

## **Clean Air Act 112(r), Risk Management Program Inspection Report**

### **Americold Logistics LLC-Mobile**

Mobile, Alabama

July 20, 2021

#### **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 Americold Logistics LLC-Mobile (the facility) located in Mobile, Mobile County, Alabama. EPCRA Tier II submittals from the facility were also obtained during the onsite inspection. The inspection 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. Numerous documents were provided for review off-site. This report will provide background information about the facility and a list of observations.

#### **2.0 Background**

The Americold Mobile facility chills and stores a variety of food products in their cold storage warehouse. 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 storage rooms. Most of the products stored are refrigerated foods for human consumption and inherently pose no known environmental or safety risks. The facility started operating as CS Integrated Logistics in 1978. The facility was later acquired by Atlas Cold Storage. Most recently, the current owner (Americold Logistics) acquired the facility in 2012. Americold's corporate location is in Atlanta and it operates 242 facilities worldwide and 170 facilities in the United States. Outside the U.S., the company has facilities in Canada, Spain, Argentina, Brazil, Portugal, Austria, Poland, Netherlands, Australia, New Zealand, and the United Kingdom. The facility has approximately 22 full time employees and operates 5:00 AM to 11:00 PM, 5 days/week, 52 weeks/year.

The anhydrous ammonia process used by the facility for its refrigeration is regulated pursuant to Program 3 of the RMP. According to facility records, the facility has one ammonia process, with a design inventory of 15,815 pounds of ammonia. Tanner Industries, Inc., supplies anhydrous ammonia to the facility on an as needed basis. The ammonia refrigeration process at the facility is subject to the RMP requirements of 40 C.F.R. Part 68 and to EPCRA Sections 302, 311 and 312. The background specifics are summarized in Table 1 presented below.

TABLE 1: Inspection Information Summary

Inspection Team

Lead Inspector: Om P. Devkota, EPA  
Chetan Gala, EPA  
Zachary Goods, Eastern Research Group, (Contractor to EPA)

Date of Facility Visit: July 20, 2021

Facility Identification

Name: Americold Logistics LLC-Mobile  
Street Address: 2201 Perimeter Road  
City: Mobile County: Mobile State: Alabama Zip: 36615  
EPA Facility ID No: 1000 0002 9355

Latitude: 30.642633  
Longitude: -088.081511

Name, address and phone of corporate parent company:

Owner/Operator: Americold Logistics  
Mailing Address: 10 Glenlake Parkway, Suite 600, South Tower  
City: Atlanta State: Georgia Zip: 30328  
Phone: (678) 441-1400  
Website: <https://www.americold.com/>

Name, title, and email of the person responsible for 40 C.F.R. Part 68 implementation:

Name: Sheldon Baptiste  
Title: Regional PSM Manager  
Email: [Sheldon.Baptiste@Americold.com](mailto:Sheldon.Baptiste@Americold.com)

Name and title of emergency contact:

Name: Brandon Ludlam  
Title: Facility Service Manager  
Day phone: (251) 432-3556  
24-hour Phone: (251) 802-3777  
Email: [Brandon.Ludlam@Americold.com](mailto:Brandon.Ludlam@Americold.com)

Name and titles of stationary source personnel involved in site inspection (*accompanied site tours, provided documents and explanations*):

| Name           | Title                         | Phone          | Email                                                                          |
|----------------|-------------------------------|----------------|--------------------------------------------------------------------------------|
| Brandon Ludlam | Facility Service Manager      | (251) 432-3556 | <a href="mailto:Brandon.Ludlam@Americold.com">Brandon.Ludlam@Americold.com</a> |
| John Moss      | Process Safety Manager        | (404) 984-9953 | <a href="mailto:John.Moss@Americold.com">John.Moss@Americold.com</a>           |
| Tim Holland    | Lead Facility Service Manager | (205) 492-9928 | <a href="mailto:Tim.Holland@Americold.com">Tim.Holland@Americold.com</a>       |

*Note: This is not a union facility*

## Date and Program Levels of Submitted Risk Management Plan

Date of initial submission: June 14, 1999 (CS Integrated – Mobile Provision facility)

Date of recent submission: May 28, 2019

Process as reported in RMP:

Process: Ammonia Refrigeration

Process ID: 1000099225

Process Chemical ID: 1000124347

Program Level as reported in RMP: 3

NAICS code: 49312 (Refrigerated Warehousing and Storage)

### **3.0 Observations**

The inspection of the facility evaluated compliance with various sections of the RMP regulations (40 C.F.R. Part 68, Program Level 3), using the inspection checklist included in “Guidance for Conducting Risk Management Program Inspections under Clean Air Act Section 112(r)” and “Ammonia Refrigeration List of Key Safety Measures.” The inspection involved discussions with the facility representatives regarding a myriad of issues related to its ammonia refrigeration processes, the facility’s RMP, a review of paperwork associated with the facility’s most recent Risk Management Plan (RMPlan), and a walkthrough of the facility. Inspection in-brief and out-brief conferences were conducted. Observations from the RMP inspection at the facility are discussed below:

