# CAA112(r) INSPECTION REPORT

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| **Name**: Ray-Carroll County Grain Growers, Inc.-Carrollton | |
| **Address**: 26274 Hwy 24<br>Carrollton, MO 64633 | **Date of Inspection**: September 8, 2022 |
| **County**: Carroll | **Case No**: 22MO0908 |
| **Phone**: (660) 542-3539 | **RMP No**: 1000069998 |
| **High Risk**: No | **FRS No**: 1000 0003 4633 |
| **CAA Title V**: No | **Program Level**: Program 2 |
| **Mailing Address**: PO Box249, Carrollton, MO 64633 | |
| **Process**: Ray-Carroll County Grain Growers, Inc. -Carrollton, receives, stores and distributes anhydrous ammonia to local farmers for use as a crop nutrient. (NAICS Code 42451 Grain and Field Bean Merchant Wholesalers) | |

## SUMMARY OF OBSERVATIONS

A review of the Ray-Carroll County Grain Growers, Inc. -Carrollton documents and facility revealed the following deficiencies:

1. **Ray- Carroll failed to meet the RAGAGEP design requirements listed in CGA G-21.1-2014 Section 6.7.1 by not having protective barriers around the bulk anhydrous ammonia tanks. 40 CFR 68.48 (b) requires that the facility is designed per RAGAGEP.**

## INTRODUCTION

I, Lorenzo Sena, a Compliance Inspector with the U.S. Environmental Protection Agency (EPA), Region VII, inspected Ray-Carroll County Grain Growers, Inc. in Carrollton (Ray-Carroll), Missouri on September 8, 2022. Ray-Carrol was selected for an inspection because it is the largest anhydrous ammonia supplier in EPA Region VII and had never been inspected.

I arranged for the inspection on September 7, 2022, with Mr. David Heddings, the Location Manager for Ray-Carrol.

I conducted the inspection to determine if the facility complies with Section 112(r) of the Clean Air Act (CAA), as amended in 1990. The inspection also included reporting provisions of the Emergency Planning and Community Right to Know Act (EPCRA) and the release reporting provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The inspection forms completed during the onsite inspection are included as Appendix #1.

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 (CAPP) require that the facilities must submit a complete Risk Management Plan (RMP) to the EPA for those regulated chemicals they possess in amounts above the applicable threshold quantities after June 21, 1999 and to implement the program described in the RMP.

A facility diagram as well as a diagram showing the location of the facility and labeled photographs are included as Appendix #2

## HISTORY OF BUSINESS

According to Mr. Heddings, the Ray Carroll facility in Carrollton, MO, is owned and operated by Ray-Carroll County Grain Growers, Inc. and has maintained an inventory of more than 10,000 pounds of anhydrous ammonia since 1995. The two 30,000 bulk anhydrous ammonia tanks were installed in 1995 and the 50,000 gallon bulk anhydrous tank was installed in 2014. The entire anhydrous ammonia system was re-piped and updated at the time of the installation of the 50,000 gallon bulk tank. The facility is located approximately 1.6 miles to the east of the town of Carrollton, MO. This facility receives, stores, and sells anhydrous ammonia to farmers in the local area. The facility has three bulk tanks, two of which have capacities of 30,000 gallons and one with a 50,000 gallon capacity. In addition to the three bulk tanks and loading platform, the facility has an office building, various storage and maintenance buildings, a rail loadout (with a capacity of fifty 30,000 gallon tank cars), 36- 1,450 gallon nurse tanks, 23- 1,000 gallon nurse tanks and 8- 1,000 gallon double nurse tanks (See Appendix #2).

According to the 2020 census, 3,500 (est.) individuals reside in the town of Carrollton, MO. The most recent RMP (See Appendix #3) for Ray-Carrol classified them as a Program 2 facility (which I concur with) and I proceeded to conduct this inspection as a Program 2 facility. In total, Ray-Carrol has a total of 120 employees, 20 of which are employed by the Ray-Carroll, Carrolton facility. The facility business hours are 8:00am to 5:00pm and operate 5 days per week (M-F).

| **Maximum Intended Inventory (82% fill)** | **Amount of Anhydrous Ammonia in Pounds** |
|---|---|
| Quantity Onsite at Time of Inspection | 647,307 |
| Quantity Listed in RMP | 8,500,000 |
| Maximum Daily Quantity per Tier II Forms | Max of 9,999,999 |

## PERSONS INTERVIEWED AND INDIVIDUAL RESPONSIBILITIES

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|---|---|
| David Heddings | Location Manager, Ray Carroll - Carrollton |
| Jeff Reichert | Safety Director, Ray-Carroll |
| Randal Luscombe | Assistant Manager, Ray Carroll - Carrollton |
| Darren Harris | Operations Manager, Ray Carroll |

## OPENING CONFERENCE

I arrived at the site on September 8, 2022 at 9:52am, I was met by Mr. Heddings and we proceeded to an break area where I was met by Messrs. Reichert, Luscombe and Harris. I presented my credentials to the group and we each introduced ourselves and proceeded with the inspection.

