

CAA 112(r) INSPECTION REPORT

Name: BHJ USA LLC	
Address: 2472 170 th Street, Fort Dodge, IA, 50501	Date of Inspection: September 9, 2024
County: Webster	Case No: 24IA0909
Phone: 515-955-6046	RMP No: 1000 0020 9375
High Risk: No	FRS No: 1100 3625 2033
CAA Title V: No	Program Level: Program 3
Mailing Address: 2472 170 th Street, Fort Dodge, IA, 50501	
Process: Refrigeration of pet food product by use of anhydrous ammonia.	

SUMMARY OF OBSERVATIONS

A review of documents pertaining to BHJ USA LLC (BHJ) at 2472 170th Street, Fort Dodge, Iowa (facility), and an inspection at that facility—with focus on Chemical Accident Prevention Provisions (Title 40 *Code of Federal Regulations* [CFR] Part 68)—revealed the following preliminary findings:

1. **68.30(a):** The facility did not use the correct radius to estimate the population that would be affected by the worst-case scenario release. *This finding was added upon post-inspection review.*
2. **68.39(d):** BHJ did not document the methodology applied to model distance to endpoint under both its worst-case and alternative release scenarios. *This finding was added upon post-inspection review.*
3. **68.67(f):** The facility did not revalidate or update its process hazard analysis (PHA) every 5 years. *This finding was added upon post-inspection review.*
4. **68.67(e):** The facility did not document completion of PHA actions.
5. **68.77(a) and (b):** The facility did not perform an initial Process Safety Start-up Review (PSSR) of the new refrigeration system.
6. **68.79(d):** The facility did not document responses to compliance audit findings.
7. **68.190(a):** The facility did not submit a 5-year Risk Management Plan (RMP) update on time.
8. **68.195(b):** The facility did not update the emergency contact listed on its RMP within 30 days of the change.

INTRODUCTION

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

On August 1, 2024, I had called the number on the facility RMP; I got a call back from Dr. Billie Johnson, Regulatory Compliance Manager for BHJ. She asked why this BHJ facility was being inspected, and I told her that EPA considered BHJ an agency priority because of its late RMP submittal. We initially discussed scheduling the RMP inspection for August 8, 2024. I sent an email with additional details and the checklist I would be using. Because of a conflict, I called to cancel the inspection; I sent a follow-up email on August 30, 2024, notifying Dr. Johnson that I would instead be inspecting the facility on September 9, 2024.

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 3 Process Checklist (Folder 1, Attachment 1). All attachments cited in this inspection report (Attachments 1 through 18) are also in a folder on the accompanying compact disc (CD). Folder numbers on the CD correspond to attachment numbers.

HISTORY OF BUSINESS

BHJ is a pet food storage and manufacturing company that uses an RMP-regulated chemical, anhydrous ammonia, in its refrigeration process. The plant has two engine rooms: the southeast (old engine room) and northwest (new engine room). The two engine rooms are considered a same process and were evaluated as such. Prior to BHJ owning the property at 2427 170th Street, Fort Dodge, Iowa, a different refrigeration company had been there for approximately 20 years. In 2011, BHJ acquired the property and the southeast refrigeration system. In 2012, BHJ added the northwest engine room to accommodate product inventory.

According to BHJ's maximum intended inventory calculations, the facility has approximately 21,941 pounds of anhydrous ammonia (Folder 2, Attachment 2). The facility's 2024 RMP (Folder 3, Attachment 3) lists a maximum of 23,780 pounds of anhydrous ammonia; I inquired why the quantities differed, to which Mr. Steve Beam replied that the inventory may vary based on when anhydrous ammonia is added to the system annually.

A summary of the facility's inventory is as follows:

	Quantity (pounds)
	Anhydrous Ammonia
Quantity at the Time of Inspection	~23,000 ^(a)
Quantity in Maximum Inventory Documentation	21,941 ^(b)
Quantity listed in 2024 RMP Submission	23,780 ^(c)

Notes:

- (a) Amount I observed on September 9, 2024, based on facility personnel indicating the inventory was similar to that listed in its 2024 RMP.
- (b) See facility's maximum inventory calculations (Attachment 2).
- (c) See facility's 2024 RMP Submission (Attachment 3).

