

CAA112(r) INSPECTION REPORT

Name: Red Oak, IA 305	
Address: 203 West Oak Street, Red Oak, IA 51566	Date of Inspection: 12/3-4/2024
County: Montgomery	Case No: 25IA1204
Phone: (800) 362-2233	RMP No: 1000 0008 1788
High Risk: No	FRS No: 1100 0051 6745
CAA Title V: No	Program Level: Program 2
Mailing Address: 2626 1st Ave South, Fort Dodge, IA 50501	
Process: Agronomy business, including retail sale of anhydrous ammonia	

SUMMARY OF OBSERVATIONS

A review of documents pertaining to the Red Oak, IA 305 facility at 203 West Oak Street, Red Oak, IA 51566 and an inspection of those facilities—both with focus on Chemical Accident Prevention Provisions (Title 40 *Code of Federal Regulations* [CFR] Part 68)—identified the following preliminary findings:

1. Red Oak, IA 305 failed to ensure and document that the process is designed in compliance with RAGAGEP; CGA 6-21-2023 section 3.5 per 40 CFR 68.48(b).
2. Red Oak, IA 305 failed to perform inspections and tests on process equipment per 40 CFR 68.56(d).
3. Red Oak, IA 305 failed to retain their two most recent compliance audits per 40 CFR 68.58(e).
4. Red Oak, IA 305 failed to coordinate with local emergency planning and response organizations per 40 CFR 68.93(a).
5. Red Oak, IA 305 failed to provide the correct operator phone number in the RMP per 40 CFR 68.160(b)(4).
6. Red Oak, IA 305 failed to update their emergency contact information within one month of a change per 40 CFR 68.195(b).

INTRODUCTION

I, Aaron Banes, and Jodi Harper, Compliance Inspectors with the U.S. Environmental Protection Agency, Region VII, inspected the NEW Cooperative Red Oak, IA 305 (Red Oak, IA 305) facility located in Red Oak, IA on December 3, 2024. The inspection concluded on December 4, 2024.

I arranged for the inspection on December 2, 2024. I attempted to call the operator number as listed on the RMP at 11:41 am, but the call connected to an unrelated person. Next, I called the emergency contact number for Lynette VanDenEinde found on the RMP. The phone rang but there was no answer, so I left a message. Then we called the business number as listed elsewhere, and were connected to an operator. The operator then connected us to the same voicemail for Lynette that we'd left a message on. Finally, I sent an email notification to the email addresses found on the RMP.

By email, I provided notification of intent to inspect on December 3-4, 2024 and a list of documents that we would be interested in reviewing. I asked that employees be notified of the inspection and informed they are allowed to participate. The email stated that Red Oak, IA 305 was selected for inspection because of a release reported to the NRC in 2024.

We conducted the inspection to determine if the facility complies with Section 112(r) of the Clean Air Act, as amended in 1990. The inspection also included reporting provisions of the Emergency Planning and Community Right to Know Act and the release reporting provisions of the Comprehensive Environmental Response, Compensation, and Liability Act.

EPA's regulations describing how these laws are to be implemented are found in the Code of Federal Regulations, Title 40, Part 68 (CAA), 355, 370, and 372 (EPCRA). The law and the implementing regulations 40 CFR 68, Chemical Accident Prevention Program require that the facilities must submit a complete Risk Management Plan to the EPA for those regulated chemicals they process in amounts above the applicable threshold quantities after June 21, 1999 and to implement the program described in the RMP.

The finalized inspection report as well as the photos (Appendix - 14) will be transmitted via e-mail to the facility representative. A copy of this inspection report, documents obtained, photographs taken during the inspection, checklists and completed forms will be maintained in the EPA facility file.

HISTORY OF BUSINESS

United Farmers Mercantile started in 1918 as a farmers stock company and became a cooperative under United Farmers Mercantile Cooperative (UFMC) in 1946. The Red Oak facility was built in 1951. The current ammonia plant was established in 2012 and provides ammonia for agricultural application. United Farmers Mercantile merged with NEW Cooperative on September 1, 2023.

