

CAA 112(r) INSPECTION REPORT

Name: Nebraska Corn Processing, LLC	
Address: 107 Potter Street, Cambridge, NE, 69022	Date of Inspection: September 23, 2024
County: Furnas	Case No: 24NE0923
Phone: 308-697-3760	RMP No: 1000 0020 2121
High Risk: No	FRS No: 1100 1785 2625
CAA Title V: No	Program Level: Program 3
Mailing Address: 107 Potter Street, Cambridge, NE, 69022	
Process: Ethanol manufacturing using denaturant.	

SUMMARY OF OBSERVATIONS

A review of documents pertaining to Nebraska Corn Processing, LLC (NCP) at 107 Potter Street, Cambridge, Nebraska (NE) (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. **68.22(b-c):** The facility did not provide parameters for worst-case release.
2. **68.39(c):** The facility did not document a release rate or duration for its worst-case scenario. *This is a post-inspection finding.*
3. **68.39(b):** The facility did not provide documentation explaining the alternative release scenario.
4. **68.65(d)(1)(4):** The facility did not document relief system design basis.
5. **68.69(a)(1-4):** The facility did not develop written procedures for all aspects of the process.
6. **69.79(a):** The facility did not complete a compliance audit every 3 years.
7. **68.10(b):** The facility did not comply with emergency coordination activities.
8. **68.90(b)(4):** The facility did not comply with emergency coordination requirements described in 40 CFR 68.93.
9. **68.93(c):** The facility did not document coordination with the Fire Department.

INTRODUCTION

I, Amelia Papajohn, Tetra Tech, Inc. (Tetra Tech), as a representative of U.S. Environmental Protection Agency (EPA) Region 7, inspected the NCP facility in Cambridge, NE, on September 23, 2024.

On September 17, 2024, I called the number on the facility risk management plan (RMP); I received a call back from Mr. Mike Hotchkiss. We discussed scheduling the RMP inspection for September 23, 2024, because of an annual shutdown of the process. I sent a follow-up email with additional details and the checklist I would be using.

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

NCP is an ethanol manufacturing facility that uses gasoline (denaturant) and naphthalene (naphtha) to render its product undrinkable and suitable for fuel sale. Although gasoline is not specifically listed as a regulated substance under 40 CFR 68.130, it may contain one or more regulated substances. Because both it and the naphtha petroleum mixture are used as a denaturant, not a fuel, it does not meet the exemption in 40 CFR Section 68.115(b)(2)(ii). As a result, the denaturant and naphtha are flammable liquid mixtures regulated by 40 CFR 68.

The mixtures are in two separate tanks: TK-6103 for naphtha and TK-6104 for denaturant. The property previously was owned by a different ethanol manufacturer that went out of business; NCP inherited the denaturant tank and associated piping in 2008 and added the naphtha tank in 2023 for renewable energy tax credit.

According to NCP's maximum intended inventory calculations, a maximum of 999,999 pounds of denaturant and naphtha may be on site at a time (Folder 2, Attachment 2). The facility's 2022 RMP (Folder 3, Attachment 3) lists a maximum of 567,000 pounds of naphtha.

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

	Quantity (pounds)	Quantity (pounds)
	Naphtha	Denaturant
Quantity at the Time of Inspection	~510,000 ^(a)	~510,000 ^(a)
Quantity in Maximum Inventory Documentation	999,999 ^(b)	999,999 ^(b)
Quantity listed in 2022 RMP Submission	567,000 ^(c)	567,000 ^(c)

Notes:

- (a) Amount I observed on September 23, 2024, based on facility inventory knowledge.
- (b) See facility's maximum inventory (Attachment 2).
- (c) See facility's 2022 RMP Submission (Attachment 3).

PERSONS INTERVIEWED AND INDIVIDUAL RESPONSIBILITIES

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

Mike Hotchkiss Environmental Health and Safety (EHS Manager), NCP
Mary Carper Corporate Safety Officer, NCP
Troy Bose Maintenance Manager, NCP

OPENING CONFERENCE

I arrived at the NCP facility at 107 Potter Street, Cambridge, NE, on Monday, September 23, 2024, at approximately 8:00 a.m. I signed in at the front office and met with Mr. Hotchkiss, EHS Manager, in a conference room. He mentioned NCP's corporate safety officer, Ms. Mary Carper, was to join briefly on a call.

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. Hotchkiss 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 NCP's hazard assessment, including worst-case and alternative-release scenarios (Folder 4, Attachment 4).