PERSONS INTERVIEWED AND INDIVIDUAL RESPONSIBILITIES

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

Jeff Tschosik Plant Manager, BHJ
Ian Jodeit Process Safety Management (PSM) Specialist, BHJ
Michael Woosley PSM and Safety Consultant, LoTemp Equipment Company
Steve Beam Refrigeration and PSM Coordinator, BHJ

OPENING CONFERENCE

I arrived at the BHJ facility at 2472 170th Street, Fort Dodge, Iowa, on Monday, September 9, 2024, at approximately 9:00 a.m. I signed in at the front office and met with BHJ personnel: Mr. Jeff Tschosik, Plant Manager; Ian Jodeit, PSM Specialist; and Steve Beam, Refrigeration and PSM Coordinator. Michael Woosley, PSM and Safety Consultant, was also present from LoTemp.

After introductions, 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 photographic documentation. 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. Tschosik signed the Notice of Inspection Form.

I then asked to see the facility's RMP documentation, including hazard assessment, process safety information, process hazard analyses, operating procedures, training records, maintenance records, compliance audits, and emergency response procedures, asking questions when necessary.

HAZARD ASSESSMENT

I asked to review BHJ's hazard assessment, including worst-case and alternative-release scenarios (Folder 4, Attachment 4).

Mr. Woosley provided the facility's worst-case release scenario: complete loss of the largest vessel on site, the high-pressure receiver in the southeast engine room. The high-pressure receiver has a maximum capacity of 8,350 pounds. BHJ calculated a release rate of 835 pounds per minute for 10 minutes, resulting in a distance to endpoint of 1.1 miles. An urban topography was assumed, and mapdevelopers.com was used to determine a radius affected by the release.

However, BHJ used Circular Area Profiles (CAPS) 2020 census data with a 2-mile radius instead of 1.1 miles.

I made a preliminary finding post-inspection:

1. **68.30(a): The facility did not use the correct radius to estimate the population that would be affected by the worst-case scenario release. *This finding was added upon post-inspection review.***

Additionally, BHJ did not document the source of tables used to model the release scenario.

I made another preliminary finding post-inspection:

2. **68.39(d): BHJ did not document the methodology applied to model distance to endpoint under both its worst-case and alternative release scenarios. *This finding was added upon post-inspection review.***

The alternative-release scenario for the BHJ facility was a leak from a 0.5-inch-diameter pipe under 180 pounds per square inch gauge (psig). Assumedly, 10 minutes would pass before the release could be controlled. The pipe would release anhydrous ammonia at 540 pounds per minute; at 10 minutes of release time, the total amount released would be 5,400 pounds. The affected radius would be 0.4 mile from the release point, and 53 people were projected to be within the radius of the release by use of CAPS 2020 census data.

PROCESS SAFETY INFORMATION

I requested to review process safety information, and Mr. Woosley provided a Safety Data Sheet (SDS); block flow diagrams; safe upper and lower limits and consequences of deviation; materials of construction; relief and ventilation system design; codes and standards invoked; material and energy balances; and safety systems information (Folder 5 and Attachment 5).

The SDS I received included toxicity and safety information; physical, reactivity, and corrosivity data; as well as permissible exposure limits and stability data.

Safe upper and lower limits for temperatures and pressures were available for compressors, vessels, pumps, valves, and evaporators. Consequences of deviations were listed for vessels, oil scrubber, purgers, pumps, plate chiller, coolers oil pot, blast cell, and the underfloor heater.

The materials of construction document conveyed manufacturer data regarding vessels in both the southeast and northwest refrigeration systems. BHJ follows International Institute of Ammonia Refrigeration (IIAR) and American National Standard Institute (ANSI) guidelines for its process.

I reviewed the design basis for pressure and safety relief and ventilation systems. Relief valves are replaced every 5 years according to IIAR guidelines, and capacities of valves were described and implemented also based on IIAR guidance. The ventilation system document included minimum rate requirements and equipment specifications.

Finally, I noted material energy balances for both the southeast and northwest refrigeration systems.

BHJ's process safety information appeared to satisfy the requirements of 40 CFR 68.65.

PROCESS HAZARD ANALYSES

I asked to review the initial process hazard analysis (PHA) for both refrigeration systems, as well as the two most recent PHAs (Folder 6, Attachment 6). An initial PHA was completed during August 21 and 22, 2012, when the new northwest refrigeration system was put online. PHAs are to be revalidated every 5 years according to 68.67(f), and completion of the next PHA revalidation happened on January 4, 2018. The most recent PHA was completed on December 7, 2023. I made a preliminary finding:

- 3. 68.67(f): The facility did not revalidate or update its PHA every 5 years. *This finding was added upon post-inspection review.***

