

CAA 112(r) INSPECTION REPORT

Name: Innovative Ag Services	
Address: 312 South Jefferson Street, Andrew, Iowa, 52030	Date of Inspection: July 9, 2024
County: Jackson	Case No: 24IA0709
Phone: 319-465-3501	RMP No: 1000 0009 2393
High Risk: No	FRS No: 1100 0055 8557
CAA Title V: No	Program Level: Program 2
Mailing Address: 2010 South Main Street, Monticello, IA, 52310	
Process: Agronomy business, including retail sale of anhydrous ammonia	

SUMMARY OF OBSERVATIONS

A review of documents pertaining to the Innovative Ag Services (IAS) facility at 312 South Jefferson Street, Andrew, 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)—did not identify any preliminary findings.

INTRODUCTION

I, Amelia Papajohn, Tetra Tech, Inc. (Tetra Tech), as a representative of U.S. Environmental Protection Agency (EPA) Region 7, inspected the IAS facility in Andrew, Iowa, on July 9, 2024.

On July 2, 2024, I called the number on the facility risk management plan (RMP), and Mr. Adam Rollinger answered. I explained I would be inspecting the Andrew facility on July 9, 2024. I then sent an email outlining the nature of the inspection and time I would be arriving.

The intent of the inspection was to determine if the facility complies with Section 112(r) of the Clean Air Act (CAA), as amended in 1990. EPA's regulations describing implementation of this law are included in 40 CFR Part 68. I referenced these regulations throughout the inspection by using the Program 2 Process Checklist and Supplemental Checklist for Ammonia Fertilizer Sector Inspections (Attachment 1). All attachments cited in this inspection report (Attachments 1 through 12) are also in a folder on the accompanying CD. Folder numbers on the CD correspond to attachment numbers.

HISTORY OF BUSINESS

The IAS facility, at 312 South Jefferson Street, Andrew, Iowa, stores and sells grain, pesticides and fertilizers, including anhydrous ammonia, a substance regulated under Section 112(r). A maximum of 526,776 pounds of anhydrous ammonia is stored on site according to IAS's RMP (Folder 2, Attachment 2). For 2024, maximum intended inventory matched the reported quantity in IAS's RMP (Folder 3, Attachment 3). Anhydrous ammonia is stored in two bulk storage tanks with

maximum capacities of 30,000 and 18,000 gallons, respectively, as well as an estimated 40 nurse tanks (Folder 3, Attachment 3). Additionally, the facility has a transport bullet with a capacity of 9,600 gallons, which was empty and disconnected from a vehicle at the time of inspection. During the site walk-through, I observed approximately 50,000 pounds on site, as both bulk storage tanks were empty and only a handful of nurse tanks contained product.

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

	Quantity (pounds)
	Anhydrous Ammonia
Quantity at the Time of Inspection	~50,000 ^(a)
Quantity listed in 2024 RMP Submission	526,776 ^(b)
Quantity in Maximum Inventory Documentation	526,776 ^(c)

Notes:

- (a) Amount I observed on July 9, 2024, based on the gauges and facility inventory knowledge.
- (b) See facility's 2024 RMP Submission (Attachment 2). This quantity assumes that all nurse tanks are full.
- (c) See facility's maximum inventory calculations (Attachment 3).

PERSONS INTERVIEWED AND INDIVIDUAL RESPONSIBILITIES

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

Bill Vetter..... IAS, Director of Safety and Compliance
 Heather Litwiller.....Compass Compliance, RMP Consultant
 Isaac AmbrosyIAS, Location Manager

OPENING CONFERENCE

I arrived at the IAS facility at 312 South Jefferson Street, Andrew, Iowa, at approximately 8:30 a.m. on July 9, 2024. I signed in at the office and met with facility personnel in a conference room. 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 of photographs. I also stated that I would conduct an exit interview to review and explain any 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 (Attachment 1), and explained that my inspection was for enforcement purposes and that enforcement actions could result from the inspection. Mr. Vetter, Director of Safety and Compliance at IAS, signed the Notice of Inspection Form.

After the introduction, Ms. Heather Litwiller, the facility's RMP consultant, presented IAS's RMP binder. I asked for relevant documents from the binder, including the facility's off-site consequence analysis, safety information, hazard reviews, operating procedures, training records, maintenance records, and compliance audits, asking questions when necessary. Ms. Litwiller inquired why this facility had been selected for an RMP inspection; I replied that EPA considered the IAS facility an agency priority because of a release in 2020, described below.

HAZARD ASSESSMENT

I asked to review IAS's hazard assessment, including worst-case and alternative-release scenarios.