Red Oak, IA 305 sells ammonia, grain, feed, dry fertilizer, and operates a retail gas station and lumberyard. The facility also has an underground pipe that provides ammonia to a neighboring facility named Nachurs Alpine Solutions.

Red Oak, IA has a population of 5,596 and a size of 3.98 square miles according to the 2020 Census. Red Oak, IA is in Montgomery County, which is approximately 45 miles southeast of Omaha, NE. The regulated process chemical is anhydrous ammonia.

	Quantity (pounds)
	Anhydrous Ammonia
Quantity at Time of Inspection	1,564,387
Quantity listed in 2022 RMP Submission	2,607,070
Quantity in Maximum Inventory Documentation	2,084,019

PERSONS INTERVIEWED AND INDIVIDUAL RESPONSIBILITIES

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

Lynette VanDenEinde.....Area Manager
 Jon Wells.....Safety and Risk Management Manager
 Dan Chapman.....Safety Specialist

OPENING CONFERENCE

We, Jodi Harper and I, arrived at Red Oak, IA 305 on December 3, 2024 at 9:04am. We entered the facility through the east entrance and walked up to the sales desk. We introduced ourselves as EPA inspectors and stated that we'd sent an email and called to establish an inspection. I asked the salesclerk if we could speak with Jon Wells. They responded that they didn't recognize the name. We then asked if we could speak to Lynette VanDenEinde, to which the salesclerk responded that they'd check if Lynette was in.

We were directed to the offices on the south side of the building where Lynette had her office. We asked if there was a room that we could use for conference, document review, and interviews. We were then directed to a conference room that we would use for the opening conference, review of documents, and closing conference. Jon Wells and Dan Chapman were present in the conference room as facility representatives.

The opening conference started at 9:24am. I explained that I was conducting the inspection under authority of the CAA's Chemical Accident Prevention Provisions and that the inspection would consist of a facility walk-through, review of relevant documents, and taking photographs. I also stated that would be a closing conference to review and explain any findings, provide receipt for any requested document copies or photographs, and answer questions. I presented

my EPA badge and explained that I was the lead on the inspection, and that Jodi was present to observe so that I may acquire my credentials. Jodi showed the facility representatives her credentials.

After the introduction, I was asked which documents I wanted to review. I stated that I would like to review all the documents that had been listed in the email, and that there may be more. I stated that their facility was selected for inspection because of the release they had in 2024. Jon Wells stated that Lynette would be in and out as she was available.

EPCRA TIER II

I asked to review the facility's EPCRA Tier II documents. Dan Chapman provided the 2023 EPCRA Tier II submissions (Appendix – 4). I compared the maximum daily amounts to the average amounts. I also checked to see if the anhydrous ammonia amounts were in line with what the RMP lists. The EPCRA Tier II reporting was consistent with information in the RMP and appeared to be reported timely.

HAZARD ASSESSMENT

I asked to review the facility's Hazard Assessment, including the Worst-Case and Alternative Release scenarios. I was provided with documentation generated by RMP*Comp that was last updated in 2022 (Appendix – 5).

The Worst-Case Scenario substantiation provided at the time of inspection showed a calculated endpoint of 4.4 miles for a 156,237 lb release from a 30,000 gallon anhydrous ammonia tank over 10 minutes using urban topography. Within the endpoint, there is an estimated population of 6,492 persons. The Alternate Release Scenario was a 2 minute release from a break in a 2-inch transfer house for a total of 11,900 lbs. The distance to endpoint is 0.5 miles and would affect an estimated 124 persons. The methodology for the population estimate is based on the 2022 Marplot model modified by the 2010 census population.

SAFETY INFORMATION

I asked Dan Chapman and Jon Wells to provide me with the most current SDS and asked how often they are updated. They provided an SDS dated 2019 provided by Nutrien and an SDS dated 2020 provided by Koch (Appendix – 6). Dan Chapman stated that the SDS is updated every time a new one is released.

