, consisted of an examination of program documentation, as well as site reviews of various aspects of facility operations. Personnel from the facility participated throughout the inspection. Requested program documents were provided for further review off-site. This report will provide a background of the facility and a listing of observations.

2.0 Background

The Citrus World facility is located in Lake Wales, Florida. This facility uses anhydrous ammonia for refrigeration purposes. The refrigeration process, consisting of piping, valves, and equipment, cycles ammonia through various physical states (high pressure liquid, low pressure liquid, low pressure vapor, high pressure vapor, then back to high pressure liquid) in order to provide refrigeration for cold food storage. The process is regulated as program level 3. According to facility records, the facility has a maximum of 202,177 pounds of ammonia on site. The ammonia refrigeration process at the facility is subject to the RMP requirements of 40 C.F.R. Part 68 and EPCRA Section 302. The background specifics are summarized as follows in Table 1.

TABLE 1: Inspection Information Summary

Inspection Team

Lead Inspector: Justin Stark, U.S. EPA
Inspector: Jordan Noles, U.S. EPA
Inspector-In-Training: Callie Sotolongo, U.S. EPA

Inspector: Grant Harvey, Florida Division of Emergency Management (FDEM)
Inspector: Chris Stevens, FDEM
Inspector: Kevin Hardy, FDEM
Inspector: Mark Briggs, Eastern Research Group, Inc. (ERG)
Inspector: Liam Prendergast, ERG
Date of Facility Visit: March 6, 2024

Facility Identification

Name: Citrus World, Inc. d/b/a Florida's Natural Growers
Street Address: 20205 US Hwy 27
City: Lake Wales County: Polk State: Florida Zip: 33853
EPA Facility ID No: 1000 0005 7751
Dun & Bradstreet (D&B) No: 4091732
Latitude: 27.909614
Longitude: -081.600433

Name, address and phone of corporate parent company:
Owner/Operator: NA
Mailing Address: NA
City: NA State: NA Zip: NA
Phone: NA

Name, title, and email of person responsible for 40 C.F.R. Part 68 implementation:
Name: Scott Smith
Title: Vice President of Operations
Phone: 863-676-1411
Email: Scott.Smith@floridasnatural.com

Name and title of emergency contact:
Name: Kenneth LaRue
Title: Safety & Security Manager
Day phone: 863-676-1411
24-hour Phone: 540-230-4448
Email: Kenneth.LaRue@floridasnatural.com

Name and titles of stationary source personnel involved in site inspection *(accompanied site tours, provided documents and explanations):*
Name: Scott Smith
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Name: Kenneth LaRue
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Name: Boris Zasepsky
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Name: Jim Ashby
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Note: This is not a union facility.

Date and Program Levels of Submitted Risk Management Plan

Date of initial submission: June 18, 1999
Date of most recent submissions: April 28, 2021
Process: Ammonia Refrigeration
Process ID: 1000115593, 1000115594
Program Level as reported in RMP: Program Level 3
NAICS code: 311411 (Frozen Fruit, Juice, and Vegetable Manufacturing)

3.0 Observations

The inspection of the Citrus World facility evaluated various sections of the RMP regulations (40 C.F.R. Part 68, Program Level 3) and the inspection checklist included in "Guidance for Conducting Risk Management Programs Inspections under Clean Air Act Section 112(r)." The inspection began with an opening discussion of facility operations. The discussion was followed by a tour of the facility's ammonia refrigeration process areas. EPA inspectors then requested paperwork associated with the facility's Risk Management Plan (RMPlan). The documents were reviewed by EPA inspectors on-site and provided for review off-site. An inspection out-brief was conducted where EPA inspectors described their observations. Observations from the RMP inspection at the Citrus World facility are discussed below:

1. 40 C.F.R. § 68.65(d)(2) requires the owner or operator to document that equipment complies with recognized and generally accepted good engineering practices (RAGAGEP).

