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

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| **Name**: New Cooperative | |
| **Address**: 26479 160th St., Lidderdale, Iowa | **Date of Inspection**: August 30, 2023 |
| **County**: Carroll | **Case No**: 23IA0830 |
| **Phone**: 515-955-9039 | **Risk Management Plan (RMP) No**: 1000 0004 0975 |
| **High Risk**: No | **Facility Registration Service (FRS) No**: 1100 1033 7983 |
| **CAA Title V**: No | **Program Level**: Program 2 |
| **Mailing Address:** 26479 160th St., Lidderdale, Iowa | |
| **Process**: Agronomy business, including retail sale of anhydrous ammonia | |

## SUMMARY OF OBSERVATIONS

A review of documents pertaining to the Five Star Cooperative at 26479 160th St., Lidderdale, Iowa (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 document coordination with local authorities, as required by 40 CFR 68.93(c).**
2. **The facility did not submit its Emergency Action Plan (EAP to the Local Emergency Planning Committee (LEPC), as required by 40 CFR 68.93(b).**

## INTRODUCTION

I, Amelia Papajohn, Tetra Tech, Inc. (Tetra Tech), as a representative of U.S. Environmental Protection Agency (EPA) Region 7, inspected the New Cooperative facility in Lidderdale, Iowa, on August 30, 2023. On August 23, I had called the New Cooperative Lidderdale facility and spoke with Mr. Wayne Tigges, the location manager, to notify him of an inspection planned for August 31, 2023. I then sent a follow-up email outlining the nature of the inspection and confirming the date and time I would be arriving. Mr. Jon Wells inquired as to why the Glidden and Lidderdale New Cooperative facilities were to be inspected. I indicated the reason for inspection was the quantity of anhydrous ammonia on site and the number of worst-case scenario receptors.

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 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 New Cooperative facility stores grain and sells fertilizer products, including anhydrous ammonia, to local farmers in the area. The facility stores a maximum of 959,767 pounds of anhydrous ammonia on site, according to its 2022 Tier II. The discrepancy between the maximum in the facility's 2022 Tier II and the amount of anhydrous ammonia listed in the facility's 2020 (most recent) RMP, 810,000 pounds, is due to an increase in inventory.

During the inspection, I observed the following anhydrous ammonia vessels: two 140,000-pound-capacity bulk storage tanks, one transport tanker, and approximately 30 nurse tanks. The bulk storage tanks were at 85% capacity.

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

| | **Quantity (pounds)** |
|---|---|
| | Anhydrous Ammonia |
| Quantity at the Time of Inspection [1] | ~600,000 |
| Quantity listed in 2020 RMP Submission [2] | 810,000 |
| Quantity in Maximum Inventory Documentation [3] | 959,767 |

Notes:

[1] Amount I observed on August 30, 2023, in both bulk and nurse tanks, based on readings of gauges and knowledge of facility inventory.

[2] See facility's 2020 RMP Submission (Attachment 2). This quantity assumes all nurse tanks are also full.

[3] See facility's maximum inventory calculations from 2022 Tier II (Attachment 3).

## PERSONS INTERVIEWED AND INDIVIDUAL RESPONSIBILITIES

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

Wayne Tigges ........ New Cooperative, Lidderdale Location Manager
Jon Wells ........ New Cooperative, Safety and Risk Management Manager
Dave Hoeppner ........ New Cooperative, Safety Manager
Jeff Marsh ........ New Cooperative, Regulatory Compliance Administrator
Cain Bachman ........ New Cooperative, Glidden Location Manager

## OPENING CONFERENCE

I arrived at the New Cooperative Facility at 26479 160th St., Lidderdale, Iowa, at approximately 1:30 p.m. on August 30, 2023. The date of the inspection changed because the Glidden New Cooperative facility inspection had finished earlier than anticipated. I met with facility personnel in a conference room and 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. Jon Wells 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 DEGADIS models (Attachment 2).

New Cooperative's worst-case scenario was complete loss of contents in its bulk storage tank, the largest vessel on site (capacity 140,000 pounds), at release rate of 1,400 pounds per minute over 10 minutes. The bulk storage tank is filled to 85% capacity. Calculation via use of Marplot indicated an affected radius of 2.7 miles and population of approximately 310.

The facility's alternative-release scenario involved a driver pulling away from intake lines prior to disconnection of the transfer hoses at the bulk storage tank. Assumedly, fail-safe mechanisms would not work, and estimate of time for New Cooperative personnel to bring the situation under control was 2 minutes. By application of the DEGADIS model, a 2,901-pound release at 1,450 pounds per minute would affect a population of 150 people within a 0.64-mile radius.

New Cooperative's hazard assessment for its worst-case and alternative-release scenarios appears 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 4 and Attachment 4.

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

I requested New Cooperative's maximum intended inventory calculations, which estimated on-site presence at any one time of a maximum of 959,767 pounds of anhydrous ammonia. This estimate included bulk storage tanks and nurse tanks.

Mr. Wells provided 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), Compressed Gas Association (CGA), American Society of Mechanical Engineers (ASME), and Iowa regulations.