I asked how much ammonia is on hand and by what means they track it. Dan Chapman provided me with a Maximum Intended Inventory Calculation worksheet for Red Oak, IA 305. I examined the Maximum Intended Inventory Calculation worksheet. Jon Wells ran an inventory report that gave the total amount of ammonia on-hand (Appendix – 6).

According to the worksheet, they have one 26,000 gallon and seven 30,000 gallon tanks.

In addition to the bulk tanks, the Maximum Intended Inventory Calculation worksheet shows that the facility has thirty 1,000 gallon tanks, thirteen 1,450 gallon tanks, and eighty-one 2,000 gallon tanks. According to the Maximum Intended Inventory Calculation worksheet, the Bulk tank and nurse tank capacities total to 446,850 gallons or 2,084,019 lbs.

I asked to review the safe upper and lower operating limits for their anhydrous ammonia process. Dan Chapman provided me with a document that details the safe operating temperatures, pressures, flow rates, and composition. I asked to review their equipment specifications. I was provided with photos of inaccessible data plates and a document with specifications relevant to the process. I asked which codes and standards the facility follows, and was provided with a document with a list of codes. The relevant industry standards that the Red Oak, IA 305 facility uses are ANSI/CGA G-2.1-2023 and ASME Boiler and Pressure Vessel Code (Appendix – 6).

During the field tour portion of the inspection, I took photos of process equipment and signage. While I was inspecting the nurse tank storage area, there was a trailer that was only outfitted with one tank but appeared to hold two (Appendix – 14, PC030034.JPG). I asked if that trailer was in service, and was told that it was out of service.

The double tank trailer didn't have a sign saying it was out of service, so I made the following preliminary finding:

Red Oak, IA 305 failed to ensure and document that the process is designed in compliance with RAGAGEP; CGA 6-21-2023 section 3.5 per 40 CFR 68.48(b).

**Facility added Out of Service signage to address this preliminary finding by December 4, 2024 at 5:37pm (Appendix - 16).*

HAZARD REVIEW

I asked to see the facility's Hazard Review documentation. Dan Chapman provided a document dated to February 16, 2022 (Attachment – 7). I reviewed the document to check if it takes stock of hazards associated with the process and regulated substance, considerations of what might cause failures, and safeguards used or needed to control process safety. The document found no deficiencies in the process and was signed by Bruce Streicher.

STANDARD OPERATING PROCEDURES (SOPs)

I asked to see the facility's Standard Operating Procedures for the anhydrous ammonia process. Dan Chapman provided an Operating Procedures Program 2 document dated to December 2, 2024 (Appendix – 8). I reviewed the document for content to observe that it covered initial startup procedures, normal operations, emergency shutdown operations, and consequences of and steps to avoid deviations.

NEW Cooperative stores anhydrous ammonia for Nachurs Alpine Solutions. Nachurs purchases bulk anhydrous ammonia, which is delivered to NEW Cooperative. Nachurs then uses a pipeline connecting from NEW Cooperative to access the anhydrous ammonia. To ensure that the equipment operates properly and the pipeline is still in good shape, the facilities track the amount of ammonia entering and leaving the pipeline. Nachurs Alpine Solutions has a meter on their end of the pipeline. NEW Cooperative has the information about what left the tank, and compare that to the number Nachurs sends. If the numbers don't match, both facilities consult with each other to figure out what happened, which usually is a ticket that didn't get entered. Nachurs does not pull ammonia every day, but does so frequently.

TRAINING

I asked to see the facility's training policy for new employees and existing employees. Dan Chapman provided a Training document dated December 3, 2024 (Appendix – 9). The document details the facility training policy. Red Oak, IA 305 trains employees that work with anhydrous ammonia when they are initially hired and annually after. The facility policy is also to retrain if there's a change in the process. I was also provided with training records that cover individual employees and their test answers.