    - During the facility walk-through, the inspection team observed signage posted near the primary entry doors to ammonia machinery rooms (AMRs) 1, 2, 4, 5, 6, and 7 with instructions for shutting down the refrigeration system in an emergency, the name and telephone numbers of the refrigeration operating and maintenance staff, the quantity of ammonia in the system, the type of oil in the system and the high and low-side design pressures. The primary entry door for AMR 8 had some signage but the signage was damaged so part of the emergency phone numbers was obscured and neither the amount of ammonia in the system nor the type of oil could be determined. A lack of signage is inconsistent with the following RAGAGEP:

        - Section 5.14.1.1 of American National Standards Institute/International Institute of Ammonia Refrigeration (ANSI/IIAR) 2 (2021) states, "Signage or schematic drawings for each system containing more than 22 lbs. of ammonia shall be posted at a location that is readily accessible to trained refrigeration staff and trained emergency responders. Schematic drawings or signage shall include the following information: 1. Instructions with details and steps for shutting down the system in an emergency; 2. The contact information for whom to contact in an emergency; 3. Maximum intended inventory of ammonia in the system; 4. Type of refrigerant compressor oil(s), and 5. Low-side and high-side design pressures."

        - Sections 7.2.10.1 through 7.2.10.5 of ANSI/IIAR-9 (2020) states, "It shall be the duty of the person in charge of the premises at which the refrigeration system is installed to 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. Documentation shall include the following: 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 the emergency facility contact title and phone number to call in the event of an alarm or ammonia release."

- During the facility walk-through, the inspection team observed that multiple entry/egress doors between the AMRs 1, 6, 7, 8 and the building exterior were not tight-fitting, such that there were visible gaps present, thus allowing for a potential pathway for ammonia to escape out of the AMR in the event of a release. A lack of tight-fitting doors to/from the AMR is inconsistent with the following RAGAGEP:

    - Section 6.2.1 of ANSI/IIAR-2 (2021) and Section 7.3.9.2 of ANSI/IIAR-9 (2020) state, "Machinery room doors shall be self-closing and tight fitting. Doors that are part of the means of egress shall be equipped with panic hardware and shall be side hinged to swing in the direction of egress for occupants leaving the machinery room. Where the machinery room is not provided with sprinklers, doors communicating with the building interior shall be 1-hour fire rated. Doors to the outdoors shall be fire-rated where required by the Building Code based on the fire rating required for exterior wall openings."

    - Section 8.11.2 of American National Standard Institute/The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ANSI/ASHRAE) 15 (2016) states, "Each refrigerating machinery room shall have a tightfitting door or doors opening outward, self-closing if they open into the building and adequate in number to ensure freedom for persons to escape in an emergency. With the exception of access doors and panels in air ducts and air-handling units conforming to Section 8.11.7, there shall be no openings that will permit passage of escaping refrigerant to other parts of the building."

- During the facility walk-through, the inspection team observed the Emergency Stop (E-STOP) and Emergency Ventilation Control actuation buttons were not located adjacent to and outside of AMRs 1, 4, and 5 primary entry/egress doors. A lack of these controls adjacent to and outside of AMRs 1, 4, and 5 entry doors is inconsistent with the following RAGAGEP:

    - Section 6.12.1 of ANSI/IIAR-2 (2021) and Section 7.3.11.1 of ANSI/IIAR-9 (2020) state, "A clearly identified emergency shut-off switch with a tamper-resistant cover shall 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."

    - Section 6.12.2 of ANSI/IIAR-2 (2021) and Section 7.3.11.2 of ANSI/IIAR-9 (2020) state, "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."

- During the facility walk-through, the inspection team observed numerous ammonia pressure vessels located outside AMRs were not affixed with National Fire Protection Association (NFPA) diamonds to indicate the hazards of ammonia. A lack of NFPA diamonds on ammonia refrigeration equipment is inconsistent with the following RAGAGEP:

    - Section 5.14.2 of ANSI/IIAR-2 (2021) states, "NFPA 704 Placards – Buildings and facilities with refrigeration systems shall be provided with placards that display information in accordance with NFPA 704. For equipment located outdoors, the placard shall display the following degrees of hazard: Health-3, Flammability-1, Instability-0."

    - Section 7.2.9.1.1 of ANSI/IIAR-9 (2020) states, "Buildings and facilities with refrigeration systems shall be provided with placards in accordance with NFPA 704."