Mr. Hotchkiss provided the facility's worst-case release scenario: complete loss of the denaturant tank, the largest vessel on site, with a capacity of 567,000 pounds. NCP used RMP*Comp to calculate a distance to endpoint of 0.7 mile assuming an overpressure endpoint of 1 pound per square inch. This would affect 312 people in the radius, which was determined by use of Marplot 2010 census data. However, weather parameters were not provided. I made a preliminary finding:

- 1. 68.22(b-c): The facility did not provide parameters for worst-case release.**

Additionally, a release rate was not documented for the worst-case release scenario:

- 2. 68.39(c): The facility did not document a release rate or duration for its worst-case scenario. *This is a post-inspection finding.***

The alternative-release scenario for the NCP facility was a pool fire resulting from a tank overflow. However, no documented description of this scenario was available, including assumptions and

parameters used, rationale for selection of specific scenarios, and anticipated effect of administrative controls and mitigation on the release quantity and rate. I made a preliminary finding:

3. 68.39(b): The facility did not provide documentation explaining the alternative release scenario.

The release rate was predicted at 3,500 pounds per minute for a duration of 15 minutes, resulting in 52,500 pounds released. The affected radius would be 0.4 mile from the release point, and no people were projected to be in the radius of the release by use of Marplot 2010 census data.

PROCESS SAFETY INFORMATION

I requested to review process safety information and Mr. Hotchkiss provided Safety Data Sheets (SDSs); block flow diagrams; safe upper and lower limits and consequences of deviation; materials of construction; codes and standards invoked; material and energy balances; and safety systems information (Folder 5 and Attachment 5).

SDSs for both denaturant and naphtha included toxicity and safety information; physical, reactivity, and corrosivity data; and permissible exposure limits and stability data.

Safe upper and lower limits of temperatures and pressures were available for both tanks. Consequences of deviations were listed in the process hazard analysis (PHA) for process equipment.

The materials of construction document showed parts and dimensions of the process tanks. NCP follows American National Standard Institute (ANSI), National Fire Protection Association (NFPA), and American Petroleum Institute (API) guidelines for its process.

I asked to review the design basis for pressure and safety relief systems. Mr. Hotchkiss could not find such documentation. I made a preliminary finding:

4. 68.65(d)(1)(4): The facility did not document relief system design basis.

Finally, material energy balances were provided for the entire process.

PROCESS HAZARD ANALYSES

I asked to review the initial PHAs of both denaturant and naphtha tanks, as well as the two most recent PHAs (Folder 6, Attachment 6). The initial PHA of denaturant from 2008 used a Hazard and Operability study (HAZOP). HAZOP methodology was also applied for the two most recent PHAs, dated May 15, 2023, and May 18, 2018. Both PHAs included denaturant, and because the naphtha tank came online in 2023, the 2023 PHA included it.

I noticed that numerous recommendations were listed on the 2023 PHA. I asked Mr. Hotchkiss how the facility tracks completion of actions in response to these recommendations. He showed me an Excel spreadsheet that documented the recommendation, action taken, and completion date. He said that recommendations are completed by submittal of a work order or assignment of tasks during NCP's monthly meetings.

OPERATING PROCEDURES

I requested to review NCP's standard operating procedures (SOPs); Mr. Hotchkiss responded that the facility had only railcar loading/offloading procedures related to denaturant and naphtha (Folder 7, Attachment 7). I asked about any additional procedures related to normal startup and shutdown, emergency shutdown or operations, and startup following a turnaround, because Mr. Hotchkiss had mentioned that the facility has an annual shutdown. He could not produce such documentation, so I made a preliminary finding:

5. 68.69(a)(1-4): The facility did not develop written procedures for all aspects of the process.

I inquired how employees access the railcar procedures. Mr. Hotchkiss replied that those procedures are available online or in the control room.

TRAINING

I asked what kind of training NCP employees receive. Mr. Hotchkiss provided me a list of all courses he had taken online at EHS Insight.com (Folder 8, Attachment 8), and explained that he tracks all employee training there. Basic safety training and awareness is provided virtually, and annual review of SOPs is completed both virtually and in person. Monthly refresher training also occurs.

MECHANICAL INTEGRITY

I requested documentation of inspections and tests on process equipment, as well as maintenance SOPs. Mr. Troy Bose and Mr. Hotchkiss provided tank inspections, railcar unloading checklist, pump maintenance SOP, relief valve and level gauge tests, and maintenance schedule (Folder 9, Attachment 9). Mr. Hotchkiss explained that testing and inspections occur during annual plant shutdowns to ensure mechanical integrity of the process.

I reviewed the inspection and test documentation. Xcel completed a tank thickness test and external inspection of the naphtha tank that received a passing score. Internal inspection of the tanks is conducted every 10 years. Relief valves for both the naphtha and denaturant tanks passed tests and inspection; these are completed every 2 years. The level gauges and digital control system on both tanks passed inspection and were checked by testing whether the interlocks close when the high alarm is encountered. Inspection frequency of the interlock system has increased since the 2018 incident (described below) to approximately monthly.