I was also provided with an example Independent Contract Agreement that details NEW Cooperative's policy. However, Jon Wells stated that no contractors have been used at the Red Oak, IA 305 facility since the September 1, 2023 merger.

MAINTENANCE

I asked to see documentation regarding maintenance procedures and how the facility maintains mechanical integrity of the process equipment. Dan Chapman provided me with running gear maintenance guidelines and maintenance records (Appendix – 10). The records included a list of Pressure Relief Valves and hoses along with their replacement dates.

During the field tour portion of the inspection, I took photos of process equipment and signage. While I was atop the southmost riser collecting photos of hoses rated for anhydrous ammonia, Dan Chapman made me aware that there was a hose assemblage was leaking behind me. I turned around to a frosted over hose assemblage releasing chemical vapor (Appendix – 14, PC030028.JPG and PC030029.JPG).

As I observed the frosted and hissing hose assemblage release, I made the following preliminary finding:

Red Oak, IA 305 failed to perform inspections and tests on process equipment per 40 CFR 68.56(d).

**Facility fixed the hose assemblage to address this preliminary finding by December 4, 2024 at 3:08pm (Appendix - 16).*

Jon Wells provided the agreement between the then-UFMC and Nachurs (Appendix – 17). In 2002, Nachurs proposed to have anhydrous ammonia they purchased delivered via truck to UFMC for storage and then installed a double walled pipe (pipe-in-pipe). The pipe is approximately 2000 feet long and is 2 inch diameter for the inner pipe. This pipe is maintained solely by Nachurs, and they draw ammonia on demand for their process. There are gas monitors to track whether ammonia has escaped from the inner pipe into the interstitial space. Trucks from Nachurs are treated the same as those for NEW Cooperative, and the offloading process is the same.

COMPLIANCE AUDIT

I asked to review the last two compliance audits. I was provided with a compliance audit dated February 16, 2022 (Appendix 11). The compliance audit was conducted and certified by Bruce Streicher, who is knowledgeable in the process but no longer with the company. The 2022 compliance audit found nothing lacking.

I asked to see their second most recent compliance audit, but Dan Chapman indicated that they were unable to locate another compliance audit. I identified the following preliminary finding:

Red Oak, IA 305 failed to retain their two most recent compliance audits per 40 CFR 68.58(e).

**Facility provided a compliance audit dated December 5, 2024 to address this preliminary finding (Appendix - 16).*

INCIDENT INVESTIGATION AND OSHA 300 LOGS

On March 11, 2024, a call was made to the United States Coast Guard National Response Center. 1,500 tons of liquid nitrogen fertilizer had been released onto the ground and into a drainage ditch, flowing into the East Nishnabotna River. The event was caused by a valve being left open on an aboveground storage tank overnight. The EPA requested information from Red Oak, IA 305 to ensure compliance with Chemical Accident Prevention Provisions which resulted in targeting the facility for inspection.

I asked if the facility had any RMP reportable releases in the past 5 years, to which they said they hadn't. I asked if Red Oak, IA 305 has a standard Incident Investigation form and was provided with an Incident Investigation form for review (Appendix – 12). The form content included the date of incident, the date that the investigation began, a description of the incident, factors that contributed to the incident, and recommendations resulting from an investigation. I asked for the facility's OSHA 300 logs. I was provided with OSHA 300 logs dating

from 2021-2024 (Appendix – 12). There were no incidents in the OSHA 300 logs with accidents related to hazardous chemical exposure.

EMERGENCY RESPONSE

I asked if the facility was a responding facility. Dan Chapman indicated that Red Oak, IA 305 was not a responding facility, and that they rely on local responders in the event of an emergency. Dan Chapman provided NEW Cooperative's Emergency Response Coordination Guidance (Appendix - 13). I asked if the facility had documentation covering coordination activities with the LEPC. Dan Chapman indicated that they had not been able to locate any documentation of emergency coordination activities. I identified the following preliminary finding:

Red Oak, IA 305 failed to coordinate with local emergency planning and response organizations per 40 CFR 68.93(a).

