United States Environmental Protection Agency / Region 4

Risk Management Program Supplemental Inspection Report

Citrosuco North America, Inc.
Lake Wales, Florida
March 7, 2024

1.0 Introduction

The U.S. Environmental Protection Agency (EPA) conducted a Risk Management Program (RMP) inspection of the Citrosuco North American, Inc., (Citrosuco) facility located in Lake Wales, Florida on March 7, 2024. An inspection report of the EPA's observations was sent to the facility on May 14, 2024. This is a supplemental inspection report of additional observations discovered during a review of Citrosuco records which were provided to the EPA after the inspection.

2.0 Background

The 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 111,000 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.

Facility Identification

Name: Citrosuco North America, Inc.
Street Address: 5937 Highway 60 East
City: Lake Wales County: Polk State: Florida Zip: 33898
EPA Facility ID No: 1000 0015 2078
Dun & Bradstreet (D&B) No: 108848680
Latitude: 27.895944
Longitude: -81.490444

Name, address and phone of corporate parent company:
Owner/Operator: Citrosuco .
Mailing Address: 305 Rua Joao Pessoa Matao
City: Sao Paulo State: Sao Paulo Zip: 15990
Phone: NA

Name, title, and email of person responsible for 40 CFR Part 68 implementation:

Name: Nick Emanuel
Title: Chief Executive Officer
Day phone: (863) 528-4693
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Email: nemanuel@citrosuco.com

Name and title of emergency contact:
Name: Nick Emanuel
Title: Chief Executive Officer
Day phone: (863) 528-4693
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Email: nemanuel@citrosuco.com

Date and Program Levels of Submitted Risk Management Plan (RMP)

Date of initial submission: June 28, 1999
Date of most recent submissions: July 7, 2014
Process: Ammonia Refrigeration
Process ID: 1000056189
Program Level as reported in RMP: 3
NAICS code: 311411 (Frozen Fruit, Juice, and Vegetable Manufacturing)

3.0 Observations

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).

    - The facility provided ventilation calculations and a summary of the current ventilation capacity for Ammonia Machinery Room (AMR) 1 and AMR 2. Ventilation calculations provided for AMR 1 indicate the current total ventilation available for the space is 8,000 cubic feet per minute (CFM). Based on the documentation provided by the facility the available ventilation for AMR 1 is not adequate for both temperature control and emergency ammonia releases. A lack of adequate ventilation capacity in for AMR 1 is inconsistent with the following RAGAGEP:

        - Section 8.11.5 of American National Standard Institute/The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ANSI/ASHRAE)-15 (2016) states, *"The mechanical ventilation required to exhaust an accumulation of refrigerant due to leaks or a rupture of the system shall be capable of removing air from the machinery room in not less than the following quantity where G is the mass of refrigerant (n pounds) in the largest system, any part of which is located in the machinery room:*

$Q = 100 \times G^{0.5}$"

According to the facility, the mass of anhydrous ammonia in AMR 1 is 14,000 pounds which equates to a minimum air flow of 11,800 CFM.

- Section 6.14.7.1 of ANSI/Institute of Ammonia Refrigeration (IIAR)-2 (2021) states, "*emergency ventilation systems shall provide not less than 30 air exchanges per hour based on gross machinery room volume."*

  Using information on the length, width and height of AMR 1 provided by the Facility, the EPA calculated the emergency ventilation system should provide a minimum of 119,700 CFM.

- The facility provided their Ammonia Refrigeration Safety Inspection Checklist dated March 28, 2024, and noted that testing of the emergency ventilation system found it is not interfaced to a supervised alarm to automatically start the emergency exhaust fans when ammonia is detected. Not having an emergency ventilation system that is interfaced to the alarm system so it can be started when ammonia is detected is inconsistent with the following RAGAGEP:

  - Section 6.13.2.3 of ANSI/IIAR-2 (2021) states, *"detection of ammonia concentrations equal to or exceeding 150 ppm (1/2 IDLH) shall activate indicators and an audible alarm and shall activate emergency ventilation. Once activated, emergency ventilation, and visual indicators shall continue to operate until manually rest by a switch located in the machinery room. Audible alarms shall continue to operate until they are manually reset by a switch located in the machinery room or alternatively in ana area remote from the machinery room."*

2. 40 C.F.R. § 68.67(f) requires at least every five (5) years after the completion of the initial process hazard analysis (PHA), the PHA shall be updated and revalidated by a team meeting the requirements of 40 C.F.R. § 68.67(d), to assure that PHA is consistent with the current process. Updated and revalidated PHAs completed to comply with 29 C.F.R. 1910.119(e) are acceptable to meet these requirements.

   - According to the documentation provided by the facility, a PHA was completed in 2018 and another was to be performed in May or June 2022. However, the facility has not provided its last two PHAs.

3. 40 C.F.R. § 68.69(c) requires the owner or operator to ensure operating procedures (SOP) are reviewed as often as necessary to assure that they reflect current operating practice, including changes that result from changes in process chemicals, technology, and equipment, and changes to stationary sources. The owner or operator shall certify annually that these operating procedures are current and accurate.

- A review of the SOPs provided by the facility indicates they are not being reviewed as often as necessary to ensure they reflect current operating practices. For example, the SOP titled "Overview of Safety Systems for System 1" indicates on page 4 that ammonia sensors activate at 150 PPM to provide at least 20,000 CFM of outside air. Ventilation documentation provided by the facility indicates the maximum available ventilation capacity for System 1 is 8,000 CFM. The footer found on the bottom of the SOP indicates it was last reviewed on May 8, 2014. Another example is the SOP for draining oil from oil pots. According to page 7 of the SOP titled "Oil Pot," refrigeration personnel are to remove the plug from the drain line at the valve and attach a hose to the drain outlet and when finished draining oil, they should remove the hose and replace the plug. During the EPA's inspection on March 7, 2024, the EPA found the oil drain piping did not have oil drain plugs. The footer found on the bottom of the SOP titled Oil Pot indicates it was last reviewed on April 30, 2014.

4. 40 C.F.R. § 68.73(d)(2) requires inspection and testing procedures to follow RAGAGEP.

    - According to the documentation provided by the facility, an annual testing of the E-Stops and annual emergency ventilation systems was performed on March 28, 2024 (22 days after the inspection). The facility could not demonstrate that it has performed past annual testing on its E-Stops and the emergency ventilation systems in accordance with Chapter 12 of ANSI/IIAR-6 (2019).

5. 40 C.F.R. § 68.79(d) requires the owner or operator to promptly determine and document an appropriate response to each of the findings of the compliance audit, and document that deficiencies have been corrected.

    - The facility completed a compliance audit in 2022. However, no information was provided on the appropriate response (i.e. actions taken, and completion date) on the findings.

6. 40 C.F.R. § 68.93(a) requires coordination with local emergency planning and response organizations to occur at least annually, and more frequently if necessary, to address changes: At the stationary source; in the stationary source's emergency response and/or emergency action plan; and/or in the community emergency response plan.

    - The facility has not provided documentation demonstrating that coordination with local emergency planning and response organizations occurs annually.

Inspection Report,

Prepared by:

JUSTIN STARK Digitally signed by JUSTIN STARK Date: 2024.12.11 16:20:20 -05'00'

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

Approved by:

JASON DRESSLER Digitally signed by JASON DRESSLER Date: 2024.12.12 14:18:09 -05'00'

Jason Dressler, Section Chief
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