



REGION 5

CHICAGO, IL 60604

MEMORANDUM

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Central Indiana Ethanol, LLC

FROM: Manojkumar P. Patel, Environmental Engineer
AECAB (MI/WI)

THRU: Sarah Marshall, Section Supervisor
AECAB (MI/WI)

TO: File

BASIC INFORMATION

Facility Name: Central Indiana Ethanol, LLC

Facility Location: 2955 West Delphi Pike, Marion, Indiana 46952

Date of Inspection: September 24 and 25, 2024

EPA Inspector(s):

1. Manojkumar P. Patel, Environmental Engineer

Other Attendees:

1. Mike Browder, Environmental, Health and Safety Engineer, Central Indiana Ethanol LLC
2. Ryan Drook, Chief Executive Officer, Central Indiana Ethanol, LLC
3. Mark Sevier, Director of Quality, Central Indiana Ethanol, LLC
4. Brady Turner, Operations, Central Indiana Ethanol, LLC
5. Austin Crouch, Maintenance Supervisor, Central Indiana Ethanol, LLC
6. Eric Utterback, V.P. Operations, Central Indiana Ethanol, LLC

Contact Email Address: mbrowder@cie.us

Purpose of Inspection: Compliance with the Chemical Accident Prevention Provisions found in Section 112(r) of the Clean Air Act (CAA), 42 U.S.C. § 7412(r)

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Facility Type: Ethanol Manufacturing Operations with natural gasoline (Flammable Mixture)

Regulations Central to Inspection: The Chemical Accident Prevention Provisions at 40 C.F.R. Part 68, commonly referred to as the Risk Management Program

Arrival Time: 9/24/2024 at 8:50 am CST; 9/25/2024 at 8:00 am CST

Departure Time: 9/24/2024 at 4:30 pm CST; 9/25/2024 at 1:00 pm CST

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☒ Provided Small Business Resource Information Sheet
- ☐ Small Business Resource Information Sheet not provided.
- ☒ Provided CBI warning to facility

The following information was obtained verbally from the facility personnel unless otherwise noted.

Company Ownership: In or around December 2021, CC Industries acquired Central Indiana Ethanol, LLC operations located in Marion, Indiana.

Process Description:

Central Indiana Ethanol, LLC (CIE or the facility) operates 24 hours a day, 7 days a week, and employs about 60 full-time employees. The facility performs the following operations: grain receiving, hammer milling, fermentation, distillation, dehydration and evaporation, separation, wet and dry distillers' grain and solubles (WDGS/DDGS) drying, corn oil separation, and ethanol storage. The facility also procedures carbon dioxide (CO₂) from the fermenters scrubber and produces food grade CO₂.

The facility has one (1) natural gasoline storage tank with 100,000 gallons capacity and it is located in the tank farm area. The natural gasoline is used to denature the ethanol in the tank farm area. Natural gasoline is a flammable mixture. The four constituents of natural gasoline are butane, pentane, neo-pentane (or 2,2- dimethylpropane), and iso-pentane (or 2-methylbutane). The four constituents are part of the Risk Management Plan (RMP) requirements. Butane makes up 0.806% of the natural gasoline, pentane makes up 24.518%, neo-pentane makes up 0.237%, and iso-pentane makes up about 22.96%.

TOUR INFORMATION

EPA Toured the Facility: Yes

Data Collected and Observations:

The following observations were made during the records review process:

Risk Management Program Applicability

The facility describes its operations as under the North Industrial Classification Standards (NAICS) code 325193 (Ethyl Alcohol Manufacturing). This NAICS code is not listed under the eligible NAICS code under the RMP regulations. However, the covered process meets the Program Level 3 eligibility requirements because the covered processes are subject to the Occupational Health and Safety Agency (OSHA) Process Safety Management standards at 29 C.F.R. § 1910.119 and it satisfies the requirements at 40 C.F.R. § 68.10(i)(2).