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 5), which according to 40 CFR 68.50(d) should occur every 5 years. Mr. Wells showed me the two most recent ones, completed in 2023 and 2018, respectively. I looked over the 2023 hazard review and noted that New Cooperative had assessed site conditions and process equipment for deficiencies and had found none. Equipment assessed included tanks, pumps, compressors, piping, hoses, and risers.

## OPERATING PROCEDURES

I asked to see New Cooperative's standard operating procedures (SOP). Facility personnel provided SOPs for initial start-up, normal operations, emergency shutdown, normal shutdown, and start-up following a shutdown per 40 CFR 68.52(b) (Folder 6, Attachment 6). No temporary operations occur at the facility, as the site shuts down in the winter. SOPs for normal operations included instructions on filling nurse tanks, as well as consequences of deviation.

## TRAINING

I requested to review training records and asked about provisions for training employees. Mr. Tigges and Mr. Wells responded that employees review SOPs and receive video and hands-on instruction. I reviewed the quiz that employees are required to take after receiving annual training (Attachment 7).

## MAINTENANCE

I inquired about equipment maintenance schedules and replacement procedures. Mr. Wells provided inspection checklists for nurse and bulk storage tanks (Attachment 8) and explained that employees are taught how to identify equipment deficiencies and are familiar with replacement procedures. I reviewed repair logs and asked if all equipment replacements had been replacement in kind, to which Mr. Tigges responded yes. Most part changeouts are completed by New Cooperative employees; Mr. Tigges showed me a sample job hazard analysis for a nurse tank hydrostatic valve replacement. Occasionally, New Cooperative uses a contractor, Dale's Petroleum, for maintenance. Regarding maintenance schedules, parts are replaced according to manufacturers' specifications, typically every 5 years. During the site walk-though, I observed that replacement dates on hoses had not been exceeded.

Finally, I asked if the facility had underground piping, and if so, whether it had conducted an underground pipe test. I was shown a report from 2019 indicating that underground piping had passed inspection.

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 2021 and one from 2018 (see Folder 9, Attachment 9). I reviewed the most recent one, which noted no deficiencies.

According to Mr. Wells, any deficiencies identified by a compliance audit would be tracked on pen and paper. The document appeared to comply with stipulations in 40 CFR 68.58.

## INCIDENT INVESTIGATION

I asked if any incidents had occurred at the facility within the last 5 years; Mr. Tigges cited a release on April 18, 2019. According to facility personnel and the incident report (Attachment 10), the incident involved an employee who accidentally opened a valve on an anhydrous ammonia nurse tank prior to connection of the hose. The release lasted for a few seconds before the system was shut off but burned the employee seriously enough to warrant a visit to the emergency room. Because of the short duration of the release, responders were not notified. SOPs outline correct order of operations for filling nurse tanks, so the cause of the release was determined to be human error/distraction by another employee. Corrective actions included retraining employees involved with the process, with emphasis on job awareness. I inquired about documentation of retraining, and Mr. Hoeppner showed me a record conveying the date and type of training.

## EMERGENCY RESPONSE

I asked to review the facility's EAP, because facility personnel had indicated that the facility was not a responding facility. The EAP (Attachment 11) contained contact information pertaining to emergency response agencies, as well as instructions on responses under various scenarios. The facility relies on the Lidderdale fire department in the event of an accidental release, and the location manager, Mr. Tigges, is the emergency coordinator. New Cooperative personnel said they contact the fire department annually to coordinate emergency activities. I asked when the fire department last had visited and if I could view documentation of the last notification exercise. Mr. Wells replied that no documentation was available, so I made the following preliminary finding:

1. **The facility did not document coordination with local authorities, as required by 40 CFR 68.93(c).**

Additionally, I inquired if the facility had submitted its EAP to the LEPC. A negative response induced another preliminary finding:

2. **The facility did not submit its EAP to the LEPC, as required by 40 CFR 68.93(b).**

I called the LEPC, which is the Region 5 LEPC, and left a message asking if New Cooperative had submitted its EAP and Tier II. I did not receive a call back.

## MANAGEMENT

I asked to see an organizational chart demonstrating persons responsible for RMP implementation (see Attachment 12). Mr. Wells provided a chart that showed Mr. Tigges as location manager and Mr. Wells as safety and risk manager. Mr. Tigges is responsible for training, maintenance oversight, and incident investigation, and Mr. Wells oversees overall RMP implementation at the facility. Mr. Dave Hoeppner, as safety manager, ensures conformance to safe work practices.

## PHOTOGRAPHS

During the site walk-through, I took 33 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 two preliminary findings:

1. **The facility did not document coordination with local authorities, as required by 40 CFR 68.93(c).**
2. **The facility did not submit its EAP to the LEPC, as required by 40 CFR 68.93(b).**

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. Wells reviewed and signed both documents, indicating that the document copies provided to me did not contain confidential business information.

I departed from the New Cooperative facility at approximately 4:30 p.m. on August 30, 2023.

This report concludes my inspection activities regarding the New Cooperative facility in Lidderdale, Iowa.

Amelia Papajohn
Compliance Inspector

**ATTACHMENTS**

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

CD – Attached to Report