

**CLEAN AIR ACT (CAA) § 112(r)(1),
EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT (EPCRA)
§§ 311 AND 312
INSPECTION REPORT**

Castle Rock Meats Inc - Denver

Facility Name and Address: Castle Rock Meats Inc - Denver 707 East 50th Avenue Denver, Colorado 80216 Contact/Telephone: Todd Yearous (303)941-3305 Mailing Address: Same as above	Date of Inspection: 8/6/2024 RMP EPA ID #: NA TRIFID #: Facility does not TRI-report NAICS: 424470 # Employees at this location: 38
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INTRODUCTION

This report presents the observations of the CAA section 112(r)(1) and EPCRA sections 311/ 312 inspection conducted by EPA Region 8. The purpose of this inspection was to determine compliance with the General Duty Clause (GDC) requirements of CAA section 112(r)(1), the SDS requirements of EPCRA 311, and the Tier II reporting requirements of EPCRA sections 312.

Castle Rock Meats Inc – Denver (CRMID) produces, processes, handles, or stores anhydrous ammonia which is a regulated substance covered by the General Duty Clause as specified in the CAA § 112(r)(1).

Nature of Business: According to their NAICS code, CRMID is a “meat and meat products merchant wholesaler”.

Summary of the EPA’s General Duty Clause

The CAA section 112(r)(1) General Duty Clause states:

“It shall be the objective of the regulations and programs authorized under this subsection to prevent the accidental release and to minimize the consequences of any such release of any substance listed pursuant to paragraph (3) or any other extremely hazardous substance. The owners and operators of stationary sources producing, processing, handling or storing such substances have a general duty, in the same manner and to the same extent as section 654, title 29 of the United States Code [the general duty clause in the Occupational Safety and Health Act], to identify hazards which may result from such releases using appropriate hazard

assessment techniques, to design and maintain a safe facility taking such steps as are necessary to prevent releases, and to minimize the consequences of accidental releases which do occur.”

OBSERVATIONS

CAA § 112(r)(1) (GDC):

The EPA noted 26 possible GDC findings during its inspection of CRMID.

Just before the inspection, CRMID had hired consultants to improve CRMID’s GDC program. These consultants had begun to address many of the 26 findings that the EPA would eventually note.

For example, CRMID had retained a consultant to write a PSM program and an Emergency Action Plan (EAP) for the facility. CRMID had also retained an ammonia contractor to address many findings before the EPA noted them. In addition, CRMID intends to hire an engineering firm to address other findings.

However, it should be noted that the written PSM program, the written EAP, and other written plans/programs are so new that they have not been read or implemented by anyone at CRMID.

Because the above plans/programs are overwhelming in size and content, and because CRMID has not assigned anyone to review and implement them, the EPA recommends that CRMID retain a consultant/trainer to ensure that the plans/programs are reviewed and implemented. This consultant could either manage, or train CRMID to manage, the PSM program, the Emergency Action Plan, etc.

The EPA’s 26 GDC findings are listed below. The findings are listed in a 4-section format.

Section 1. Identify hazards which may result from such releases using appropriate hazard assessment techniques.

1. CRMID did not conduct a Hazard Assessment, until 2024, to identify hazards which might result in, or from, an accidental release of anhydrous ammonia. CRMID began operating at their current location in 2002.

Hazard assessments should be conducted using recognized and appropriate hazard evaluation techniques such as those described in “*Guidelines for Hazard Evaluation Procedures*” by the Center for Chemical Process Safety (CCPS). Hazard Review checklists developed by ammonia refrigeration industry organizations such as the IIAR *Ammonia Refrigeration Management Program* and are based on industry codes, standards and

good engineering practices may also be used for systems that contain ammonia below the RMP threshold quantity of 10,000 pounds.

- *However, shortly after the EPA issued a Notice of inspection to CRMID on May 21, 2024, CRMID retained a consultant. The consultant prepared a GDC program for CRMID.*
- *The prepared GDC program is essentially a Process Safety Management (PSM) program, and follows the requirements of 29 CFR 1910.119*
- *The written GDC program was completed just before the EPA inspection of 8/6/2024 and included a Hazard Review (HR).*

Note:

Aside from its Hazard-Review portion, the written PSM is so new that it has not been read or implemented by anyone at CRMID.