- 40 C.F.R. § 68.15(a) requires the owner or operator of a stationary source with processes subject to Program 2 or Program 3 to develop a management system to oversee the implementation of the risk management program elements.
  - During the inspection, inspectors observed that the organizational chart documenting the Facility’s RMP management structure had been updated after the initial inspection notification date, suggesting that the organizational chart in-place prior to notification of inspection may have been out of date or was not in place.
- 40 C.F.R. § 68.65(d)(2) requires documentation that equipment complies with recognized and generally accepted good engineering practices (RAGAGEP). During the facility walkthrough, EPA inspectors observed the following:
  - Corrosion, rusting, degradation, and/or vapor barrier damage are present on ammonia piping in the Ammonia Machinery Room on piping near the C-1 and C-4 Compressors, near the V-1 Receiver and on piping at roof-level nearby the evaporative condensers in the truck loading area. Section 4.3.5 of IIAR Bulletin 109 states that if the heat exchanger or pressure vessel shows signs of corrosion beyond mild surface corrosion, the heat exchanger or pressure vessel should be further inspected for soundness by a professional engineer with expertise in the field, or an American Society of Mechanical Engineers (ASME) inspector. Section 4.7.4 of International Institute of Ammonia Refrigeration (IIAR) Bulletin 109 (1997) states that “Uninsulated refrigerant piping should be examined for signs of corrosion. If corrosion exists, the pipe should be cleaned down to bare metal and painted with a rust preventive paint. Badly corroded pipe should be replaced.” IIAR Bulletin 110, Section 6.7.1 indicates, “All uninsulated piping and associated components such as flanges and supports

shall be inspected annually for any damage to or deterioration of the piping or its protective finish; and remedial action is taken where necessary. Areas affected by slight corrosion should be cleaned off and appropriately treated before reinstating the protective finish.”

- Numerous valves throughout the facility including those in the ammonia machinery rooms did not contain valve identification tags. ANSI/American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)-15-2016, Section 11.2.2 states systems containing more than 110 pounds (50 kg) of refrigerant shall be provided with durable signs having letters not less than 0.5 inch (12.7 mm) in height designating valves or switches for controlling the refrigerant flow.
- Heavy ice build-up was observed at the following locations during the inspection:
  1. C-1 Compressor
  2. C-7 Compressor
  3. V-2A Intercooler and V-2A Oil Pot
  4. Low-Temperature Recirculator
  5. -20degF Recirculator

Pipes or vessels can develop ice buildup if they are not properly insulated, and the ice buildup can also add considerable weight on piping and vessel supports that are not designed to hold extra weight. Section 4.10.7 of IIAR Bulletin No. 109 (1997) requires, “Ice formations that could endanger refrigerant piping or other components should be removed and the condition(s) that cause the ice buildup corrected.”

- Ammonia equipment and piping labelling was inadequate and there was inconsistent labeling throughout the Facility. Not all piping was labeled to indicate contents, direction of flow, physical state (i.e., liquid or vapor), or pressure level (i.e., high or low), particularly nearby the C-1 Compressor in the ammonia machinery room and on long pipe runs located on the roof of the Facility. Additionally, there were inconsistent distinctive component markers for other system equipment in the ammonia machinery room. Section 5.14.5 of ANSI/IIAR 2 (2014) requires, “All 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.

The marking system shall either be one established by a recognized model code or standard or one described and documented by the facility owner.”

- Access to the emergency safety shower and eyewash station located exterior to one of the primary ammonia machinery room entry doors is partially obstructed by a permanent fixed roof-access ladder. Section 4.5.5 of ANSI-ISE Z358.1 (2014) requires, “The emergency shower shall be located on the same level as the hazard and the path of travel shall be free of obstructions that may inhibit its use.”
- 40 C.F.R. § 68.67(e) requires the owner or operator shall establish a system to promptly address the team's findings and recommendations; assure that the recommendations are resolved in a

timely manner and that the resolution is documented; document what actions are to be taken; complete actions as soon as possible; develop a written schedule of when these actions are to be completed; and communicate the actions to operating, maintenance and other employees whose work assignments are in the process and who may be affected by the recommendations or actions.

