

CAA112(r) INSPECTION REPORT

Name: Lincoln Premium Poultry	
Address: 1325 E Cloverly Road, Fremont, Nebraska	Date of Inspection: April 5, 2023
County: Dodge County	Case No: 23NE0405
Phone: (402) 704-2200	RMP No: 1000 0024 2061
High Risk: No	FRS No: 1100 7000 5201
CAA Title V: No	Program Level: Program 3
Mailing Address: 1325 E Cloverly Road, Fremont, Nebraska	
Process: Anhydrous ammonia used for refrigeration	

SUMMARY OF OBSERVATIONS

A review of documents pertaining to the Lincoln Premium Poultry Plant at 1325 E Cloverly Rd., Fremont, Nebraska (facility), and an inspection at that facility—with focus on Chemical Accident Prevention Provisions (Title 40 *Code of Federal Regulations* [CFR] Part 68)—did not reveal any preliminary findings.

INTRODUCTION

I, Heather Wood, Tetra Tech, Inc. (Tetra Tech), as a representative of U.S. Environmental Protection Agency (EPA) Region 7, inspected the Lincoln Premium Poultry facility in Fremont, Nebraska, on April 5, 2023. Ms. Amelia Papajohn of Tetra Tech also attended for training purposes. On March 31, 2023, I spoke with Mr. Brain Plautz, Environmental Safety Manager at Lincoln Premium Poultry, and notified him that I was planning to conduct an RMP inspection on Wednesday, April 5. He confirmed that he and relevant facility personnel would be available that day for the inspection. I then sent a follow-up email outlining the basis for the inspection and specifying the date and time Ms. Papajohn and I would arrive.

HISTORY OF BUSINESS

Lincoln Premium Poultry is a meat packing facility that uses an anhydrous ammonia refrigeration system to keep poultry cold and prevent spoiling. Construction of the facility began in 2016, and operations started in September 2019 after the structures and refrigeration components had been built. All anhydrous ammonia process equipment is within a single engine room that hosts five vessels (V1, V2, V3, V4, and V5) with maximum capacities of 9,959.6; 16,352.2; 34,421.4; 12,374.3; and 21,781.4 pounds of anhydrous ammonia, respectively.

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

	Quantity (pounds)
	Anhydrous Ammonia
Maximum Intended Inventory – Engine Room ^a	~100,000
Risk Management Plan Process Quantity ^b	117,826

^a Total amount of anhydrous ammonia in the five vessels and piping, according to the facility's Change Management Report (Attachment 2)

^b See facility's Risk Management Plan Submission dated May 27, 2022 (Attachment 3)

PERSONS INTERVIEWED AND INDIVIDUAL RESPONSIBILITIES

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

Brian Plautz..... Environmental Safety Manager, Lincoln Premium Poultry
Jeffery LucasEnvironmental Health and Safety (EHS) Director, Lincoln Premium Poultry
Matt Nichols..... Project Safety Management (PSM) Coordinator, Lincoln Premium Poultry
Mike Andreasen Utility Manager, Lincoln Premium Poultry

OPENING CONFERENCE

Ms. Papajohn and I arrived at the Lincoln Premium Poultry facility at 1325 E Cloverly Rd., Fremont, Nebraska, on Wednesday, April 5, 2023, at approximately 8:00 a.m. At the front desk, we read through safety documents related to the refrigeration system, and after acknowledging we read them, received badges to enter the facility. Mr. Plautz was there to take us to a conference room where we were introduced to Mr. Matt Nichols and Mr. Jeffery Lucas.

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 photography of equipment items and their environs. 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 (Attachment 1), and explained that my inspection was for enforcement purposes and that enforcement actions could result from the inspection. Mr. Lucas signed the Notice of Inspection Form. During the opening conference, I also explained that the facility had been selected for inspection because of two releases of anhydrous ammonia there: one on October 30, 2019, and one on February 19, 2022. The latter incident reportedly resulted in trips to the hospital for three workers.