Management System

EPA requested documentation of the management system for implementing elements of the RMP, as specified in 40 C.F.R. § 68.15(a). The facility provided records of a RMP management system at the time of inspection.

The facility was unable to provide an assigned qualified person or position that has the overall responsibility for the development, implementation, and integration of RMP elements. Also, an organizational chart or similar document was not provided to EPA demonstrating the individual requirements of RMP.

Process Safety Information

The facility provided a Process and Instrumentation Diagram (P&ID) for the covered process equipment. The process chemistry and the maximum intended inventory is described in the RMP plan. The facility will provide the safe upper and lower limits for temperatures, pressures, and flows for the covered process equipment under the denaturant system for EPA's review.

The facility provided Process Deviations and Consequences for the Anhydrous Ammonia System. The facility did not evaluate the potential consequences of deviation resulting from the safe upper and lower limits for temperatures, pressures, or flows.

The facility will upload an electrical classification layout P&IDs to satisfy the requirements under 40 C.F.R. § 68.65(d)(1)(iii). The facility did not provide a relief system design and design basis for the covered equipment.

EPA requested documents related to the safety systems on the covered equipment and the facility stated that it will provide a document that will address the safety system on the covered process equipment. The facility stated that the ventilation system design will be uploaded for the facility's covered processes.

EPA was unable to verify the facility's applicable design codes and standards employed. The facility informed EPA that it will upload them to a SharePoint site at a later time. The facility did not have a material and energy balance for the covered processes (Ammonia System and Denaturant System) as these covered processes were built after June 21, 1999.

Process Hazards Analysis

The facility used the Checklist and Hazards and Operability Study (HAZOP) methods for the latest PHA revalidation in 2024. EPA observed that the facility updated or revalidated the PHA every 5 years to show it is consistent with the current covered process. The facility's prior PHA was performed in 2019 using HAZOP and Checklist methods.

We discussed the NODE #8 Ammonia System in the 2024 PHA. The facility uses a truck's pumping system for unloading anhydrous ammonia into the Anhydrous Ammonia Tank. The facility did not define the pump's stop and the pump's breaks in NODE #8.

We also discussed about the NODE #10 - Denaturant Storage, and Final Product Tanks. In paragraph 10.1 Recommendation column, a "deadhead condition" is not defined. As per the facility, a "deadhead condition" is a phase where unloading pumps are running but the valves are closed. The facility is in process of revising its SOP for the denaturant tank to add "operator opens the deadhead valves prior to unloading of natural gasoline". Secondly, the facility needs to add "shut the drain line isolation valve prior to PG-8306 and open valve prior to the Tank TF-8306".

Operating Procedures

The facility will provide all operating procedures for EPA's review to a SharePoint site. The facility stated that all operating procedures are readily accessible by employees who are involved in the covered processes through a Document Control Software (DCS). The facility informed EPA during the inspection that the facility did not annually certify that operating procedures are current and accurate, and they were not reviewed to assure the facility's current operating practices.

Opening of process equipment and line break are part of Lockout and Tagout (LOTO) policy and the facility will upload the policy.

Training

EPA requested RMP training records for all employees at the facility. Specifically, EPA requested that all records must contain information that each employee understood the training on the operating processes and can verify that each employee understood the training. All training records were uploaded to the SharePoint folder.

Mechanical Integrity

The facility claims that it has established and developed written procedures to maintain the on-going integrity of the process equipment. EPA requested inspection, calibration, testing records for tank farm equipment, all related transfer pumps, loading and unloading arms, pressure relief valves (PRV), and tank level gauges.

The facility provided the Mechanical Integrity (MI) policy and procedures for all covered equipment. EPA did not verify the inspection and the required testing performed on all process equipment. The facility will provide documents demonstrating that it followed RAGAGEP for inspections and tests on all covered equipment.

Management of Change

The facility informed EPA that it established and implemented written procedures to manage change to process chemicals, technology, and equipment. EPA requested a list of Management of Change (MOC) in the last 5 years and requested the facility to upload all information related to the MOCs. The facility claimed that it did not have any MOCs in the last 5 years.