I explained how the inspection would progress and discussed the inspection forms with the group. I explained that I would write a report of the inspection, turn it in to EPA Management and they would assign a Case Review Officer (CRO) who would be in contact with the facility regarding details of the inspection. I did inform him that he would receive a copy of my inspection report, and the photos taken during the inspection.

Following the opening conference, we began the inspection with a tour of the facility. Following the facility tour, I was provided with two large 3-ring binders which contained the information required to be maintained by the facility per 40 CFR part 68. I then proceeded to fill out the inspection checklists (see Appendix#1) while asking the group questions. I explained that in addition, I would review the binders, make a list of the documents I copied and compile a list of questions to ask the group. After reviewing the binders and scanning documents, I was informed that the concrete blocks had been placed around the bulk tanks and I toured the ammonia bulk tank area after they had been installed. Following that I completed my checklist and obtained answers to the questions I had with regards to the two 3-ring binders

## EPCRA TIER II

The facility RMP (included as Appendix #3) lists a maximum capacity of 8,500,000 pounds of anhydrous ammonia onsite. The facility Tier II forms (included as Appendix #4) list a maximum of 1,000,000 to 9,999,999 pounds of ammonia.

During the inspection, I asked the group how the amount of anhydrous ammonia reported on the Tier II forms was calculated as well as how they maintain an inventory detailing the current amount of anhydrous ammonia onsite. Mr. Luscombe provided me with a document which listed the maximum inventory of anhydrous ammonia at the facility including all bulk and nurse tanks, this document is included as Appendix #5. According to the facility maximum inventory form (which lists each vessel and its capacity), the facility has a capacity of 9,153,353 pounds.

Following the inspection, I contacted the Carroll County LEPC to determine if the facility was included in the community emergency plan. According to Chief Sensenich, of the Carrollton, MO Fire Department, the facility is included in the plan and submits Tier II forms to Missouri Emergency Response Commission, Carroll County Local Emergency Planning Committee and the local fire department. Chief Sensenich also stated that the Carrollton Fire Department does yearly walk- throughs of the facility and signs a facility form documenting their visits.

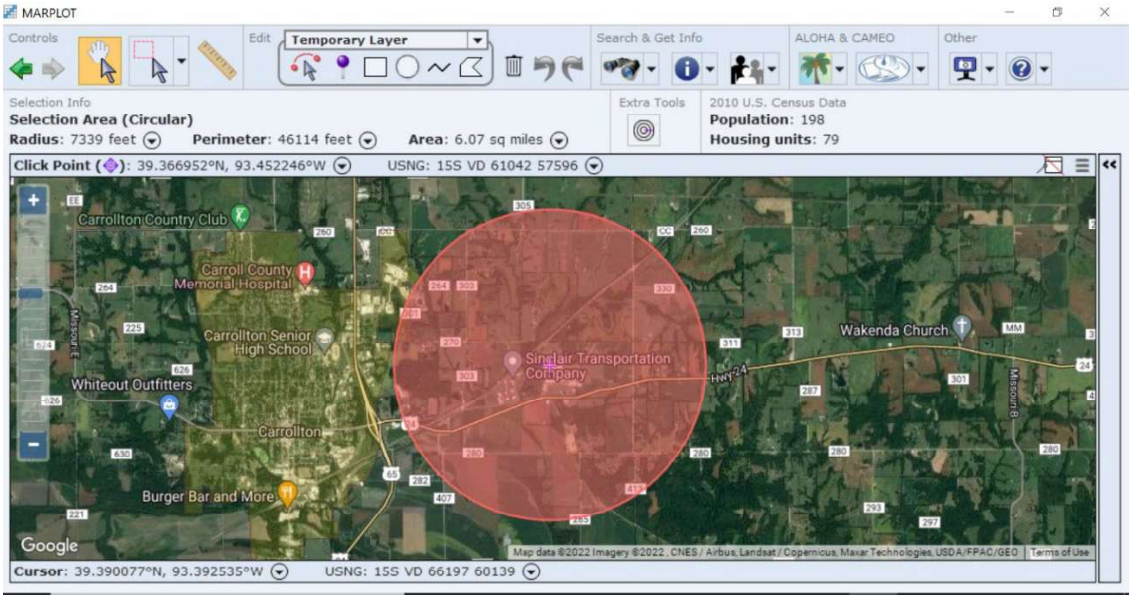
## HAZARD ASSESSMENT

A hazard assessment was included in one of the 3 ring binders which I was provided for review, the documents included a Hazard Assessment for the site. The Offsite Consequence Analysis (OCA) lists the largest vessel as 217,000 (220,000 is rounded up in the inventory as the largest