After the introduction, I asked to see the facility RMP documentation, including the off-site consequence analysis, process safety information, process hazard analyses, operating procedures, training records, maintenance records, compliance audits, and emergency response procedures. As I reviewed available documents, I directed any questions I had to facility personnel, and I noted my findings on the Region 7 Checklist for Risk Management Plan Investigations or Audits at Program Level 3 Stationary Sources (Attachment 1). Photographs I took during the walk-through are in the photographic log in Attachment 4 and in Folder 4 of the CD.

HAZARD ASSESSMENT

I asked to see the facility's hazard assessment and off-site consequence analysis, including its worst-case and alternative-release scenarios. Lincoln Premium Poultry's worst-case scenario involved emptying of the largest anhydrous ammonia vessel, V3, and its associated piping. Approximately 52,582 pounds of anhydrous ammonia would be released to the surrounding community (26,610 people) within 3.1 miles of the facility. The facility's alternative-release scenario was a rooftop piping leak that would release an estimated 3,000 pounds of ammonia in 10 minutes, affecting the population within a 0.2-mile radius. These amounts and distances were calculated by use of RMP*Comp and Emergency Response Planning Guidelines (ERPGs)

(Folder 5). Both the worst-case and alternative-release scenarios had been most recently calculated in July 2019.

The facility's hazard assessment appeared to meet requirements stipulated in 40 CFR 68.20-68.42.

PROCESS SAFETY INFORMATION

I inquired if the facility could show me its process safety information, including a Safety Data Sheet (SDS) for anhydrous ammonia, diagrams and schematics, design codes and standards in place, and material and energy balances (Folder 6). I was shown the SDS for anhydrous ammonia, and Lincoln Premium Poultry provided diagrams of its ventilation system and a block flow diagram of its entire process (Folder 6).

The facility abides by the International Institute of Ammonia Refrigeration (IIAR) standards and American National Standard Institute (ANSI) guidelines, recommendations by the manufacturer of equipment at the facility, and applicable local, state, and federal codes. Facility personnel showed me a materials of construction document indicating that the materials constituting much of the process equipment were stainless steel, carbon steel, galvanized steel, and cast iron (Folder 6). Additionally, the document specified the **model** for each component of the refrigeration system. Finally, I reviewed a few of the facility's heat exchanger standard operating procedures (SOP) that stipulated operating limits and consequences of deviation.

Lincoln Premium Poultry's process safety information appeared to satisfy the requirements of 40 CFR 68.65.

PROCESS HAZARD ANALYSES

Facility personnel showed me the initial process hazard analysis (PHA) conducted in 2019. I asked if the facility planned to do another one this year, to which Mr. Lucas replied that it had been scheduled for next year. I reviewed the facility's initial PHA (Folder 7), which implemented a "what if?" and checklist structure, and I observed that recommendations and actions therein had been signed off as completed; most action items had due dates prior to startup of the refrigeration system. Lincoln Premium Poultry uses FIIX, an online maintenance system, to track all work orders and PHA actions.

STANDARD OPERATING PROCEDURES

I asked facility personnel how employees access SOPs. Mr. Nichols responded that these are electronic, can be viewed via SharePoint, and are updated annually or following any changes to the process. I reviewed a selection of heat exchanger SOPs (Folder 8) and noted that these addressed various operating phases, including initial startup, normal operations, temporary operations, emergency shutdown, emergency operations, normal shutdown, and startup following a shutdown. Also in those documents was information regarding operating limits and safety. I noted that the facility had a SOP for its new heat exchanger, HEX-20.

I inquired about establishment of safe work practices at the facility, specifically relating to changes implemented after the incidents there. Mr. Lucas explained that the facility now has a dedicated team trained and allowed to work on equipment associated with the refrigeration system.

TRAINING

I asked how employees are onboarded and trained at the facility, and how training completion is tracked. Mr. Lucas cited an 8-week onboarding program involving shadowing by experienced personnel, reviews of SOPs, studies of piping and instrumentation diagrams, and completion of online training. Additionally, all employees to work on the ammonia refrigeration equipment receive 24-hour hazmat training from Chris Bryant Consulting. Refresher training recurs every 3 years (or sooner if an employee receives disciplinary action for not following operating procedures). Lincoln Premium Poultry tracks training progress on a spreadsheet shown to me.