Compliance Audits

At the time of the inspection, the facility provided compliance audit reports that have been performed for the facility's RMP covered processes. The facility completed the latest compliance audit (CA) on July 18, 2023. The previous CA was completed on April 25, 2021. The RMP regulations require the facility to certify that it evaluated compliance with RMP regulations at least every three (3) years to verify that the procedures and practices are being followed adequately.

EPA reviewed the 2023 Audit findings and observed that the report described several findings were marked NS (as not in compliance with the RMP criteria).

The latest 2023 CA report stated that the facility does not maintain a document on the maximum capacity of the process vessels or piping and recommended the facility to update the maximum intended inventory including the pressure vessel capacity and piping capacity.

The 2023 CA report stated that no operating limits are defined with the SOPs at the facility and the report recommends updates to the SOPs to include normal operating limits including safe upper and lower limits and exit points from normal operations into emergency operations or shutdown procedures for the Process Safety Management (PSM) covered processes. The 2023 CA report states

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that no conditions for emergency shutdown were defined within the SOPs and recommends to define the conditions in which emergency operations or emergency shutdown is required.

As per the 2023 CA Report, operating limits do not contain consequences of deviation and steps required to correct or avoid deviation. The 2023 CA Report suggests to develop SOPs to define actions to take to avoid deviation from normal operating conditions and address the hazards of the chemicals in the processes.

The facility's SOPs do not contain safety systems and its functions for the covered processes.

The facility did not document visual inspection of the rupture disks during the shutdown and 2023 CA report recommended to add documentation for visual inspections of rupture disks in the shutdown checklist.

The 2023 CA Report provides that there is no established process for evaluation of contractor safety. The 2023 CA Report recommends developing and implementing a process to periodically evaluate contractor performance, safety protocols, and training records.

Employee Participation

The facility informed EPA during the inspection that it developed a written plan of action regarding the implementation of employee participation to access PHAs, operating procedures, and all related information under the RMP regulations.

Contractors

The facility claims that it collects and evaluates information regarding the contract owner or operator's safety performance when it selects a contractor. However, EPA was unable to verify how the facility evaluates a contractor's periodical performance.

Emergency Response

The facility informed EPA that its facility is designated as a "non-responding source" under RMP emergency response program. EPA received a revised Emergency Response Plan dated May 3, 2024.

Photos and/or Videos: were taken during the inspection and are listed in Appendix A.

Field Measurements: were not taken during this inspection.

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

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Requested documents:

- 2020/2021 Compliance Audit Report
- July 18, 2023, Compliance Audit Report
- Protect Project 9/2024 Report
- First Verify Screenshot – Annual Review
- First Verify Screenshot Review 9-2021
- First Verify Screenshot Westmore Project 8-2024
- First Verify Screenshot Zeeco Project 7-2023
- Emergency Action Plan dated May 3, 2024
- CIE PSM Committee Meeting Minutes dated January 10, 2024
- API 653 Storage Tank TF-8306 Inspection Report dated February 11, 2021
- API 653 Storage Tank TF-8309 Inspection Report dated February 8, 2021
- API 510 Anhydrous Ammonia Tank TP-12401 Inspection Report dated November 12, 2020
- Pressure Safety Valve Replacement Report
- Manufacturer Specifications for CROSSBY Series valves, Hydro seal valves, SQUIBB TAYLOR Relief Valves
- F-720-013 Maintenance Technicians Training Checklist
- Standard Operating Procedures WI-C-1040 Filling Ammonia Tank
- SOP WI-C-1075 Starting Ammonia System
- SOP WI-C-1083 Working on the Ammonia System
- SOP WI-D-1019 Offload Denatured Truck
- SOP WI-M-1240 Resetting Liquid Ammonia Breakaway Valve
- CIE 2019 PHA Final Report (8/30/2019)
- CIE Marion PHA Final Report (7/14/2019)
- F346 PSV ASME Standards Rev 3
- F346 Wall Louvers Rev 0
- ICM40 Wall Louvers Design Calculations Rev 0
- 01 PK-12400 Specifications Rev 0
- 02 Ammonia Pkg Cut Sheets
- TP4, TP5, TP6, TP7 (2015) Documents
- TP12401 Ammonia Tank Specification
- Anhydrous Ammonia Safety Data Sheet
- Natural Gasoline Data Sheet (3/2/2023)
- New Hire Training
- Ammonia Driver Training Logs
- Incident Investigation Policy (P-PSM-1012)
- Pre-Startup Safety Review Policy (P-PSM-1008)
- Mechanical Integrity Policy (P-PSM_1009)
- Management of Change Policy (P-PSM-1011)
- Employee Participation Policy (P-PSM-1002)
- Hotwork Policy (P-PSM-1010)