I reviewed the maintenance schedule Mr. Hotchkiss and Mr. Bose provided, which followed American Society of Mechanical Engineers (ASME), API 653 guidelines for frequency of inspection.

The railcar inspection checklist shown to me by Mr. Bose included checks that valves were sealed, and that the railcar brake was engaged before loading and the car itself indicated no signs of defects.

I asked to see maintenance SOPs and how employees access maintenance information. Mr. Hotchkiss responded that manuals are available in the control room, and he provided a pump maintenance SOP with information on startup, shutdown, operations, and troubleshooting.

During my walkthrough of the facility, process equipment appeared to be in good condition. At the time of inspection, railcars were not being loaded and product was not being mixed because of the shutdown. I saw no signs of leaks in the tank farm area and detected no odors.

MANAGEMENT OF CHANGE (MOC)

Because Mr. Hotchkiss mentioned installation of the naphtha tank in 2023, introducing a major change to the denaturing process, I asked to review an MOC for it in addition to any other process equipment alterations. Mr. Hotchkiss said that the facility occasionally replaces pumps, but replacements have been like in kind. He gave me MOC documentation for installation of the naphtha tank, including a change request form, employee notice document, level gauge installation work order, and Fire Marshall notification (Folder 10, Attachment 10).

PRE-STARTUP SAFETY REVIEW (PSSR)

I asked to review the PSSR for the naphtha tank installation. Mr. Hotchkiss gave me a PSSR checklist (Folder 11, Attachment 11) that showed performance of a PHA, completion of MOC documentation, updates to process safety information, and passage of maintenance pre-startup tests.

COMPLIANCE AUDIT

I asked to see the facility's two most recent compliance audits, and Mr. Hotchkiss provided them to me. One was dated October 11, 2019, and the other November 16, 2022 (Folder 11, Attachment 11). I noticed the most recent compliance audit was approximately 1 month late, and thus made a preliminary finding:

6. 69.79(a): The facility did not complete a compliance audit every 3 years.

I noted several recommendations on the 2022 compliance audit, and I inquired if the facility had a way to track completed actions to implement recommendations. Mr. Hotchkiss showed me an Excel spreadsheet he uses to document the date of completion of an action in response to a recommendation and a description of the action (Attachment 11).

INCIDENT INVESTIGATION

I asked facility personnel about any incidents involving denaturant. Mr. Hotchkiss cited one on May 21, 2018. I requested to review the incident report (Folder 12, Attachment 12). According to the report, NCP maintenance staff noticed gasoline mixed with rainwater in the containment berm of the tank farm during a site walk-through. Valves and flanges in the containment area were closed; the cause of the release was determined to be the level gauge, which stopped at 66% during offload. Mr. Hotchkiss explained that this had caused inaccuracy in the tank level displayed while gasoline was being pumped to the tank. To remedy this, NCP repaired the faulty gauge and added a secondary ultrasonic level gauge. I inquired how the gauges are tested and asked to see documentation of their installation. Mr. Bose responded that level gauges are tested for alarm on the digital control system and valve automatic shut-off. He presented documentation indicating successful completion of level gauge testing on both the denaturant and naphtha tanks.

NCP's incident investigation appeared to comply with 40 CFR 68.81(e).

EMPLOYEE PARTICIPATION

I requested to examine NCP's employee participation written program. Mr. Hotchkiss provided it to me. The written plan (Folder 13, Attachment 13) detailed employee involvement in aspects of RMP. Additionally, safety information was highlighted, and management encourages submittals of safety concerns.

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

HOT WORK PERMIT

I asked to review any active or completed hot work permits. Mr. Hotchkiss said a contractor, UGS, conducts hot work, and he provided a completed permit (Folder 14, Attachment 14). Activity performed and required precautions were listed on the permit, which was also signed and dated.

CONTRACTORS

I requested to review contractor training documentation and asked about NCP's contractor screening process. Mr. Hotchkiss explained that contractors review the Emergency Action Plan (EAP), hazards associated with the process, and the facility permitting system for maintenance; these reviews are documented as contractor requirements (Folder 15, Attachment 15). He also explained that NCP uses ISNetworld, or ISN, to screen contractors according to their safety programs, Occupational Safety and Health Administration (OSHA) 300 logs, citations, etc.

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

EMERGENCY RESPONSE

I asked if NCP was a responding facility, and Mr. Hotchkiss said it was not. I inquired about the facility EAP, and Mr. Hotchkiss provided it to me. The EAP (Folder 16, Attachment 16) stipulated that employees may respond to minor emergencies but are otherwise expected to evacuate and call the local fire department. Personal protective equipment (PPE) is available for minor fixes to process equipment. Roles and responsibilities were documented for NCP personnel, as well as contact information. Information regarding hazardous materials and their reportable quantities was detailed, including denaturant and naphtha. External agencies' contacts were listed.