Ms. Litwiller provided the facility's worst-case release scenario: complete loss of the largest bulk storage tank. The largest tank has a capacity of 30,000 gallons but is never filled above 85%, so the maximum amount released would be approximately 140,000 pounds. IAS used RMP*Comp to calculate a release rate of 14,000 pounds per 10 minutes, resulting in a distance to endpoint of 4.4 miles. An urban topography was assumed because of various obstacles in the area, and 1,203 people were within the release radius.

The alternative-release scenario for the IAS facility was a transport unit pulling away while connected to transfer hoses. Though the facility has in-line emergency shutoff valves and other fail-safe mechanisms, function of these is not assumed under the scenario. Also assumed is a time span of 2 minutes for facility personnel to stop the release. A 2-inch-diameter pipe would release 5,954 pounds per minute (rounded to 5,950); at 2 minutes of release time, the total amount released would be 11,900 pounds. The affected radius would be 0.5 mile from the release point, and within that radius, 250 people would be affected.

Populations for both scenarios were estimated in 2021 using EPA's MARPLOT software; the current version of MARPLOT still uses 2010 Census data.

IAS's hazard assessment appears to meet the requirements in 40 CFR 68 Subpart B.

PROCESS SAFETY INFORMATION

I asked facility personnel to show me documentation of safety information, including a Safety Data Sheet (SDS) for anhydrous ammonia, codes and standards followed, equipment specifications, safe upper and lower limits, and consequences of deviation (Folder 5, Attachment 5).

I reviewed the facility's anhydrous ammonia SDS, which contained physical and chemical information, as well as first aid procedures should an exposure occur.

I inquired about codes and standards IAS follows. Ms. Litwiller responded that the facility applies American National Institute of Safety (ANSI) and Compressed Gas Association (CGA) guidance for all process equipment. Additionally, I reviewed equipment specifications for both storage tanks, as well as list of apparatuses used, including gauges and valves.

Safe upper and lower limits are defined for temperatures, pressures and flows, and anhydrous ammonia compositions. Consequences of deviation are written for daily operations scenarios; these are documented in IAS's standard operating procedures.

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

HAZARD REVIEW

I inquired about the facility's two most recent hazard reviews. Ms. Litwiller provided them to me, and I noted their dates of April 4, 2018, and March 28, 2023 (Folder 6, Attachment 6). Both hazard

reviews included a checklist for common process events such as transfer and storage operations. These events considered process equipment including pumps, compressors, storage tanks, electrical equipment, piping, and safety equipment.

I asked facility personnel how deficiencies were corrected in a timely manner; I was told that facility audits are tracked in Excel by Mr. Vetter and addressed by Mr. Ambrosy. I requested to look through maintenance logs, which Mr. Ambrosy uses to document equipment replacements. IAS's biannual inspection checklist demonstrated that deficiencies were corrected from the 2023 hazard review. I inquired as to why IAS's 2018 hazard review deficiencies had not been completed until 2024. Mr. Ambrosy explained that the deficiencies recorded on the 2018 hazard review were suggestions for future maintenance and thus did not have a strict timeline for completion.

Hazard reviews appeared to meet requirements specified in 40 CFR 68.50.

OPERATING PROCEDURES

I requested to review IAS's standard operating procedures, and Ms. Litwiller provided them (Folder 7, Attachment 7). These included instructions for initial startup, normal operations (filling tanks and toolbar operations), emergency shutdown, normal shutdown, and startup following a shutdown per 40 CFR 68.52(b). Additionally, procedures were present for contractors who deliver anhydrous ammonia after hours. The facility does not have temporary operating procedures because it fully shuts down in the winter months. Because of no major changes to the process, procedures have not been updated.

Standard operating procedures appeared to meet requirements specified in 40 CFR part 68.52.

TRAINING

I asked Mr. Vetter what forms of training employees receive. He explained that employees involved with anhydrous ammonia receive annual training each September that includes videos from J.J. Keller, hands-on training, and SOP review.

I asked how training completion is tracked. Mr. Vetter said he sends a roster to human resources (HR), which tracks completion in a spreadsheet. Mr. Ambrosy ensures that employees have received training; HR sends reminder emails.

Training appeared to meet requirements specified in 40 CFR 68.54.

MAINTENANCE

I requested to review maintenance documentation; Mr. Ambrosy and Mr. Vetter presented underground piping results and inspection checklists (Folder 8, Attachment 8). I was shown an underground piping test from 2019 with a passing grade and was informed by Mr. Vetter that one was to be conducted today but would be delayed a few days because of my inspection. I asked about frequency of such tests, and Mr. Vetter responded that the underground piping test occurs every 5 years. I then reviewed a biannual inspection checklist from 2023 confirming that gauges, piping, valves, and tank conditions had been found up to date.