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- Contractor Safety Policy (P-PSM-1007)
- Process Deviations and Consequences

DIGITAL SIGNATURES

Report Author: **MANOJKUMAR PATEL**
Digitally signed by MANOJKUMAR PATEL
Date: 2024.11.04 15:12:07 -06'00'

Section Supervisor: **SARAH MARSHALL**
Digitally signed by SARAH MARSHALL
Date: 2024.11.05 08:55:48 -06'00'

APPENDICES

1. Appendix A: Digital Image Log and Digital Video Log

Facility Name: Central Indiana Ethanol, LLC
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APPENDIX A: DIGITAL IMAGE LOG AND DIGITAL VIDEO LOG

Inspector Name: Manojkumar P. Patel
Sept 25 2024

Archival Record Location: [CAA RMP Inspection Pictures](#)

Image Number	File Name	Date and Time (incl. Time zone and DST)	Description of Image
1	P9250328.JPG	9/25/2024 10:21	Denaturant Unloading (Bottom w/ facility's pump)
2	P9250329.JPG	9/25/2024 10:22	Denaturant Unloading Pressure Gauge
3	P9250330.JPG	9/25/2024 10:25	Final Product Loadout - Bottom Rack
4	P9250331.JPG	9/25/2024 10:25	Final Product Loadout - Filter
5	P9250332.JPG	9/25/2024 10:26	Final Product Loadout - Filter Pressure Readout @PSI
6	P9250333.JPG	9/25/2024 12:14	PSV on the Filter Skid
7	P9250334.JPG	9/25/2024 12:14	Ethanol Loadout Bottom - Yellow Vapor
8	P9250335.JPG	9/25/2024 12:16	Pressure Indicator 150 PSI Bottom Loading Arm
9	P9250336.JPG	9/25/2024 12:19	Manual Valve (Separates Bottom & Top Loading Arm)
10	P9250337.JPG	9/25/2024 12:23	Denaturant Tank T 8306
11	P9250338.JPG	9/25/2024 12:23	Denaturant Tank T 8306 (Closer View)
12	P9250339.JPG	9/25/2024 12:24	Denaturant Loading Pipe - Yellow (Left Manual Valve - Close; Right Valve - Close; Middle Manual Valve - Open)
13	P9250340.JPG	9/25/2024 12:25	Firesafe Valve
14	P9250341.JPG	9/25/2024 12:26	Pressure Indicator from Denaturant Tank to Pump to Final Product Tank TF 8309
15	P9250342.JPG	9/25/2024 12:29	Denaturant Enters the Ethanol Line
16	P9250343.JPG	9/25/2024 12:31	Ethanol w/ Denaturant Transfer & Recirculation
17	P9250344.JPG	9/25/2024 12:32	Temperature Indicator Readout @ 64F
18	P9250345.JPG	9/25/2024 12:32	Firesafe Valve w/ Fusible Link
19	P9250346.JPG	9/25/2024 12:34	Pump 8309
20	P9250347.JPG	9/25/2024 12:34	Pump 8309 to Truck Loadout / Recirculation
21	P9250348.JPG	9/25/2024 12:37	Recirculation Valve
22	P9250349.JPG	9/25/2024 12:37	Air Pressure to the Air circulation valve
23	P9250350.JPG	9/25/2024 12:38	Flow Regulator (controls flow rate between Truck and Rail Loadout)
24	P9250351.JPG	9/25/2024 12:41	TF 8309 Denatured Ethanol 750,000 Gallons
25	P9250352.JPG	9/25/2024 12:45	Vapor Knockout Tank
26	P9250353.JPG	9/25/2024 12:47	N.G. Pressure Regulator (one is at 12 PSI; other is 8 PSI)
27	P9250354.JPG	9/25/2024 12:47	Flame Arrestor - In 3" H2O; Out - 3" H2O)