    - NFPA 704, Standard System for the Identification of the Hazards of Materials for Emergency Response (2012), Section 9.1 states, "Symbol Arrangement. One of the systems delineated in Figure 9.1(a), Figure 9.1(b), or Figure 9.1(c) shall be used for the implementation of this standard."

- Ammonia audible/visual alarms were not provided outside the primary entry door into AMRs 1, 4, and 5. Not providing an audible and visual alarm outside the AMR's entry doors is inconsistent with the following RAGAGEP:

    - Section 6.13.1(2) of ANSI/IIAR-2 (2021) states, "Audible and visual alarms shall be provided inside the room to warn that access to the room is restricted to authorized personnel and emergency responders when the alarm has activated. Additional audible and visual alarms shall be located outside of each entrance to the machinery room."

- The audible/visual alarms located outside AMRs 4, 5, 6, 7, and 8 entry doors were not labeled to denote their functionality. A lack of sufficient labeling in association with ammonia audible/visual alarms is inconsistent with the following RAGAGEP:

    - Section 7.2.9.1(2) of ANSI/IIAR-9 (2020) states, "Machinery Room Signage. Signage shall be provided in accordance with this section … 2) Alarm Signage. The meaning of each alarm shall be clearly marked by signage near the visual and audible alarms."

- Section 7.3.12.6 of ANSI/IIAR-9 (2020) and Section 17.6 of ANSI/IIAR-2 (2021) state, "Ammonia leak detection alarms shall be identified by signage adjacent to visual and audible alarm devices."

- Section 8.11.2.1 of ANSI/ASHRAE-15 (2016) states, "… The meaning of each alarm shall be clearly marked by signage near the annunciators."

- Areas of localized corrosion were observed on ammonia piping, valves, and ammonia refrigeration equipment in the AMR and throughout the rest of the facility. Specifically, inspectors noted areas of localized corrosion in the following areas:

  1) Ammonia piping above the Ammonia Accumulator outside Warehouse "W"

  2) Ammonia piping inside AMR 1

  3) Ammonia piping and valves outside of and on the roof associated with AMR 1

  4) Ammonia piping inside of AMR 2

  5) Ammonia piping and valves outside of and on the roof associated with AMR 2

  6) Ammonia piping inside of AMR 4

  7) Ammonia piping on the roof of AMR 4

  8) Ammonia piping inside of AMR 5

  9) Ammonia piping inside of AMR 6

  10) Ammonia piping inside of AMR 7

  11) Ammonia piping inside of AMR 8

  12) Ammonia piping on the roof of warehouse E and J

  13) Ammonia piping and associated equipment on the mid-level roof of the Aseptic Tank Farm (ATF)

  14) Ammonia piping and associated equipment on the roof of the ATF

  15) Ammonia piping on High pressure receiver for AMRs 6 & 7

  16) Ammonia piping on High pressure receiver for AMR 4

  The presence of corrosion on ammonia piping and equipment associated with ammonia refrigeration systems is inconsistent with the following RAGAGEP:

- Section 53.3.1.1 of NFPA 1 (2018) states, “Refrigeration systems shall be operated and maintained in a safe and operable condition, free from accumulations of oil, dirt, waste, excessive corrosion, other debris, or leaks, and in accordance with ASHRAE 15 and the mechanical code. Ammonia refrigerator systems shall be maintained in accordance with ANSI/IIAR-7, Developing Operating Procedures for Closed-Circuit Ammonia Mechanical Refrigerating Systems.”

- Section 8.10.4 of ANSI/ASHRAE-15 (2013) states, “Refrigerant piping installed in concrete floors shall be encased in pipe duct. Refrigerant piping shall be properly isolated and supported to prevent damaging vibration, stress, or corrosion.”

- Section 5.1 of ANSI/IIAR-9 (2020) states, “All equipment and system components shall be inspected, tested, and maintained in accordance with ANSI/IIAR 6 (2019).”