Because the PSM is overwhelming in size and content, and because CRMID has not assigned anyone to review and implement the PSM, the EPA recommends that CRMID retain a consultant/trainer to ensure that the PSM is reviewed and implemented. This consultant could either manage, or train CRMID to manage, the PSM program.

Section 2. Design a safe facility taking such steps as are necessary to prevent releases.

- 2. CRMID did not provide manufacturer data reports for 2 pressure vessels in the Machinery Room. These 2 vessels are an oil pot and an oil separator.**

Section 4.1.1 of IIAR 9, *Standard for Minimum System Safety Requirements for Existing Closed-Circuit Ammonia Refrigeration Systems*, requires that such data reports kept on hand.

- *An ASME U-1 form, or U-1A form, is generally used as a manufacturer data report for pressure vessels*
- *However, neither U-1 forms, nor U-1A forms, were available*
- *CRMID should attempt to obtain the U1 forms, U-1A forms, or similar Manufacturer Data Report*
- *The following sources may be able to provide the forms/reports:*
 - *The installing contractor*
 - *The manufacturer*
 - *The Jurisdiction or Building Department*
 - *The engineering firm that designed CRMID's ammonia system*
 - *CRMID's insurance carrier*
 - *The National Board of Boiler and Pressure Vessel Inspectors*
 - *Previous owners of CRMID, if applicable.*

- *Alternatively, as the ammonia contractor has suggested, the 2 vessels could be replaced with vessels that do have U-1 forms, U-1A forms, or similar manufacturer data reports, associated with them.*

3. **Equipment, piping, valves, and vessels are not labeled. This equipment, etc. is located both inside and outside of the CRMID building.**

Section 7.2.9 of IIAR 9, requires such labeling. The section also specifies how the labels are to be designed.

- *As discussed in finding #1 above, CRMID conducted a Hazard Review (HR) just before the EPA inspection of 8/6/2024*
- *The missing labeling was noted in the HR and will be addressed by CRMID's ammonia contractor.*

4. **The meaning of the alarms in the Machinery Room is not clearly marked with signage.**

Section 7.2.9.1 of IIAR 9 requires such signage.

5. **The king-valve sign in the Machinery Room could be improved.**

The sign is suspended beneath the king valve, but the sign is only labeled on its eastern side, though the sign could easily be labeled on its western side.

Because entry to the Machinery Room is on the west side of the sign, the sign would not be immediately visible during an emergency.

The EPA therefore recommends that the king valve be identified on both the east and west sides of the sign.

The king valve should be identified per Section 7.2.9.3 of IIAR-9.

6. **A timber beam is suspended from the ceiling of the Machinery Room. The beam may support, or may have once supported, a hoist.**

Section 7.3.4 of IIAR 9 specifies that combustible materials should not be stored in the Machinery Room unless they are in the form of tools/spare-parts which are necessary for the maintenance and operation of the ammonia system.

The EPA recommends that the beam be removed unless it is currently being used as a hoist-support (i.e., as a "tool").

7. **Housekeeping could be improved within the Machinery Room.**

Various items are stored on shelves, especially on the east and north walls of the Machinery Room. Many of these items appear to be combustible and/or unnecessary in the Machinery Room.

Section 7.3.4 of *IIAR 9* specifies that combustible materials should not be stored in the Machinery Room unless they are in the form of tools/spare-parts which are necessary for the maintenance and operation of the ammonia system.

The EPA therefore recommends that combustible items and unnecessary items be removed from the Machinery Room.

8. The entry/exit doors to the Machinery Room do not contain panic hardware.

The doors also open into the Machinery Room, instead of away from the Machinery Room.

In addition, the doors are not self-closing.

Section 7.3.9.2 of *IIAR 9* specifies that the doors should:

- contain panic hardware
- swing away from the Machinery Room
- be self-closing.

9. An emergency stop switch has not been installed outside of the Machinery Room.

Section 7.3.11.1 of *IIAR 9* requires such a switch.

