CLEAN AIR ACT (CAA) 112(r) INSPECTION REPORT

Name: Aurora Cooperative	
Address: 56725 722 Road, Fairbury, NE, 68352	**Date of Inspection**: September 28, 2023
County: Jefferson	**Case No**: 23NE0928
Phone: 402-694-2106	**Risk Management Plan (RMP) No**: 1000 0022 7809
High Risk: No	**Facility Registration Service (FRS) No**: 1100 6323 4959
CAA Title V: No	**Program Level**: Program 2
Mailing Address: P.O. Box 209, 2225 Q St., Aurora, NE, 68818	
Process: Agronomy business, including retail sale of anhydrous ammonia	

SUMMARY OF OBSERVATIONS

A review of documents pertaining to the Aurora Cooperative facility at 56725 722 Road, Fairbury, Nebraska (facility), and an inspection at that facility—both with focus on Chemical Accident Prevention Provisions (Title 40 *Code of Federal Regulations* [CFR] Part 68)—identified the following preliminary findings:

1. **The facility did not conduct its compliance audit every 3 years, as required by 40 CFR 68.58(a).**
2. **The facility did not submit its 5-year RMP update on time, as required by 40 CFR 68.190(b)(1).**

INTRODUCTION

I, Amelia Papajohn, Tetra Tech, Inc. (Tetra Tech), as a representative of U.S. Environmental Protection Agency (EPA) Region 7, inspected the Aurora Cooperative facility in Fairbury, Nebraska, on September 28, 2023. On September 19, I had called the Aurora Cooperative facility and had spoken with Mr. Shane Kluck, an RMP/Process Safety Management (PSM) coordinator, to notify him of an inspection planned for September 28, 2023. I then sent a follow-up email outlining the nature of the inspection and confirming the date and time I would be arriving.

The intent of the inspection was to determine if the facility complies with Section 112(r) of the CAA, as amended in 1990. EPA's regulations describing implementation of this law are included in 40 CFR 68. I referenced these regulations throughout the inspection by using the Program 2 Process Checklist and the Supplemental Checklist for Ammonia Fertilizer Sector Inspections (Folder 1, Attachment 1). All attachments cited in this inspection report (Attachments 1 through 13) are also in a folder on the accompanying compact disc (CD). Folder numbers on the CD correspond to attachment numbers.

HISTORY OF BUSINESS

The Aurora Cooperative facility stores grain and sells fertilizer products, including anhydrous ammonia, to local farmers in the area. According to the facility's maximum inventory calculations (Attachment 2), as much as 424,618 pounds of anhydrous ammonia is on site. Two bulk storage tanks may contain 131,325 pounds, while 42 nurse tanks may contain 293,293 pounds. The inventory calculations differed from the number reported in the facility's RMP: 290,000 pounds (Folder 3). I asked facility personnel to explain this, and Mr. Jim Holliday stated that he must have accidentally entered the nurse tank total. He then went online, corrected the amount on the RMP, submitted the document, and sent me a copy (Attachment 3).

The following summarizes reported/observed amounts of anhydrous ammonia at the facility:

	Quantity (pounds)
	Anhydrous Ammonia
Quantity at the Time of Inspection [1]	~ 272,000
Quantity in Maximum Inventory Documentation [2]	424,618
Quantity listed in the September 28, 2023 RMP Submission [3]	424,618

Notes:

[1] Amount I observed on September 28, 2023, in both bulk and nurse tanks, based on readings of gauges and knowledge of facility inventory.

[2] See facility's maximum inventory calculations (Attachment 2).

[3] See facility's 2023 RMP Submission from September 28, 2023 (Attachment 3). This quantity assumes all nurse tanks are also full.

PERSONS INTERVIEWED AND INDIVIDUAL RESPONSIBILITIES

I interviewed the following persons as part of the inspection process:

Shane Kluck ....Vice President of Safety and Risk Management, Aurora Cooperative
Jim Holliday..Safety and Compliance Officer, Aurora Cooperative
David Bruns .... Location Manager, Aurora Cooperative
Dustin Gaskell.. Consultant, Aurora Cooperative
Don Engel ....Project and Operations Manager, Aurora Cooperative

OPENING CONFERENCE

I arrived at the Aurora Cooperative Facility at 56725 722 Road, Fairbury, Nebraska, at approximately 8:30 a.m. on September 28, 2023. I met with facility personnel in a conference room at 2222 L Street, Fairbury, Nebraska, to review documents because no building was present where the process equipment was located (56725 722 Road, Fairbury, Nebraska).
I explained that I was conducting the inspection under authority of CAA Chemical Accident Prevention Provisions, and that the inspection would consist of a facility walk-through, review of relevant documents, and photographic documentation. I also stated that I would conduct an exit interview to review and explain my findings, provide a receipt for any requested document copies, and answer questions. I presented my inspection credentials to facility personnel, filled out a Notice of Inspection Form (Folder 1), and explained that my inspection was for

enforcement purposes and that enforcement actions could result from the inspection. Mr. Kluck signed the Notice of Inspection Form.