- During the facility walk-through, the inspection team observed multiple places where ammonia piping was not clearly and/or consistently labeled with contents, direction of flow, or phase of components. A lack of labeling of ammonia piping is inconsistent with the following RAGAGEP:

  - Section 5.14.6 of ANSI/IIAR-2 (2021) states, “Pipe Marking. Ammonia piping mains, headers, and branches shall be identified with the following information: I. "AMMONIA"; 2. Physical state of the ammonia; 3. Relative pressure level of ammonia, being low or high as applicable; 4. Pipe service, which shall be permitted to be abbreviated; and 5. Direction of flow. The marking system shall either be one established by a recognized model code or standard or one described and documented by the facility owner or the owner's agent.”

  - Section 7.2.9.4 of ANSI/IIAR-9 (2020) states, “Ammonia piping mains, headers, and branches shall be identified with the following information 1) “AMMONIA” 2) Physical state of the ammonia 3) Relative pressure level of ammonia, being low or high as applicable 4) Pipe service, which shall be permitted to be abbreviated 5) Direction of flow”

  - Section 4.1.1-8 of IIAR Bulletin 114 (2014) states, “The piping marker will be considered to have (5) sections: a. marker body b. physical state section c. pressure level section. D. abbreviation section e. directional arrow”

  - Section 5.0 of IIAR Bulletin 114 (2014) states, “Piping markers shall be located as follows: a. before and after a change in piping direction; when piping terminates at equipment and is within 24” of a marker or when piping changes direction more than once and is within 24” of a marker, it is not

necessary to place an additional marker between the directional changing elbows or the termination point at equipment. b. before and after piping penetrations of walls, ceilings and floors, c. on extended horizontal or vertical runs of pipe, with a maximum spacing of 40 feet between markers, in order to provide positive identification, and d. at least once on the piping in every area through which the refrigeration piping passes."

- ANSI/American Society of Mechanical Engineers (ASME) A13.1 (2015) specifies the most common pipe conventions in the United States for identifying pipe content, as well as the size, color, and placement of the identification device.

- During the facility walk-through, the inspection team observed unsealed penetrations through the walls of AMRs 1 and 8. A lack of sealed piping penetrations through walls entering/exiting the AMR is inconsistent with the following RAGAGEP:

  - Section 7.3.2.1 of ANSI/IIAR-9 (2020) states, "The machinery room shall be separated from the remainder of the building by tight-fitting construction."

  - Section 7.3.2.5 of ANSI/IIAR-9 (2020) states "Air shall not flow to or from any portion of a premises that is routinely accessible to or occupied by people on a part-time or full-time basis through a machinery room unless the air is ducted and sealed to prevent Ammonia leakage from entering the airstream. Access doors and panels in ductwork and air-handling units located in a machinery room shall be gasketed and tight fitting."

  - Section 6.6.2 of ANSI/IIAR-2 (2021) and Section 7.3.6.2 of ANSI/IIAR-9 (2020) and state, "Pipes penetrating the machinery room envelope shall be sealed to walls, ceilings, or flows through which they pass to prevent leakage of Ammonia vapor to adjoining spaces and to maintain the fire rating of the machinery room envelope."

- Ice build-up was observed on ammonia piping and underneath insulation on pressure vessels in multiple areas throughout the facility. The presence of unmitigated ice build-up on both insulated and uninsulated portions of ammonia piping and/or refrigeration equipment is inconsistent with the following RAGAGEP:

  - Section 5.6.8 of ANSI/IIAR-6 (2019) states, "Equipment and piping shall be kept free from excessive ice buildup. (1) Ice buildup shall not interfere with the operation of emergency shut-off valves. (2) Ice accumulation shall not be permitted to deflect or bend pipes, displace components, or negatively impact the system's structural integrity."

  - Section 7.2.6.1 of ANSI/IIAR-9 (2020) states, "Piping and equipment surfaces not intended for heat exchange shall be insulated, treated, or otherwise protected to mitigate condensation and excessive frost buildup where the

surface temperature is below the dew point of the surrounding air during normal operation and in an area where condensation and frost could develop and become a hazard to occupants or cause damage to the structure, electrical equipment, or refrigeration system."