- *As discussed in finding #1 above, CRMID conducted a Hazard Review (HR) just before the EPA inspection of 8/6/2024*
- *The missing switch was noted in the HR and will be addressed by CRMID's ammonia contractor.*

10. Ammonia detectors in the Machinery Room are not identified with signage.

Section 7.3.12.6 of *IIAR 9* requires that such signage be installed.

11. Ventilation within the Machinery Room has not been engineered.

Four vents in the east wall of the Machinery Room remain permanently open, with no closeable dampers.

The ventilation does not comply with Section 7.3.13 of *IIAR 9*.

- *As discussed in finding #1 above, CRMID conducted a Hazard Review (HR) just before the EPA inspection of 8/6/2024*
- *The ventilation problems were noted in the HR and will be addressed by a yet-to-be-determined engineering firm.*

12. A rooftop exhaust vent, which vents the Machinery Room, is located approximately 2' from a swamp cooler, which cools the Machinery Room.

During an ammonia release, the swamp cooler might draw ammonia from the exhaust vent and direct the ammonia back into the Machinery Room.

Also, neither the vent nor the swamp cooler has been engineered.

Therefore, the ventilation does not comply with Section 7.3.13 of IIAR 9.

- *As discussed in finding #1 above, CRMID conducted a Hazard Review (HR) just before the EPA inspection of 8/6/2024*
- *Ventilation problems were noted in the HR and will be addressed by a yet-to-be-determined engineering firm.*
- *CRMID should ensure that the exhaust vent and the swamp cooler are addressed by the engineering firm.*

13. Pressure relief valves, piping, and associated headers in the Machinery Room are not engineered and appear to be undersized.

The pressure relief system does not comply with Section 7.4 of IIAR 9.

- *As discussed in finding #1 above, CRMID conducted a Hazard Review (HR) just before the EPA inspection of 8/6/2024*
- *Problems with the pressure relief system were noted in the HR and will be addressed by a yet-to-be-determined engineering firm.*

14. CRMID has not documented that their ammonia equipment complies with Recognized and Generally Accepted Good Engineering Practices (RAGAGEP).

29 CFR 1910.119(d)(3)(ii) states that employers must document that all equipment in PSM-covered processes complies with RAGAGEP.

Also, Appendix A of IIAR 6, *Standard for Inspection, Testing, and Maintenance of Closed-Circuit Ammonia Refrigeration Systems*, recommends that facilities document that all of their ammonia equipment complies with RAGAGEP.

Specifically, Item 9 in Section A.5.3.3 of *Appendix A* (which only provides guidance and is not considered part of the *IIAR-6* standard) recommends that all ammonia equipment complies with RAGAGEP.

15. CRMID did not develop or implement written Operating Procedures until recently.

IIAR 7, Developing Operating Procedures for Closed-Circuit Ammonia Refrigeration Systems, requires that written Operating Procedures be developed and implemented.

- *As discussed in finding #1 above, CRMID conducted a Hazard Review (HR) just before the EPA inspection of 8/6/2024*
- *The lack of Operating Procedures was noted in the HR and CRMID's ammonia contractor had begun to write the Operating Procedures before the EPA inspection of 8/6/2024.*

16. Two doors at the Dock are padlocked at night (on the Dock side) by CRMID personnel. One of these doors leads to the South Process Room. The other door leads to the South Cooler.

However, ammonia contractors are often working inside the noted rooms when CRMID locks up. For this reason, the contractors could be locked/trapped inside the rooms.

The EPA therefore recommends that CRMID develop a different locking mechanism for the doors and/or install other exterior doors from which the contractors can safely leave the CRMID building.

17. CRMID's written PSM program, EAP, and other plans/programs are so new that they have not been read or implemented by anyone at CRMID.

Because the written plans/programs are overwhelming in size and content, and because CRMID has not assigned anyone to review and implement them, the EPA recommends that CRMID retain a consultant/trainer to ensure that the documents are reviewed and implemented. This consultant could either manage, or train CRMID to manage, the PSM program and the other plans/programs.

Section 3. Maintain a safe facility taking such steps as are necessary to prevent releases.