- EPA inspectors reviewed the Facility's 2014 and 2019 Process Hazard Analysis (PHA)'s and associated recommendations tracking tables. The Facility's 2019 PHA revalidation report (2019 PHA.pdf) includes a What-If/Checklist Recommendation Summary (pages 3-4 of the document). The "Actions" column of the What-If/Checklist Recommendation Summary is not filled in for 2 of 22 completed action items, each of which were ranked by the Facility as "B (Undesirable must be improved)." In this summary table, 11 of 22 recommendations and action items designated as completed were completed after the designated due date, with delinquency timeframes ranging from a few days to several months.
- 40 C.F.R. § 68.69 requires the owner or operator shall develop and implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information and shall address at least the following elements.
  - (1) Steps for each operating phase:
    - (i) Initial startup;
    - (ii) Normal operations;
    - (iii) Temporary operations;
    - (iv) Emergency shutdown including the conditions under which emergency shutdown is required, and the assignment of shutdown responsibility to qualified operators to ensure that emergency shutdown is executed in a safe and timely manner;
    - (v) Emergency operations;
    - (vi) Normal shutdown; and,
    - (vii) Startup following a turnaround, or after an emergency shutdown.
  - (2) Operating limits:
    - (i) Consequences of deviation; and
    - (ii) Steps required to correct or avoid deviation.
  - (3) Safety and health considerations:
    - (i) Properties of, and hazards presented by, the chemicals used in the process;
    - (ii) Precautions necessary to prevent exposure, including engineering controls, administrative controls, and personal protective equipment;
    - (iii) Control measures to be taken if physical contact or airborne exposure occurs;
    - (iv) Quality control for raw materials and control of hazardous chemical inventory levels; and,
    - (v) Any special or unique hazards.
  - (4) Safety systems and their functions.

EPA inspectors reviewed the Emergency Shut-Down, Manual Shut-Down, and Manual Start-Up procedures for the ammonia refrigeration system. The operating procedure documents do not clearly identify which equipment should be addressed (e.g., general references to “shut off the compressor” when the Facility operates multiple compressors). Additionally, both the Emergency Shutdown (Emergency Shutdown.pdf) and Manual Shutdown (Manual Shutdown SOP.pdf) operating procedures are incomplete and include references to valve numbers and other operating procedures that are left blank.

- 40 C.F.R. § 68.69(c) requires the operating procedures shall be 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.
  - EPA inspectors reviewed the contractor training documentation. Based on a review of the Facility’s operating procedure certification records (*8. Operating Procedure Certification.pdf*), the Facility is not certifying its operating procedures annually, as required.
- 40 C.F.R. § 68.73(e) requires the owner or operator shall correct deficiencies in equipment that are outside acceptable limits (defined by the process safety information in 40 C.F.R § 68.65) before further use or in a safe and timely manner when necessary means are taken to assure safe operation.
  - Americold retained Colonial Webb Comfort Systems USA to conduct its five-year mechanical integrity audit for the ammonia refrigeration system in June 2016. As part of the June 2016 five-year Mechanical Integrity (MI) Audit (10. 2016 MI-5 audit.pdf and 11. 2016 MI NDT Report Mobile AL.pdf), Colonial Webb identified several sections of piping that, “Per IIAR B110, piping should be closely monitored to evaluate further degradation,” based on the results of non-destructive testing (NDT) inspections conducted at various locations throughout the system. Several of these items do not have an “Action” populated in the recommendations tracking table, though they were assigned a completion date. Those that do have an “Action” listed state that “NDT was performed, and pipe passed” in October 2017, potentially indicating that close monitoring of these sections of piping occurred at one time only. This may indicate that future monitoring events were not consistent with recommendations made as part of the 2016 MI Audit report.

The majority of the action items in the recommendation table do not have a “Person Responsible” populated. Finally, 35 of 106 recommendations included in the table have a “Date Completed” entry listed that is after the “Due Date” assigned to the recommendation, ranging in duration from several days to over two years.

Facility personnel reported that the 2021 Five-Year MI Audit had been completed in June 2021, but that a report was not yet available at the time of the inspection.

- 40 C.F.R. § 68.75(b) requires the owner or operator to establish and implement written procedures and these procedures assure that the following considerations are addressed prior to any change:

- (1) The technical basis for the proposed change;
  - (2) Impact of change on safety and health;
  - (3) Modifications to operating procedures;
  - (4) Necessary time period for the change; and,
  - (5) Authorization requirements for the proposed change.
- The Management of Change (MOC) documentation for replacement of Evaporators #11 and #12 indicates that the project was started in December 2016, but the MOC was not completed until December 2019. The MOC checklist indicates that “No MOC or PHA was completed for this project; however, the MOC was performed after it was discovered during the 2019 PHA that it was not performed” (refer to 18. MOC 1411-2019-001.pdf).
  - 40 C.F.R. § 68.79(d) requires the owner or operator shall promptly determine and document an appropriate response to each of the findings of the compliance audit, and document that deficiencies have been corrected.
    - The 2016 RMP Compliance Audit corrective action tracking table does not provide a schedule for planned completion of open action items, documented responses and planned actions in response to identified deficiencies, or personnel assignments completing open action items.

## **Inspection Report,**

Prepared by:

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DEVKOTA

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Om Devkota, Lead Inspector  
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