I asked to look through standard operating procedures for cooler filter changeouts on toolbars, because this had been involved in a 2020 release. Procedures described in the SOP I reviewed appeared to be the same procedures followed by the employee involved in the 2020 incident.

I asked who conducts maintenance of process equipment. Mr. Ambrosy responded that he completes most maintenance tasks, along with six technicians at the facility. Before employees conduct maintenance tasks on process equipment, they must review SOPs and training videos provided by J.J. Keller. Mr. Vetter said that the facility occasionally contracts work out to Craig's Restoration for pump or piping replacement.

During the facility walk-through, bulk storage tanks and nurse tanks appeared to be in good condition; transfer hose replacement dates had not been exceeded.

Maintenance appeared to meet requirements specified in 40 CFR 68.56.

COMPLIANCE AUDITS

I requested and reviewed the last two compliance audits the facility had conducted, dated November 11, 2021, and June 7, 2024 (Folder 9, Attachment 9). I asked Mr. Vetter how the facility documents resolution of identified corrective actions. He explained that, similar to correction of hazard review findings, Mr. Ambrosy generally performs anhydrous ammonia maintenance tasks; Mr. Vetter tracks completion of tasks in an Excel document (Folder 9).

Compliance audits and frequency of occurrence appeared to comply with stipulations in 40 CFR 68.58.

INCIDENT INVESTIGATION

I inquired about an incident on April 6, 2020. Mr. Vetter and Ms. Litwiller explained that the incident had occurred off site when an IAS employee attempted to change a cooler filter on a customer's toolbar (that is, not a toolbar owned or maintained by IAS). Standard practice for conducting maintenance on a cooler filter requires bleed off of lines for at least an hour before maintenance can begin. The employee waited till the next day before beginning maintenance, allowing ample time for bleed off. When the cooler was opened, a released puff of anhydrous ammonia vapor contacted the worker's skin, causing a chemical burn that required a hospital visit.

Ms. Litwiller said that, because the anhydrous ammonia involved in the incident was not from IAS, the facility was unsure whether to report the incident and opted to err on the side of caution. I reviewed the incident report (Folder 10, Attachment 10) and SOPs related to cooler maintenance. It appeared that IAS did its due diligence and the IAS employee followed written procedures. I asked Mr. Vetter and Ms. Litwiller why the release would have occurred despite conformance to maintenance procedures. Mr. Vetter said he was not sure, speculating that a rare manufacturer defect may have been responsible.

IAS documented the incident and included it in its RMP within 6 months. Reporting requirements specified in 40 CFR 68.60 appeared to have been fulfilled.

EMERGENCY RESPONSE

I asked facility personnel if employees respond to anhydrous ammonia releases or if they rely on the local fire department. Mr. Ambrosy replied that IAS relies on the local fire department in Andrew, Iowa.

I requested to review documentation of the facility's notification exercise (Folder 11, Attachment 11). Mr. Ambrosy provided a document demonstrating a fire department representative had visited on February 3, 2023. I asked if one was planned for this year and Mr. Vetter confirmed. Additionally, I was shown a letter from the Andrew Fire Department explaining it would provide support in the event of an emergency.

I also read through IAS's emergency action plan (Folder 11, Attachment 11), which contained emergency contact information, instruction on how to report a hazardous materials spill, first aid procedures, and steps for dealing with weather- and security-related emergencies.

Finally, I asked if the facility had submitted a Tier II report, and Mr. Vetter showed me a submission to the Andrew Fire Department.

The facility's emergency response activities appeared to meet requirements specified in 40 CFR Subpart E.

MANAGEMENT

I asked facility personnel to identify who oversees RMP-related tasks. They replied that Ms. Litwiler, RMP consultant, maintains documentation and submits RMPs; Mr. Ambrosy, the location manager, conducts maintenance tasks; Mr. Vetter, safety and compliance director, ensures completion of safety training.

PHOTOGRAPHS

During the site walk-through, I took 21 digital photographs. All of these are in Folder 12 of the CD, and selected photographs appear in a photographic log in Attachment 12.

CLOSING CONFERENCE

After I finished reviewing the facility's binder and completed the site walk-through, I explained to facility personnel that I had not made any preliminary findings. I indicated that findings could be identified during post-inspection reviews of the documents collected. I provided the Confidentiality Notice and the Receipt for Samples and Documents form (Attachment 1). Mr. Vetter reviewed and signed both documents, indicating that the document copies provided to me did not contain confidential business information.

I departed from the IAS facility at approximately 11:15 a.m., on July 9, 2024.

This report concludes inspection activities regarding the IAS facility in Andrew, IA.



Amelia Papajohn
Compliance Inspector

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HENSLEY

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Dave Hensley
Chemical Accident Prevention Section Air Branch
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