I reviewed the 2018 PHA, which followed a what-if checklist technique and evaluated each component of processes in both the southeast and northwest systems. Regarding the southeast engine room, recommendations were listed, including repainting and conducting a hazard assessment of evaporators and associated piping. However, completion dates were not provided on the PHA. I asked facility personnel if they had used a different tracking system for PHA recommendations. They said they would have documented actions on the physical PHA. I made a preliminary finding:

- 4. 68.67(e): The facility did not document completion of PHA actions.**

OPERATING PROCEDURES

I requested to review BHJ's standard operating procedures (SOPs), which personnel gave to me (Folder 7, Attachment 7). BHJ had procedures for opening and closing the ammonia refrigeration system, as well as startup, normal operations, normal shutdown, and emergency shutdown for various process equipment, including compressors, accumulators, pumps, vessels, evaporators, and plate freezers. Mr. Tschosik explained that the facility does not have temporary operations, as the engine rooms shut down completely when production stops.

Donning of personal protective equipment (PPE) is emphasized for maintenance activities. Consequences of deviation and other safety considerations are available with process safety information.

I asked how procedures are accessed. Mr. Woosley responded that these are available in the binder and used mainly by LoTemp.

TRAINING

I asked what kind of training BHJ employees receive. Facility personnel cited in-person operator training every 3 years and annual online materials, including a video, presentation, and

informational sheets. Employees are tested on the training and receive certificates of completion, including an 8-hour refresher Hazardous Waste and Emergency Response (HAZWOPER), documentation of which I received (Folder 8, Attachment 8). Mr. Beam tracks who needs training by reviewing certificates and online training completions.

MECHANICAL INTEGRITY

I requested documentation of inspections and tests of process equipment, as well as maintenance SOPs. Mr. Tschosik and Mr. Woosley provided daily pump inspection checklists and a maintenance schedule, as well as annual and safety checklists that LoTemp uses (Folder 9, Attachment 9). BHJ employees are taught how to inspect process equipment, and they paint and grease equipment. However, LoTemp, as BHJ's contractor, conducts most maintenance tasks. I asked to see a SOP pertaining to the evaporator recently installed. The SOP explained instrumentation function and operating limits, initial and normal startup, normal operations, shutdown for maintenance, and emergency and normal shutdowns.

I reviewed the maintenance schedule Mr. Beam provided, which followed IIAR guidelines for frequency of inspection. I inquired if any maintenance involved putting new process equipment online; Mr. Beam responded that equipment replacements recently had been like-in-kind.

Mill tests I read also certified that process equipment, including the recently installed evaporator, had been constructed of appropriate materials.

During my walkthrough of the facility, process equipment appeared to be in good condition with minimal freeze over and no anhydrous ammonia odors.

MANAGEMENT OF CHANGE (MOC)

I asked about any alterations or additions to process equipment that would warrant an MOC. Mr. Beam provided an MOC (Folder 10, Attachment 10) and mentioned that the configuration of two evaporators had prevented straightening of a drip pan; the solution was to replace evaporators 7 and 8. The replacements were like-in-kind. Facility personnel had mistakenly checked a box indicating the evaporators differed from the originals. Personnel corrected the error and showed me a certification letter detailing that the replacement had been like-in-kind (Attachment 10).

Process safety information associated with the evaporators appeared to be updated accordingly.

PRE-STARTUP SAFETY REVIEW (PSSR)

Facility personnel had mentioned installation of a new refrigeration system in 2012, so I asked to review the PSSR. Personnel could not locate the PSSR before the end of the inspection. I made a preliminary finding:

5. 68.77(a) and (b): The facility did not perform an initial Process Safety Start-up Review of the new refrigeration system.

COMPLIANCE AUDIT

I asked to see the facility's two most recent compliance audits, and Mr. Beam provided them to me. One was dated April 30, 2019, and the other March 7, 2022 (Folder 11, Attachment 11), satisfying the 3-year frequency required in 40 CFR 68.79(a). On both compliance audits were recommendations, but no documented record of their completion. I inquired if the facility had another way to track completion of recommendations—to which personnel responded no. I made a preliminary finding:

6. 68.79(d): The facility did not document responses to compliance audit findings.

INCIDENT INVESTIGATION

I asked facility personnel about any incidents involving anhydrous ammonia within the past 5 years. Mr. Beam said that no such incidents had occurred. I requested to review a blank incident form, and Mr. Woosley presented one to me (Folder 12, Attachment 12). The document contained sections for entry of information about causes and conditions of a release, as well as action items to prevent similar releases from reoccurring.

BHJ's incident investigation form appeared to comply with 40 CFR part 68.81(e).