I then requested documentation on the facility's emergency coordination with the Cambridge Fire Department. Mr. Hotchkiss gave me a table which showed the days that he attempted to contact the fire department. I asked to see a sign-in sheet with the individuals who attended the Fire Department's visit in 2021, but Mr. Hotchkiss did not have that documentation. I made the following preliminary findings:

- 7. 68.10(b): The facility did not comply with emergency coordination activities.**
- 8. 68.90(b)(4): The facility did not comply with emergency coordination requirements described in 40 CFR 68.93.**
- 9. 68.93(c): The facility did not document coordination with the Fire Department.**

MANAGEMENT SYSTEM

I asked if the facility had a management system in place to oversee implementation of its RMP program. Mr. Hotchkiss explained that he, as EHS manager, conducts PHAs and completes PSSRs, ensures employee participation, and manages incidents and the EAP. The plant manager, Mr. Jason Cobb, tracks process safety information and MOCs. The production manager, Mr. Lance Fraiser, conducts training and manages operating procedures. The maintenance manager, Mr. Bose, ensures mechanical integrity of process equipment.

RISK MANAGEMENT PLAN

I requested to review NCP's most recent RMP submission. Mr. Hotchkiss provided it, dated June 9, 2022. The RMP listed him as the emergency contact.

PHOTOGRAPHS

During the site walk-through, I took 16 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:

1. **68.22(b-c): The facility did not provide parameters for worst-case release.**
2. **68.39(c): The facility did not document a release rate or duration for its worst-case scenario. *This is a post-inspection finding.***
3. **68.39(b): The facility did not provide documentation explaining the alternative release scenario.**
4. **68.65(d)(1)(4): The facility did not document relief system design basis.**
5. **68.69(a)(1-4): The facility did not develop written procedures for all aspects of the process.**
6. **69.79(a): The facility did not complete a compliance audit every 3 years.**
7. **68.10(b): The facility did not comply with emergency coordination activities.**
8. **68.90(b)(4): The facility did not comply with emergency coordination requirements described in 40 CFR 68.93.**
9. **68.93(c): The facility did not document coordination with the Fire Department.**

I indicated that additional findings could be identified during post-inspection review of the documents collected. I then provided the Confidentiality Notice and the completed Receipt for Samples and Documents form (Folder 1). Mr. Hotchkiss reviewed and signed both documents, indicating that the document copies provided did not contain confidential business information.

I departed the facility at approximately 3:00 pm on September 23, 2024.

This report concludes my inspection activities regarding the NCP facility in Cambridge, NE.



Amelia Papajohn
Compliance Inspector

Hensley,
Dave



Digitally signed by
Hensley, Dave
Date: 2024.12.18
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Dave Hensley
Chemical Accident Prevention Section Supervisor
Air Branch
Enforcement & Compliance Assurance Division
Region 7 U.S. Environmental Protection Agency

ATTACHMENTS

- 1 Inspection Forms and Checklists
- 2 Maximum Intended Inventory
- 3 2022 RMP
- 4 Hazard Assessment
- 5 Process Safety Information
- 6 PHAs
- 7 Operating Procedures
- 8 Training
- 9 Mechanical Integrity
- 10 MOC
- 11 PSSR
- 12 Compliance Audit
- 13 Incident Investigation
- 14 Employee Participation
- 15 Hot Work
- 16 Contractors
- 17 Emergency Response
- 18 Photographic Log

CD – Attached to Report

NOTICE OF PRELIMINARY FINDINGS

FIRM NAME: Nebraska Corn Processing

RMP/TRI NO: none

FIRM ADDRESS: 107 Potta Street, Cambridge, NE

INSPECTOR: Amelia Papajohn

DATE: 9/23/24

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

68.10(b)

The facility didn't comply with emergency coordination activities.

68.22(b-e)

The facility didn't provide parameters for worst case release (wind speeds, temperature, surface roughness etc.)

68.39(b)

The facility didn't provide documentation explaining the alternative release scenario.

68.65(d)(1)(iv)

The facility didn't document relief system design basis.

68.69(a)(1)-(4)

The facility didn't develop written procedures for aspects of the process.

68.79(a)

The facility didn't complete a compliance audit every 3 years.

68.90(b)(4)

The facility didn't comply with part 68.93 emergency coordination

68.93(c)

The facility didn't document coordination/attempts to reach Fire Department.

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.

Trevor 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: Mike Hotchkiss

TITLE: EHS Manager

SIGNATURE: [Signature]

DATE: 9-23-24