**Facility provided documentation of Emergency Coordination dated December 5, 2024 to address this preliminary finding (Appendix - 16).*

MANAGEMENT SYSTEM

I asked Dan Chapman and Jon Wells if they had a management system in place to oversee the implementation of the risk management program elements. I was provided with a Risk Management Plan for Anhydrous Ammonia Organizational Chart (Appendix - 15). Jon Wells stated that overall responsibility for the RMP Program was his.

RISK MANAGEMENT PLAN

I asked if they had a copy of their RMP on hand. I was provided with a copy of their RMP for review. I asked about their phone number, as I had gotten an unrelated person on the other end when I had called the Operator Number listed on the RMP. Dan Chapman took a look and stated that there was an error on the RMP number, and that two numbers had been switched. The number on the RMP was (800) 632-2233 when it should have been (800) 362-2233. I identified the following preliminary finding:

Red Oak, IA 305 failed to provide the correct operator phone number in the RMP per 40 CFR 68.160(b)(4).

**Facility submitted a correction to the RMP on December 5, 2024 at 11:31am to address this preliminary finding (Appendix - 16).*

I asked when the merger was official. Jon Wells stated that the merger was official on September 1, 2023. I asked when Bruce Streicher left the company. Jon Wells stated that Bruce Streicher left the company in mid-March, 2024. A review of the RMP showed that the

emergency contact was updated to Lynette VanDenEinde on May 20, 2024. I identified the following preliminary finding:

Red Oak, IA 305 failed to update their emergency contact information within one month of a change per 40 CFR 68.195(b).

CLOSING CONFERENCE

After reviewing Red Oak, IA 305's documents and completing a facility walkthrough, I made Jon Wells and Dan Chapman aware that there would be a closing conference after a break. During the closing conference, starting at 1:15 pm on December 4, 2024, I explained to the facility that I had made the following preliminary findings:

1. Red Oak, IA 305 failed to ensure and document that the process is designed in compliance with RAGAGEP; CGA G-2.1-2023 section 3.5 per 40 CFR 68.48(b).
2. Red Oak, IA 305 failed to perform inspections and tests on process equipment per 40 CFR 68.56(d).
3. Red Oak, IA 305 failed to retain their two most recent compliance audits per 40 CFR 68.58(e)
4. Red Oak, IA 305 failed to coordinate with local emergency planning and response organizations per 40 CFR 68.93(a).
5. Red Oak, IA 305 failed to provide the correct operator phone number in the RMP per 40 CFR 68.160(b)(4).
6. Red Oak, IA 305 failed to update their emergency contact information within one month of a change per 40 CFR 68.195(b).

I indicated that additional findings could be identified during post-inspection reviews of the documents collected. I provided the Confidentiality Notice and Receipts for Samples and Documents form. Jon Wells reviewed and signed both documents and indicated to me that the document copies provided did not contain confidential business information.

We departed the facility on December 4, 2024 at 1:50pm. This report concludes inspection activities regarding NEW Cooperative's Red Oak, IA 305 facility in Red Oak, Iowa.

**AARON
BANES**

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Aaron Banes
Compliance Inspector
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**Hensley,
Dave**

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Dave Hensley
Supervisor
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APPENDICES

- 1 – Inspection Forms
- 2 – Google Earth Aerial Maps
- 3 – Risk Management Plan
- 4 – EPCRA Tier II
- 5 – Hazard Assessment
- 6 – Safety Information
- 7 – Hazard Review
- 8 – Standard Operating Procedures
- 9 – Training
- 10 – Maintenance
- 11 – Compliance Audit
- 12 – Incident Investigation
- 13 – Emergency Plan
- 14 – Photo Log
- 15 – RMP Organizational Chart
- 16 – Post Inspection Corrections