EMPLOYEE PARTICIPATION

I requested to examine BHJ's employee participation written program. Mr. Woosley provided it to me; the written plan (Folder 13, Attachment 13) discussed employee involvement in meetings, conveyance of information when changes to a process occur, and procedure for informing employees of incidents. On the final page of the document was a signature of a BHJ employee and certification that the employee participation written plan had been reviewed.

BHJ's employee participation written plan appeared to meet the requirements of 40 CFR 68.83.

HOT WORK PERMIT

I asked to review any active or completed hot work permits. Mr. Tschosik said the plant does not typically conduct hot work, but they have a SOP. Mr. Woosley provided the SOP, which included a blank permit (Folder 14, Attachment 14). I reviewed the SOP and permit, and these appeared to address fire prevention and protection requirements of 29 CFR 1910.0252(a).

CONTRACTORS

I requested to review contractor training documentation and asked about BHJ's contractor screening process. Mr. Woosley showed me training documentation for employees of LoTemp, BHJ's primary maintenance contractor (Folder 15, Attachment 15). Training subjects included

equipment isolation, startup and shutdown, leak detection trouble shooting, PPE requirements, and safety information. Trainees also receive the facility emergency action plan (EAP). Mr. Woosley and Mr. Tschosik explained that BHI reviews Occupational Safety and Health Administration (OSHA) injury logs, proof of insurance, welding certifications, and safety handbooks. This review is documented in a contractor safety program form (Attachment 15).

BHI's contractor safety program appeared to meet requirements of 40 CFR part 68.87.

EMERGENCY RESPONSE

I asked facility personnel if BHI was a responding facility, to which they responded no. I inquired about the facility EAP, and Mr. Tschosik provided it to me. The EAP (Folder 16, Attachment 16) included a diagram of the facility and listed Mr. Tschosik as the emergency plan coordinator. Additional in the EAP were emergency contact information pertaining to the Fort Dodge Fire Department, as well as safety information in the event of an anhydrous ammonia release. If a release is small/minor (below 300 parts per million), employees may don PPE to close a valve, conduct minor maintenance, or access an emergency shutoff button. Otherwise, the fire department is called, and evacuation ensues. The EAP also conveyed information regarding anhydrous ammonia incident reporting requirements.

I then requested documentation of the facility's emergency coordination with the Fort Dodge Fire Department. I was given a sign-in sheet from August 11, 2023, and a minutes log that detailed walkthrough of the engine rooms and discussion of shutoff points.

BHI appears to comply with emergency planning requirements.

MANAGEMENT SYSTEM

I asked if the facility had a management system in place to oversee implementation of its RMP program. Mr. Beam and Mr. Woosley showed me an organization chart (Folder 17, Attachment 17), and explained that Mr. Jodeit and Mr. Woosley are tasked with maintaining RMP documentation; Mr. Woosley, as contractor with LoTemp, ensures completion of maintenance tasks; Mr. Beam conducts training pertaining to anhydrous ammonia; and Mr. Tschosik, Plant Manager, conducts day-to-day operations.

RISK MANAGEMENT PLAN

I requested to review BHI's most recent RMP submission. Mr. Woosley provided the submission, dated May 21, 2024, that I compared to the submission dated May 22, 2018, which I had received from EPA. I noticed that BHI's 5-year submission was approximately a year late. I made a preliminary finding:

7. 68.190(a): The facility did not submit a 5-year RMP update on time.

Additionally, I saw that the emergency contact between the two RMPs had changed from Mr. Dale Hudson (former plant manager) to Mr. Tschosik. I asked Mr. Tschosik when he had

become plant manager; he replied approximately 2 to 3 years ago, which would mean that the facility did not update the emergency contact within 30 days of the change.

I made another preliminary finding:

- 8. 68.195(b): The facility did not update the emergency contact listed on its RMP within 30 days of the change.**

PHOTOGRAPHS

During the site walk-through, I took 21 digital photographs. All of these are in Folder 18 of the CD, and selected photographs appear in a photographic log in Attachment 18.