- Inspectors observed multiple instances throughout the facility (e.g., inside the AMRs and exterior to facility buildings) where insulation and/or vapor barriers on ammonia piping and vessels were damaged. Damaged insulation appeared to have been present on pressure vessels and valves in some locations for extended periods, allowing vegetation to grow. Damaged insulation and vapor barrier on ammonia piping and pressure vessels is inconsistent with the following RAGAGEP:

    - Section 5.10.1 of ANSI/IIAR-6 (2021) states, "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 to a level that interferes with valve operation or creates damage to piping, equipment or supports."

    - Section A.11.1.1.2 of ANSI/IIAR-6 (2019) states, "If damage were to occur to the pipe insulation, vapor barrier, or both, the owner should proceed with repairing and/or replacing the damaged pipe insulation and/or vapor barrier in a timely manner if the damage poses an immediate unsafe condition or could develop into an unsafe condition, such as excessive weight loading, to the piping."

    - Appendix G Section 300.3 (1) of ASME B31.3 (2006) states, "Engineered safeguards that may be evaluated and selectively applied to provide added safeguarding include (a) means to protect piping against possible failures, such as (1) thermal insulation, shields, or process controls to protect from excessively high or low temperature and thermal shock."

- Ammonia piping used to drain oil from oil pots is not capped to prevent inadvertent releases. A lack of caps on piping designed for oil draining is inconsistent with the following RAGAGEP:

    - Section 5.9.3(3) of ANSI/IIAR-2 (2021) states, "Oil removal shall be accomplished by one or more of the following: A valve and piping assembly at the draining point where oil is removed from the system. At a minimum, a shut-off valve in series with a self-closing shut-off valve is required. All piping to atmosphere for oil draining shall be designed to be capped when not in use."

- Inspectors observed sections of piping throughout the facility that were inadequately supported/secured and/or supported by other ammonia piping. A lack of appropriate piping support on ammonia piping is inconsistent with the following RAGAGEP:

- Section 7.2.7.1 of ANSI/IIAR-9 (2020) states, “Piping, tubing, and equipment shall be supported to prevent excessive vibration and movement.”

- Section 5.11.5 of ANSI/IIAR-2 (2021) states, “Supports and foundations shall be designed to prevent vibration or movement that causes damage, an unsafe condition, or loss of function to the equipment, connected refrigeration system components, or the building structure.”

- Section 321.1.1 of ASME B31.3 (2014) states, “The layout and design of piping and its supporting elements shall be directed toward preventing the following:

  a) Piping stresses in excess of those permitted in this Code
  b) Leakage at joints
  c) Excessive thrusts and moments on connected equipment (such as pumps and turbines)
  d) Excessive stresses in the supporting (or restraining) elements
  e) Resonance with imposed or fluid-induced vibrations
  f) Excessive interference with thermal expansion and contraction in piping which is otherwise adequately flexible
  g) Unintentional disengagement of piping from its supports
  h) Excessive piping sag in piping requiring drainage slope
  i) Excessive distortion or sag of piping (e.g., thermoplastics) subject to creep under conditions of repeated thermal cycling
  j) Excessive heat flow, exposing supporting elements to temperature extremes outside their design limits”

- Section 321.1.2 of ASME B31.3 (2014) states, “In general, the location and design of pipe supporting elements may be based on simple calculations and engineering judgment. However, when a more refined analysis is required and a piping analysis, which may include support stiffness, is made, the stresses, moments, and reactions determined thereby shall be used in the design of supporting elements.”

- Section 321.1.4 of ASME B31.3 (2014) states,

  a) “A supporting element used as an anchor shall be designed to maintain an essentially fixed position.
  b) To protect terminal equipment or other (weaker) portions of the system, restraints (such as anchors and guides) shall be provided where necessary to control movement or to direct expansion into those portions of the system that are designed to absorb them. The design, arrangement, and location of restraints shall ensure that expansion joint movements occur in the directions for which the joint is designed. In addition to the other thermal forces and moments, the effects of friction in other supports of the system shall be considered in the design of such anchors and guides.

c) Piping layout, anchors, restraints, guides, and supports for all types of expansion joints shall be designed in accordance with para. X301.2 of Appendix X."