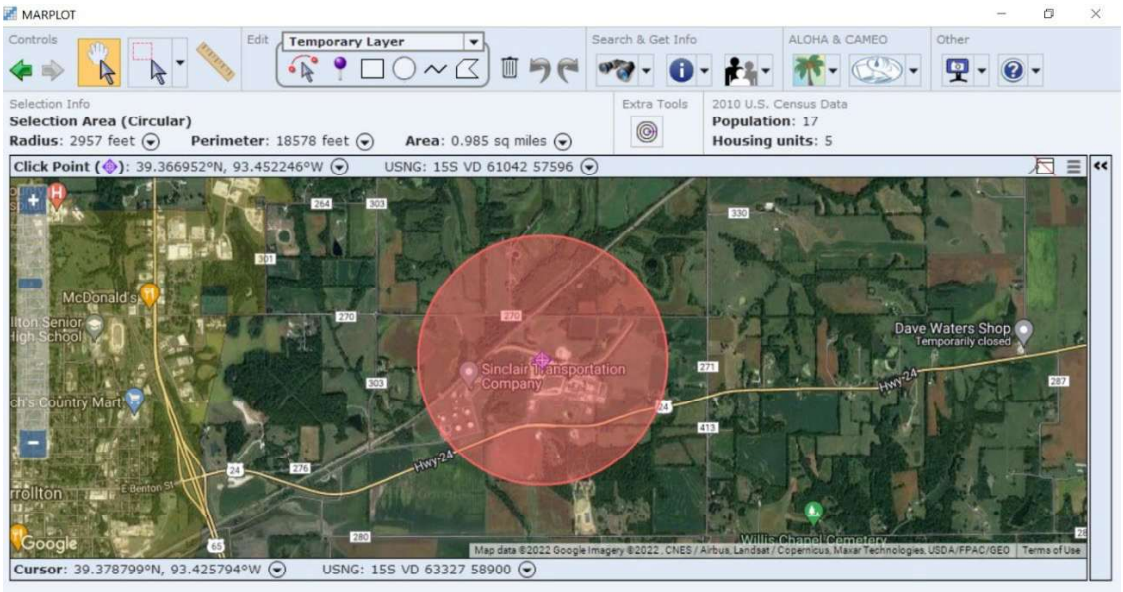
vessel) pounds and a worst-case scenario with a distance-to-endpoint (DTE) of 1.39 miles. The alternate- release scenario is listed as a 2" transfer hose failure with a DTE of 0.56 miles. The worst-case scenario DTE information was extrapolated from the data generated using the DEGADIS model (which is allowed according to the model). The impacted populations were identified using the University of Missouri CAPS 2015 data and are listed as 159 individuals for the worst-case scenario and 16 for the alternative release scenario. I noted that the facility used urban terrain to determine the distance to endpoint. The facility hazard assessment was complete, updated as required and appeared to meet the requirements listed in 40 CFR 68 Subpart B.

Using Marplot 5.1.1 (2010 census data), I arrived at the following affected populations for both the worst- case and alternative release scenarios.

Worst- Case:




Alternate Release:



## SAFETY INFORMATION

Included in the RMP binder was the current Safety Data Sheets (SDSs) for the anhydrous ammonia they purchase. The SDSs had revision dates of January 2022. The binder also contained a copy of ANSI/ CGA G-21.1-2014 and included safe upper and lower temperatures pressures, flows, compositions and equipment specifications. The information maintained in the binder appeared to satisfy all the requirements listed in 40 CFR 68.48.

## RAGAGEP

During the facility walk through, we discussed the lack of the protective barriers around the bulk anhydrous ammonia tanks (See Appendix #2 Photos #1-5 and 7). ANSI/ CGA G-21.1-2014 Section 6.7.1 states the following: "Containers and appurtenances shall be located or protected by suitable barriers to avoid damage by trucks or other vehicles". Mr. Heddings explained that for the past several weeks, the facility has been in the process of trying to get a delivery of concrete blocks for use as protective barriers around the bulk tanks. He explained that the blocks were scheduled for delivery later that day. As mentioned above, I reviewed the documentation in the RMP binders maintained by the facility. During this time facility personnel received the concrete blocks and placed them around the bulk ammonia tanks. (See Appendix #2 Photos #13 and 14).