CLOSING CONFERENCE

After I finished reviewing all the applicable documents and completed the site walk-through, I explained to facility personnel that I had made the following preliminary findings:

- 4. 68.67(e): The facility did not document completion of PHA actions.**
- 5. 68.77(a) and (b): The facility did not perform an initial Process Safety Start-up Review of the new refrigeration system.**
- 6. 68.79(d): The facility did not document responses to compliance audit findings.**
- 7. 68.190(a): The facility did not submit a 5-year Risk Management Plan (RMP) update on time.**
- 8. 68.195(b): The facility did not update the emergency contact listed on its RMP within 30 days of the change.**

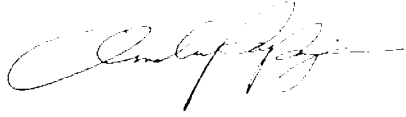
I indicated that additional findings could be identified during post-inspection review of the documents collected. Indeed, I did make the following findings upon post-inspection review:

- 1. 68.30(a): The facility did not use the correct radius to estimate the population that would be affected by the worst-case scenario release.**
- 2. 68.39(d): BHJ did not document the methodology applied to model distance to endpoint under both its worst-case and alternative release scenarios.**
- 3. 68.67(f): The facility did not revalidate or update its process hazard analysis (PHA) every 5 years.**

I then provided the Confidentiality Notice and the completed Receipt for Samples and Documents form (Folder 1). Mr. Tschosik reviewed and signed both documents, indicating that the document copies provided did not contain confidential business information.

I departed the facility at approximately 5:15 pm on September 9, 2024.

This report concludes my inspection activities regarding the BHJ Facility in Fort Dodge, IA.



Amelia Papajohn
Compliance Inspector

**Hensley,
Dave**

Digitally signed by
Hensley, Dave
Date: 2024.12.16
12:08:51 -06'00'

Dave Hensley
Chemical Accident Prevention Section Air
Branch
Enforcement & Compliance Assurance Division
Region 7 U.S. Environmental Protection Agency

NOTICE OF PRELIMINARY FINDINGS

FIRM NAME: BHJ JSA LLC

RMP/TRI NO: none

FIRM ADDRESS: 2472 170th St. Fort Dodge, IA, 50501

INSPECTOR: Amelia Papajohn

DATE: 9/9/24

An inspection of the above facility has just been completed. The purpose of the inspection was to determine compliance with the requirements of the Clean Air Act Section 112r and Emergency Planning Community Right-to-Know Act. The following potential violations were identified:

CITATION

DESCRIPTION

<u>68.67(e)</u>	<u>Didn't document PHA actions were completed.</u>
<u>68.77(a) & (b)</u>	<u>Didn't have initial PSSR for new refrigeration system</u>
<u>68.79(d)</u>	<u>Didn't document response to Compliance Audit findings</u>
<u>68.190(a)</u>	<u>Didn't submit 5 year update on time.</u>
<u>68.195(b)</u>	<u>Didn't update emergency contact on RMP w/i 30 days.</u>
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This Notice is provided to call your attention to those areas of potential noncompliance at the earliest possible time. This Notice does not constitute a Notice of Violation, Order, or Civil Action pursuant to the Emergency Planning Community Right-to-Know Act of 1986 (SARA Title III) or Section 113 of the Clean Air Act (CAA), and may not be a complete listing of all violations which may be identified as a result of this inspection.

You are encouraged to take corrective action to address these preliminary findings. Please submit the actions you take and/or a schedule of the actions to EPA in writing as soon as possible.

Tova Urban

Phone: 913-551-7133

U.S. Environmental Protection Agency
11201 Renner Blvd.
Lenexa, Kansas 66219

Corrective actions you have taken may be considered in any subsequent U.S. EPA enforcement follow-up, to the extent allowed by Agency regulations, guidance, and policies.

The undersigned hereby acknowledges receipt of a copy of this Notice.

PRINTED NAME: Jeffrey L Tschosch

TITLE: Plant Manager

SIGNATURE: [Signature]

DATE: 9-9-24

NOTICE OF PRELIMINARY FINDINGS

FIRM NAME: BHJ JSA LLC

RMP/TRI NO: none

FIRM ADDRESS: 2472 170th St. Fort Dodge, IA, 50501

INSPECTOR: Amelia Papajohn

DATE: 9/9/24

An inspection of the above facility has just been completed. The purpose of the inspection was to determine compliance with the requirements of the Clean Air Act Section 112r and Emergency Planning Community Right-to-Know Act. The following potential violations were identified:

CITATION

DESCRIPTION

68.67(e)

Didn't document PMA actions were completed.

68.77(a): (b)

Didn't have initial PSSR for new refrigeration system

68.79(d)

Didn't document response to compliance audit findings

68.190(a)

Didn't submit 5 year update on time.

68.195(b)

Didn't update emergency contact on RMP w/i 30 days.

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The undersigned hereby acknowledges receipt of a copy of this Notice.

PRINTED NAME: Jeffrey L Tschosch

TITLE: Plant Manager

SIGNATURE: [Signature]

DATE: 9-9-24