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28	P9250355.JPG	9/25/2024 12:49	Open /Close Valve prior to the Flame Arrestor
29	P9250356.JPG	9/25/2024 12:51	Flare Vapor Line Main / Pilot Burner
30	P9250357.JPG	9/25/2024 12:52	Flare Name Plate
31	P9250358.JPG	9/25/2024 12:56	Rail Loadout Pump PG 8310 (Denaturant to Tank TF8306)
32	P9250359.JPG	9/25/2024 12:57	Pressure Indicator on PG 8310
33	P9250360.JPG	9/25/2024 12:58	Filter Skid Knockout Tank
34	P9250361.JPG	9/25/2024 12:58	Strainer on the Skid
35	P9250362.JPG	9/25/2024 12:59	PSV 8402 Denaturant Filter (Dripping)
36	P9250363.JPG	9/25/2024 13:00	Second PSV PMA 400 PSI
37	P9250364.JPG	9/25/2024 13:03	Name Plate Information
38	P9250365.JPG	9/25/2024 13:04	Filter Differential Pressure Gauge
39	P9250366.JPG	9/25/2024 13:10	Anhydrous Ammonia Tank TP 1240
40	P9250367.JPG	9/25/2024 13:10	Anhydrous Ammonia Tank TP 1240 Sideview
41	P9250368.JPG	9/25/2024 13:11	Fill Level Gauge 70%
42	P9250369.JPG	9/25/2024 13:11	Pressure Gauge 110 PSI
43	P9250370.JPG	9/25/2024 13:12	Temperature Gauge 56 F
44	P9250371.JPG	9/25/2024 13:13	Ammonia Tank 4 PSV on the Top
45	P9250372.JPG	9/25/2024 13:15	Ammonia Unloading Left
46	P9250373.JPG	9/25/2024 13:15	Inspection of Ammonia Unloading Signage
47	P9250374.JPG	9/25/2024 13:17	Ammonia Tank Name Plate Information
48	P9250375.JPG	9/25/2024 13:19	PSVs (2) on the Anhydrous Ammonia to Slurry Tanks
49	P9250376.JPG	9/25/2024 13:21	Pressure Indicator 109 readout
50	P9250377.JPG	9/25/2024 13:22	Anhydrous Ammonia Entrance to the Slurry Tank
51	P9250378.JPG	9/25/2024 13:22	PSV-2 (Outside of the Process Building)
52	P9250379.JPG	9/25/2024 13:23	Windsock (Entrance of the Process Building)
53	P9250380.JPG	9/25/2024 13:25	Pressure Indicator
54	P9250381.JPG	9/25/2024 13:27	Anhydrous Ammonia Introduction to Slurry Tank
55	P9250382.JPG	9/25/2024 13:28	Message Board for Employees
56			
57			
58	P9250385.JPG	9/25/2024 13:37	Emergency Stop (E-Stop) inside DCS
59	P9250386.JPG	9/25/2024 13:42	E Stop Outside of the Lab in the Process Building
60	P9250387.JPG	9/25/2024 13:50	PSV from Anhydrous Ammonia Tag