Since the facility did not have proper barriers as required by ANSI/ CGA G-21.1-2014 Section 6.7.1 prior to the inspection, I identified the following preliminary finding:

2. **Ray- Carroll failed to meet the RAGAGEP design requirements listed in CGA G-21.1-2014 Section 6.7.1 by not having protective barriers around the bulk anhydrous ammonia tanks. 40 CFR 68.48 (b) requires that the facility is designed per RAGAGEP.**

## HAZARD REVIEW

In looking through the RMP binder I reviewed the facility hazard review dated January 2018. The hazard review appeared to meet the requirements listed in 40 CFR 68.50 and used the what if method to identify the hazards associated with the process, in addition it identified situations which could lead to accidental releases and safeguards against these situations as well and had a section relating to the detection of a release. The hazard review included inspections of the facility to determine compliance with the applicable standards. The deficiencies noted included the resolutions and dates for completion. The facility Hazard Review appears to meet the requirements listed in 40 CFR 68.50.

## OPERATING PROCEDURES

Just before the facility walk through, Mr. Reichert provided me with copies of the most recent operating procedures. These operating procedures can be seen and are included as Appendix #6. I reviewed the operating procedures more closely after the inspection and noted that they

included consequences of deviation, were detailed and addressed initial startup normal operating procedures, temporary operations (not applicable), emergency shutdown, normal shutdown and startup following an emergency shutdown. The operating procedures appeared to meet all the requirements listed in 40 CFR 68.52

## TRAINING

Prior to the facility walk through, Mr. Reichert provided me with a sign in sheet, test and the presentation used during the anhydrous ammonia safety training (See Appendix #7). The training was a hands-on ammonia training covering conducted on July 11, 2022, and appears to meet the requirements listed in 40 CFR 68.54.

## MAINTENANCE

I asked the group about the facility maintenance program. Mr. Luscombe explained that the facility has a maintenance schedule for the equipment on site, it along with maintenance records for each of the three bulk tank and two nurse tanks (which I selected due to some surface rust I identified during the facility walk through) are included as Appendix #8.

He indicated that they run an annual rotation and perform whatever maintenance is needed on both the bulk and nurse tanks. The maintenance activities included maintaining the bulk tanks (and loadout), checking valves, checking for corrosion and checking/ replacing the pressure relief valves. The nurse tanks receive the same treatment as the bulk tanks with the addition of servicing/ replacing the tires and axles.

During the facility walk through, I noted that there were two nurse tanks (3-88 and 3-84) which had some visible surface corrosion. Photos of nurse tank 3-88 are included in Appendix #2 Photos #11 and #12. I asked to see the maintenance records for those two nurse tanks as well as the three anhydrous ammonia bulk tanks, these records are included in Appendix #8. In addition, I asked to see the records for the nurse tank PRV replacement.

As can be seen in Appendix #8, the facility maintenance inspections of the bulk tanks appear to be thorough and include maintenance activities performed as well as the dates they were performed.

The facility maintenance inspections for nurse tanks 3-88 and 3-84 show that the tanks were inspected on January 2, 2022 and show that “Surface of tank has adequate paint for protection from rusting”. As can be seen in Appendix #2 and Photos #11 and #12, tanks 3-88 appeared to be in need of painting as there was light corrosion peeking through the paint throughout the tank. The paint on nurse tank 3-84 was in much better condition but still had areas of light corrosion. Messrs. Luscombe and Heddings assured me that this would be addressed during the next inspection/ maintenance cycle and before use. As mentioned above, the facility had records detailing the PRV replacement dates. Mr. Luscombe said that some of the entries were incorrect as they show the installation date and the replacement date as the same date instead of five years later but they are aware of this and do not rely on the end date listed in the records but rather

know that the PRVs will be in need of replacing five years from the installation date. Other than this, the record appeared to be complete and correct.