- While observing from ground level and traversing the roof areas of the facility, inspectors observed pressure relief valve (PRV) header piping on the roof directed to discharge in a downward direction. PRV discharge piping discharging in a downward direction is inconsistent with the following RAGAGEP:

    - Section 15.5.1.5 of ANSI/IIAR-2 (2021) states, "The termination of the discharge shall be directed upwards and arranged to avoid spraying Ammonia on persons in the vicinity."

- Inspectors observed that multiple entry/egress doors between the AMR and either adjacent rooms or the building exterior, as well as entry/egress doors to the roofs containing ammonia equipment, were not equipped with panic hardware. A lack of panic hardware equipped doors to/from the AMR and associated roof is inconsistent with the following RAGAGEP:

    - Section 6.2.1 of ANSI/IIAR-2 (2021) and Section 7.3.9.2 of ANSI/IIAR-9 (2020) state, "Machinery room doors shall be self-closing and tight fitting. Doors that are part of the means of egress shall be equipped with panic hardware and shall be side hinged to seeing in the direction of egress for occupants leaving the machinery room. Where the machinery room is not provided with sprinklers, doors communicating with the building interior shall be 1-hour fire rated. Doors to the outdoors shall be fire-rated where required by the Building Code based on the fire rating required for exterior wall openings."

    - Section 8.11.2 of ANSI/ASHRAE-15 (2016) states, "Each refrigerating machinery room shall have a tightfitting door or doors opening outward, self-closing if they open into the building and adequate in number to ensure freedom for persons to escape in an emergency. With the exception of access doors and panels in air ducts and air-handling units conforming to Section 8.11.7, there shall be no openings that will permit passage of escaping refrigerant to other parts of the building."

- Electrical cables were observed to be hanging, unguarded within the AMR 1 and outside of AMR 2. Additionally, inspectors observed disassembled electrical boxes that contained exposed wiring behind and next to compressors in AMR 1. The presence of this exposed wiring inside of the AMR is inconsistent with the following RAGAGEP:

    - Section 1-8.1.2 of NFPA 70E (2000) states, "Working space required by this standard shall not be used for storage. When normally enclosed live parts are

exposed for inspection or servicing, the working space, if in a passageway or general open space, shall be suitably guarded."

- Section 1-9.3 of NFPA 70E (2000) states, "Sufficient space shall be provided and maintained about electric equipment to permit ready and safe operation and maintenance of such equipment. Where energized parts are exposed, the minimum clear workspace shall not be less than 6 1/ 2 ft (1.98 m) high (measured vertically from the floor or platform), or less than 3 ft (914 mm) wide (measured parallel to the equipment). The depth shall be as required in 1-9.5.1 of Part I. In all cases, the workspace shall be adequate to permit at least a 90-degree opening of doors or hinged panels."

- Section 110.27(A) of NFPA 70 (2011) states, "Except as elsewhere required or permitted by this Code, live parts of electrical equipment operating at 50 volts or more shall be guarded against accidental contact by approved enclosures or by any of the following means: (1) By location in a room, vault, or similar enclosure that is accessible only to qualified persons. (2) By suitable permanent, substantial partitions or screens arranged so that only qualified persons have access to the space within reach of the live parts. Any openings in such partitions or screens shall be sized and located so that persons are not likely to come into accidental contact with the live parts or to bring conducting objects into contact with them. (3) By location on a suitable balcony, gallery, or platform elevated and arranged so as to exclude unqualified persons. (4) By elevation of 2.5 m (8 ft) or more above the floor or other working surface."

- Inspectors observed a designated flammables cabinet within AMR 2 that was not grounded. The presence of this ungrounded flammable cabinet inside of the AMR is inconsistent with the following RAGAGEP:

  - Section 6.1.10.2 of NFPA 400 (2016) states, "When processes or use conditions exist where flammable gases, dusts, or vapors can be ignited by static electricity, means shall be provided to prevent the accumulation of a static charge and to dissipate the static charge to ground."