MECHANICAL INTEGRITY

I inquired if the facility had a mechanical integrity program. Mr. Nichols showed me the facility's mechanical integrity document, which included information regarding codes and standards that the facility invokes, and inspections of the process equipment (Folder 9). The facility abides by IIAR standards, and facility personnel use the IIAR 6 checklist when inspecting the anhydrous ammonia process equipment. If any deficiencies are identified during these inspections, a work order is created, tracked in FIIX, and promptly addressed. In addition to the IIAR inspections, mechanical integrity inspections by the facility occur every 5 years.

During the facility walk-through, I observed the five anhydrous ammonia vessels and their associated piping that appeared to be in good condition, with minimal to no frosting thereon. Piping was labeled as anhydrous ammonia, and equipment was tagged with serial numbers, manufacture date, and pressure within.

MANAGEMENT OF CHANGE

Mr. Plautz stated that the facility had added a heat exchanger, HEX-20, to the process. I asked him if the facility had completed management of change (MOC) documentation (Folder 10) and had conducted a pre-startup safety review (PSSR). Facility personnel provided me with the general MOC document and the PSSR for the HEX-20 addition. A SOP for the HEX-20 also had been added to SharePoint. No MOC documentation occurred after the incident in 2022 because equipment was replacement-in-kind.

PRE-STARTUP SAFETY REVIEW

The facility showed me written procedures for a PSSR; these procedures appeared to meet requirements of 40 CFR 68.77.

COMPLIANCE AUDIT

I asked to see the facility's most recent compliance audit. Mr. Nichols showed me a compliance audit from July 2020 and indicated that a compliance audit had been scheduled for May 8, 2023, to satisfy the 3-year frequency required in 40 CFR 68.79(a). Because the facility began operations in 2019, only one compliance audit was available. I reviewed the report findings and noted that the facility's action items had been checked off with respective completion dates, and the steps taken to satisfy recommendations had been documented (Folder 11). Facility contractor Wenck Associates and facility personnel (including Mr. Nichols and Mr. Plautz) had completed the audit.

INCIDENT INVESTIGATION

I inquired about the two releases of anhydrous ammonia at the facility documented in the RMP submission. Facility personnel explained that the accident on October 30, 2019, had occurred soon after initiation of operation at the facility in September 2019. On the rooftop of the building, the line connected to the release valve supposedly was to clear and recirculate the anhydrous ammonia automatically. However, on the day of the incident, the line was not cleared, resulting in release of 1 pound of anhydrous ammonia while an employee was observing the valve. I asked what Lincoln Premium Poultry had done to ameliorate this issue, and Mr. Lucas responded that the manufacturer (still on site) had worked on the release valve and line to render these functional. He said that the check valve had been reconfigured so the line would not again be over pressurized.

We then discussed the release on Saturday, February 19, 2022, associated with a work order to remove rust on a Votator heat exchanger that was part of the refrigeration system (Folder 12). According to Mr. Nichols and Mr. Lucas, the maintenance contractor did not touch base with the facility's EHS staff before beginning the work, as is protocol at the facility. The contractor began to remove two plates, one inner and one outer, connected to the heat exchanger. The inner plate was in direct contact with anhydrous ammonia, so upon removal of it, product was released. An evacuation began, three workers went to the hospital, and a hazmat team responded to a call for help. The facility completed an incident investigation report.

Facility personnel indicated that removal of the inner plate had been unnecessary to complete the work order, so I asked what precautions had ensued following the incident to prevent recurrence of such a release. Mr. Lucas explained that since that incident, only workers having received specific training on the refrigeration system can complete work orders associated with the process; the contractor involved with the release did not have extensive knowledge of the refrigeration system or its components. Mr. Lucas also said that all contractors are now required to complete a Job Hazard Analysis (JHA) before performing any work at the facility. EHS staff must sign off on the JHA before work can begin.