After the introduction, I requested RMP-relevant information, including the facility's hazard assessment, safety information, hazard reviews, operating procedures, training records, maintenance records, and compliance audits; I asked questions when necessary.

HAZARD ASSESSMENT

I asked to view the facility's hazard assessment, including its worst-case and alternative-release scenarios. Calculations of distance to endpoint depended on the RMP*Comp and Circular Area Profiling Software (CAPS), which is still using 2010 U.S. Census data (Attachment 4). 2021 data from American Community Survey data is used in conjunction with CAPS.

Aurora Cooperative's worst-case scenario was complete loss of contents in the largest vessel on site, the 78,795-pound-capacity bulk storage tank, at release rate of 7,880 pounds per minute over 10 minutes. The bulk storage tank is filled to 85% capacity. Calculation via use of CAPS indicated an affected radius of 5.1 miles and population of approximately 261.

The facility's alternative-release scenario involved a tanker loadout spill from transfer hose failure—the most likely release scenario at the site. With no passive or active mitigation assumed, the estimate of time for Aurora Cooperative personnel to bring the situation under control was 10 minutes. By application of CAPS, six people within a 0.9-mile radius would be affected.

Aurora Cooperative's hazard assessment for its worst-case and alternative-release scenarios appeared to meet requirements in 40 CFR 68.25.

PROCESS SAFETY INFORMATION

I asked to review the facility's safety information, including its anhydrous ammonia Safety Data Sheet (SDS), maximum intended inventory calculations, safe operating upper and lower limits, equipment specifications and codes, and engineering practices invoked (Folder 5 and Attachment 5).

The anhydrous ammonia SDS included physical and chemical information, as well as first aid procedures in the event of an exposure.

I requested Aurora Cooperative's maximum intended inventory calculations, which estimated on-site presence at any one time of a maximum of 424,618 pounds of anhydrous ammonia. This estimate included bulk storage tanks and nurse tanks.

Mr. Holliday provided equipment specifications, as well as safe upper and lower limits of temperature, pressure, flow, and composition for the process. The facility also indicated its conformance to guidelines from the American National Institute of Safety (ANSI) and Compressed Gas Association (CGA), guidelines.

The facility's process safety information appeared to meet requirements specified in 40 CFR 68.48.

HAZARD REVIEW

I inquired if the facility had conducted a hazard review (Attachment 6), which according to 40 CFR 68.50(d) should occur every 5 years. Mr. Holliday and Mr. Kluck showed me one from 5 years ago and one from 2023. I reviewed the document dated May 27, 2023, which assessed process equipment and human factors cited from ANSI K61.1-1999; no deficiencies were noted. I asked what system the facility would use in the event of findings, and Mr. Kluck responded that they would use I-Auditor, which allows assignment of a task, followed by email notification to the assignee.

OPERATING PROCEDURES

I asked to see the facility's standard operating procedures (SOPs). Facility personnel provided SOPs for initial startup, normal operations, emergency shutdown, normal shutdown, startup following a shutdown, and temporary operations per 40 CFR 68.52(b) (Folder 7, Attachment 7). Temporary operations occur if a portion of the facility becomes defective and isolated by lockout/tagout procedures. SOPs for normal operations included instructions on filling nurse tanks, as well as consequences of deviation.

Employees have access to SOPs online through Paycom.

TRAINING

I requested to review training records and asked about provisions for training employees. Mr. Kluck and Mr. Bruns said that employees receive classroom instruction and on-the-job and hazard communication training, and review SOPs. Additional training and Hazardous Waste Operations and Emergency Response (HAZWOPER) certification is offered by the agricultural retailer's association and state patrol for anhydrous awareness, to which Aurora Coop sends at least one person.

I asked to see signature sheets of those who attended the annual training session, and some were provided by facility personnel (Attachment 8).