In addition to the ammonia storage tanks (bulk and nurse), I asked if and how the facility inspects the underground piping. I explained that ANSI/ CGA G-21.1-2014 section 5.6.8 states that underground piping shall be evaluated at a minimum of every five years to ensure leak-tightness. Messrs. Heddings and Luscombe explained the facility installed a pressure gauge when the facility was replumbed in 2014 (for the sole purpose of conducting leak checks) which is between the valves isolating the underground piping (See Appendix #2 Photo #15). When the valves are closed, the gauge is checked to determine if there is a pressure drop in the isolated line. They explained the piping is tested weekly (at a minimum) during the anhydrous ammonia application season. I asked them if the facility had any documentation of these tests, they said they did not. The procedures used by Ray- Carroll to evaluate the leak tightness of the underground piping meets the requirements but I explained to the group that the facility should also document when these tests are conducted. After I recommended that this be documented, Mr. Heddings added an underground piping leak check section to the bulk tank equipment checklist and said that leak checks will be documented in the future.

## COMPLIANCE AUDIT

The RMP binder included the last two compliance audits, January 2021 and January 2018. A copy of the January 2021 compliance audit is included as Appendix #9. According to the most recent compliance audit, there were no issues found. The facility compliance audit appears to meet the requirements listed in 40 CFR 68.58.

## INCIDENT INVESTIGATION AND OSHA 300 LOGS

During the inspection, I asked the group if they maintained copies of any incident investigations or OSHA 300 logs. Mr. Heddings replied that the facility has never had an accidental release of anhydrous ammonia.

## EMERGENCY RESPONSE

Ray-Carrol is a non-responding facility. In the event of an ammonia release, Mr. Heddings said they would assess the release and if necessary, evacuate the area then call 911. During my review of the RMP binder I noted that the facility had a written emergency action plan (Appendix#10). During the inspection I asked the group if they had documentation of coordination activities with the local emergency responders. Mr. Heddings asked me to contact Mr. Reichert after the inspection as Mr. Reichert had already left the facility (doctors appointment). Following the inspection, I was contacted by Mr. Harris who informed me that Mr. Reichert was no longer employed by Ray- Carroll and he would attempt to locate the information but explained that he would likely not be able to locate it as fast as Mr. Reichert would have. As of October 6, 2022, I have not received documentation with regards to coordination activities but as mentioned above in the EPCRA section of this report, Chief Sensenich stated that the Carrollton Fire Department does yearly walk- throughs of the facility and signs a facility form documenting their visits.

## MANAGEMENT SYSTEM

The RMP binder had a section listing the position and name of the personnel as well as their responsibilities with regards to the RMP requirements. The facility management system and documentation appears to meet the requirements of 40 CFR 68.15

## RISK MANAGEMENT PLAN

Ray- Carroll submitted a Risk Management Plan (RMP) on May 25, 2018 and is due for re-submission on May 25, 2023. As mentioned above, the RMP (Appendix #3) lists a maximum intended inventory of 8,500,000 pounds. The inventory documents provided by the facility (Appendix #5) show that the maximum intended inventory is 9,200,000 pounds. This difference does not increase the distance to endpoint for the worst-case scenario as the largest vessel is still the 50,000 gallon anhydrous ammonia bulk tank. This change in maximum inventory should be updated when the 5 year update for the RMP is due.

In addition to the discrepancy in the maximum inventory, I noted that the facility hazard assessment lists a worst-case distance ot endpoint of 1.39 miles while the facility RMP lists the distance as 1.22 miles. The distance to endpoint for the alternate release scenario is listed in 0.56 miles on both the RMP and the hazard assessment. I reviewed the remainder of the RMP and it appeared to be complete and meet the requirements of 40 CFR 68 Subpart G.

## CLOSING CONFERENCE

I reviewed my observations and findings with the group. Mr. Heddings signed the Receipts for Samples and Documents, the Notice of Preliminary Findings, and the Confidentiality Notice which are included as Appendix #1. Mr. Hedding selected to not claim any CBI for the inspection. Mr. Heddings made and kept of each one of these forms. I departed the facility at 2:38pm on September 8, 2022.

LORENZO SENA
Digitally signed by LORENZO SENA
Date: 2023.01.20 14:21:09 -06'00'

Lorenzo Sena
Compliance Inspector

DAVE HENSLEY
Digitally signed by DAVE HENSLEY
Date: 2023.01.20 14:30:23 -06'00'

Dave Hensley
Chemical Accident Prevention Section Chief

## APPENDICES

1 - Inspection Forms
2 - Facility Diagram and Labeled Photos
3 - Facility Risk Management Plan
4 - 2021 Tier II Forms
5 – Inventory of Anhydrous Ammonia
6 - Standard Operating Procedures
7 – Anhydrous Ammonia Training Documentation
8 - Facility Maintenance Documents

9 – January 2021 Compliance Audit
10 – Facility Emergency Plan