Additionally, Lincoln Premium Poultry is now a responding facility, and workers involved with the refrigeration system are trained on hazmat response. During the facility walkthrough, we observed as evidence of this a dedicated emergency response trailer just outside the engine room, and emergency response gear available in a hallway adjacent to the engine and control room. I also was shown updated SOPs for the heat exchangers.

When small or minor incidents occur, the facility still completes incident reports, and each incident is addressed in the monthly PSM Meeting via a tabletop exercise.

EMPLOYEE PARTICIPATION

I was shown a written program regarding employee participation that appeared to meet requirements of 40 CFR 68.83.

HOT WORK PERMIT

I reviewed the facility's hot work permit, which appeared to address the fire prevention and protection requirements of 29 CFR 1910.0252(a).

CONTRACTORS

Since the 2022 incident, Lincoln Premium Poultry has used ISN, a contractor screening platform that allows the facility to filter through a company's safety and incident history, and to examine individual performance. The facility onboards contractors for plant-specific tasks, subjects them to a general anhydrous ammonia awareness orientation, and gives each of them a copy of the facility's Emergency Action Plan (EAP).

EMERGENCY RESPONSE

Mr. Lucas told me that the facility is a responding facility, and that an emergency response program had been developed and implemented. I examined the facility's EAP (Folder 13) that names facility personnel and their roles to aid incident command, outlines how incidents should be reported, and specifies evacuation procedures. All responders receive 24-hour Hazardous Waste and Emergency Response (HAZWOPER) training, and complete refresher training every 3 years.

Emergency response equipment is available in a trailer on the east end of the facility near the engine room, as well as in a hallway adjacent to the engine room for easy access. The trailer contained respirators, self-contained breathing apparatuses (SCBA), harnesses, Tyvek suits, and chemical-resistant boots. Mr. Lucas indicated that the facility plans to move the trailer farther off site so that in the event of a large release, emergency response equipment would still be accessible. The facility will conduct a full-scale exercise in May of this year with the local fire department.

The facility has the local fire department tour the facility one to two times a year, and relies on them to notify the public in the event of release. Lincoln Premium Poultry also submits a Tier II report to the local fire department and local emergency planning committee (LEPC).

MANAGEMENT SYSTEM

I asked if the facility had a management system to oversee implementation of its RMP program. Mr. Plautz is the Environmental Safety Manager and Mr. Lucas is the Environmental Health and Safety Director; both ensure preparation of the facility for an emergency response. Mr. Lucas would act as the Incident Commander should an incident occur. Mr. Nichols is the PSM coordinator and handles training, document tracking, and work orders.

RISK MANAGEMENT PLAN

The facility gave me the RMP submission dated May 27, 2022, which had been updated following the most recent incident in February 2022. The facility's RMP submission appeared to satisfy the requirements of 40 CFR 68.150-68.195.

PHOTOGRAPHS

During the site walk-through, I took 37 digital photographs. All of these are in Folder 4 of the CD, and selected photographs appear in a photographic log in Folder 13.

CLOSING CONFERENCE

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

Ms. Papajohn and I departed the facility around 2:30 p.m. on April 5, 2023.

As of May 5, 2023, the facility had not notified me regarding any confidentiality claim covering the information provided during the inspection.

This report concludes my inspection activities regarding the Lincoln Premium Poultry in Fremont, Nebraska.



Heather K. Wood
Compliance Inspector

ATTACHMENTS

- 1 Inspection Forms and Checklists
- 2 Maximum Intended Inventory
- 3 Risk Management Plan Dated 5/27/22
- 4 Photolog
- 5 Hazard Assessment
- 6 Process Safety Information
- 7 Initial Process Hazard Analysis
- 8 Standard Operating Procedures
- 9 Mechanical Integrity
- 10 Management of Change
- 11 Compliance Audit
- 12 Incident Investigation
- 13 Emergency Action Plan

CD – Attached to Report