18. Horizontal liquid piping on the roof appears to be badly corroded and should be evaluated per Section 11.1.1 of *IIAR 6, Standard for Inspection, Testing, and Maintenance of Closed-Circuit Ammonia Refrigeration Systems*.

19. Horizontal liquid piping and horizontal hot-gas piping on the roof are sagging and should be supported per Section 7.2.7.1 of *IIAR 9*.

20. Five-year equipment inspections, by an independent party, have never been conducted at CRMID.

Section 5.4.2 of IIAR 6 requires that such inspections be conducted.

21. Daily inspections of CRMID's ammonia system have never been conducted. However, weekly, monthly, annual, etc. inspections are conducted by CRMID's ammonia contractor.

The daily inspections are required by IIAR 6.

- *As discussed in finding #1 above, CRMID conducted a Hazard Review (HR) just before the EPA inspection of 8/6/2024*
- *The lack of daily inspections was noted in the HR and CRMID's ammonia contractor will be training CRMID employees how to perform the inspections.*

Section 4. Minimize the consequences of accidental releases which do occur.

22. Windssocks are not installed at the CRMID facility.

The EPA document, *Appendix C, Hazards of Ammonia Releases at Ammonia Refrigeration Facilities (Update)* recommends that windssocks be installed.

- *As discussed in finding #1 above, CRMID conducted a Hazard Review (HR) just before the EPA inspection of 8/6/2024*
- *The missing windssocks were noted in the HR and will be installed by CRMID.*

23. Emergency contact information is not posted at the CRMID facility.

The information is required to be posted by Section 7.2.9.5 of IIAR 9.

24. Eyewash bottles on the inside and outside of the Machinery Room do not comply with Section 7.3.7 of IIAR 9.

According to Section 7.3.7, an emergency-eyewash-and-safety-shower unit should be installed on the inside and outside of the Machinery Room.

According to Section 7.3.7, the emergency-eyewash-and-safety-shower units should comply with ANSI/ISEA Z358.1.

25. Until shortly before the EPA inspection of 8/6/2024, CRMID did not have an Emergency Action Plan (EAP) which complied with OSHA 29 CFR 1910.38.

However, CRMID retained a consultant to write a robust EAP just before the EPA inspection.

Please refer to Finding #26 below for additional findings regarding CRMID's implementation of the EAP.

26. CRMID's written PSM program, EAP, and other plans/programs are so new that they have not been read or implemented by anyone at CRMID.

Because the written plans/programs are overwhelming in size and content, and because CRMID has not assigned anyone to review and implement them, the EPA recommends that CRMID retain a consultant/trainer to ensure that the documents are reviewed and implemented. This consultant could either manage, or train CRMID to manage, the PSM program and other plans/programs.

ITEMS OF NOTE:

1. One compressor in the Machinery Room is missing a nameplate. The EPA recommends that CRMID acquire a replacement nameplate.
2. Another compressor in the Machinery Room has a nameplate which is not entirely readable. The EPA recommends that CRMID acquire a replacement nameplate.

EPCRA § 311:

CRMID's anhydrous ammonia SDS is not up to date. The SDS is dated 2019 but a 2024 version is available.

The EPA recommends that CRMID keep all of its SDS's up to date.

EPCRA § 312:

CRMID's Tier II's do not take CRMID's forklift/pallet-jack batteries into account.

These batteries contain lead and sulfuric acid.

However, CRMID only has one forklift, and 4 pallet jacks, so the amount of lead and sulfuric acid may fall below reportable thresholds.

Nevertheless, CRMID should calculate the amounts of lead and sulfuric acid onsite.

CRMID should report the lead and sulfuric acid on future Tier II's if amounts exceed reportable quantities.

CRMID should also revise their most-current Tier II if lead and sulfuric acid exceed reportable quantities.

INSPECTION REPORT REVIEW RECORD		
		<i>Date:</i>
<i>Author:</i>	<i>Toxics and Pesticides Enforcement Section Inspector</i>	<i>8/29/2024</i>
<i>Final Reviewer:</i>	<i>Section Supervisor</i>	<i>9/12/2024</i>