MAINTENANCE

I inquired about equipment maintenance schedules and replacement procedures. Facility personnel presented maintenance inspection and testing schedules (Attachment 9) for liquid pumps, piping and valves, and vapor compressor pumps. Equipment is replaced according to manufacturer specifications, which is typically every 5 years. Inspections of equipment occur daily in-season and monthly in the off-season, and an annual audit occurs to check expiration dates on process equipment. When I conducted a walkthrough of the process equipment, no transfer hoses were expired.

I asked if the facility conducts maintenance in-house or if it uses a contractor. Mr. Kluck explained that employees conduct routine maintenance, and he showed me a job-hazard analysis. He also stressed absence of underground piping, and that Aurora Coop conducts tests on its storage tanks; he showed me a copy of results of those tests (Folder 9).

Maintenance procedures appeared to comply with 40 CFR Part 68.56.

COMPLIANCE AUDITS

I asked for the facility's last two compliance audits and was shown one from 2014 and one from 2023 (Folder 10, Attachment 10). I asked if the facility had conducted a compliance audit between 2014 and 2023, and Mr. Holliday said that it had not. Because a compliance audit had not been completed every 3 years, I made the following finding:

1. **The facility did not conduct its compliance audit every 3 years, as required by 40 CFR 68.58(a).**

I reviewed the compliance audit dated September 21, 2023, which noted one deficiency: the facility had not submitted its RMP on time. I inquired if this was accurate, and Mr. Holliday said yes. I confirmed this by looking at previous RMP submissions and saw that RMPs had been submitted in 2014 and 2023, with no RMP submitted in 2019. I made another preliminary finding:

2. **The facility did not submit its 5-year RMP update on time, as required by 40 CFR 68.190(b)(1).**

INCIDENT INVESTIGATION

I asked if any incidents had occurred at the facility within the last 5 years; facility personnel responded no. I was shown a blank incident report sheet, which would be used in the event of an ammonia accident.

EMERGENCY RESPONSE

I asked to review the facility's Emergency Action Plan (EAP), because facility personnel had indicated that the facility was not a responding facility. The EAP (Attachment 11) contained contact information for facility emergency coordinators, local responders, and spill reporting agencies. The document listed procedures for handling various scenarios including fire, explosions, injuries, tornado/severe weather, earthquakes, bomb threats, active shooter/workplace violence, floods, and hazardous materials spills. Also presented were procedures for anhydrous ammonia emergency response, as well as safety information.

I inquired if Aurora Coop had conducted a notification exercise, and facility personnel provided me a sign-in sheet from a previous visit by the Fairbury Fire Department (Folder 11).

MANAGEMENT

I asked to see an organizational chart identifying persons responsible for RMP implementation (Attachment 12). I was provided one that showed that Mr. Kluck, as Vice President of Safety, primarily manages RMP/PSM-related tasks. Mr. Holliday is a Safety and Compliance Safety Manager, tasked with documentation—in particular, audits and Tier II reports. Mr. Bruns is the Location Manager and ensures mechanical integrity of process equipment and annual conduct of safety training.

PHOTOGRAPHS

During the site walk-through, I took 25 digital photographs. All of these are in Folder 13 of the CD, and selected photographs appear in a photographic log in Attachment 13.

CLOSING CONFERENCE

After I finished reviewing the facility's RMP documentation and completed the site walk-through, I explained to facility personnel that I had made two preliminary findings:

1. **The facility did not submit its 5-year RMP update on time, as required by 40 CFR 68.190(b)(1).**
2. **The facility did not conduct its compliance audit every 3 years, as required by 40 CFR 68.58(a).**

I indicated that additional findings could be identified during post-inspection reviews of the documents collected. I provided the Confidentiality Notice and the completed Receipt for Samples and Documents form (Attachment 1). Mr. Holliday reviewed and signed both documents, indicating that the document copies provided to me did not contain confidential business information.

I departed from the Aurora Cooperative facility at approximately 12:00 p.m. on September 28, 2023.

This report concludes my inspection activities regarding the Aurora Cooperative facility in Fairbury, Nebraska.

Amelia Papajohn
Compliance Inspector

ATTACHMENTS

1. Inspection Forms and Checklists
2. Maximum Intended Inventory Calculations
3. RMP Submissions
4. Hazard Assessment
5. Process Safety Information
6. Hazard Review
7. Operating Procedures
8. Training
9. Maintenance Documentation
10. Compliance Audit
11. Emergency Response
12. Management System
13. Photographic Log

CD – Attached to Report