- During the facility walk-through, the inspection team observed the presence of a used oil tank outside of AMR 2 that was not in secondary containment. Oil-soaked soils were present at the base of the tank. Inspectors observed inadequate secondary containment in the caustic storage area outside of the ATF buildings. Along with inadequate secondary containment, a drain is present on the concrete pad that houses the caustic tanks with an unknown endpoint. The presence of inadequate secondary containment is inconsistent with the following RAGAGEP:

- Section 6.2.1.9.3.1 (1) of NFPA 400 (2016) states, “Buildings, or portions thereof, used for any of the following shall be provided with secondary containment:

    1) Storage of liquids where the capacity of an individual vessel exceeds 55 gal (202.8 L) or the aggregate capacity of multiple vessels exceeds 1000 gal (3785 L)”

- The King Valves for the ammonia refrigeration system were located approximately 7.5 ft above the floor and are not readily accessible. A lack of ready access to the King Valves for an ammonia refrigeration system is inconsistent with the following RAGAGEP:

    - Section 7.3.3.3.1 of ANSI/IIAR-9 (2020) states, “Manually operated valves that are inaccessible from floor level shall be operable from portable platforms, fixed platforms, ladders, or shall be chain operated.”

    - Section 7.3.3.3.2 of ANSI/IIAR-9 (2020) states, “Manually operated isolation valves identified as being part of the system emergency shutdown procedure shall be directly operable from the floor or chain operated from a permanent work surface. Emergency shut-off valve identification shall comply with Section 7.2.9.3.”

- Ambient and emergency exhaust ventilation discharges on the roof of AMR 1 are within 20 feet of the screened entry door into the building and within the path of egress. Emergency ventilation being discharged within 20 feet of building openings is not consistent with the following RAGAGEP:

    - Section 6.14.3.3 of ANSI/IIAR-2 (2021) states, “Machinery room exhaust shall be to the outdoors not less than 20 ft (6 m) from a property line or openings into buildings.”

- Inspectors observed PRV discharge piping that terminates below adjacent roof levels and in close proximity to the adjacent building exterior wall, specifically at the site of the August 2022 incident. The location of the PRV discharge headers next to adjacent buildings while also being below the adjacent roof level is inconsistent with the following RAGAGEP:

    - Section 7.4.2.2 of ANSI/IIAR-9 (2020) and Section 15.5.1.3 of ANSI/IIAR-2 (2021) state, “The discharge termination from pressure relief devices relieving to atmosphere shall not be less than 7.25 ft (2.2 m) above a roof that is occupied solely during service and inspection. Where a higher adjacent roof level is within 20 ft (6.1 m) horizontal distance from the relief discharge, the

discharge termination shall not be less than 7.25 ft (2.2 m) above the height of the higher adjacent roof."

- Emergency procedures and diagrams showing the location of shutoff valves for the ammonia refrigeration systems are not posted outside each of the AMRs for use by emergency responders. A lack of emergency procedures and diagrams showing the location of shutoff valves is inconsistent with the following RAGAGEP:

    - Section 5.14.4 of ANSI/IIAR-2 (2021) states, "Valves listed as emergency shut off valves in the system emergency shutdown procedure shall be clearly and uniquely identified at the valves themselves and in the system schematic drawings."

- During the inspection, the inspection team requested facility operators show the status of ammonia detectors within the refrigeration system. According to the refrigeration control system, more than a dozen detectors were measuring on-going ammonia leaks within the refrigeration system. In AMR 2, the north center wall ammonia detector was measuring 20 ppm while the U Warehouse north detector was measuring 12 ppm. On-going ammonia leaks within the refrigeration system is inconsistent with the following RAGAGEP:

    - Section 53.3.1.1 of NFPA 1 (2018) states, "Refrigeration systems shall be operated and maintained in a safe and operable condition, free from accumulations of oil, dirt, waste, excessive corrosion, other debris, or leaks, and in accordance with ASHRAE 15 and the mechanical code. Ammonia refrigerator systems shall be maintained in accordance with ANSI/IIAR-7, Developing Operating Procedures for Closed-Circuit Ammonia Mechanical Refrigerating Systems."

Inspection Report,

Prepared by:

JUSTIN STARK

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Date: 2024.05.13 20:26:18 -04'00'

Justin Stark, Inspector
North Air Enforcement Section
U.S. EPA Region 4

Approved by:

JASON DRESSLER

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Jason Dressler, Section Chief
North Air Enforcement Section
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