UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Epsilyte LLC, Peru, Illinois

FROM: Charles Hall, Environmental Engineer
AECAB (MN-OH)

THRU: Brian Dickens, Section Chief
AECAB (MN-OH)

TO: File, Epsilyte LLC, Peru, Illinois

BASIC INFORMATION

Facility Name: Epsilyte LLC

Facility Location: 501 Brunner Street, Peru, Illinois

Date of Inspection: 27 July 2023

EPA Inspector:
1. Charlie Hall

Other Attendees:
1. Angel Arias, Operations Superintendent
2. Trent Goodale, Health & Safety Coordinator
3. Lisa Grant, Operations Process Engineer
4. Chad Hohman, Process & Controls Engineer
5. Emily Manternach, Senior Environmental, Health, & Safety Specialist
6. Mike McClure, Mechanical Engineer
7. Phillip Miller, Health & Safety Specialist
8. Dean Tostovarsnik, Engineering Support
9. Paul Thompson, Training & Development Manager (remotely)
10. Mark Wilson, Site Manager
11. Pamela Youell, Environmental, Health, & Safety Manager

Contact Email Address: pamela.youell@epsilyte.com

Purpose of Inspection: CAA 112(r) inspection

Facility Type: expandable polystyrene bead manufacturer

Regulations Central to Inspection: 40 C.F.R. Part 68

Arrival Time: 07:55 hrs CDT
Departure Time: 12:00 hrs CDT

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 was not provided because Epsilyte is not a small business.
☒ Provided CBI warning to facility.

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

Company Ownership: Epsilyte became the facility's owner on November 1, 2020.

Process Description: Epsilyte receives a pentane/isopentane (85% pentane) mixture by rail tank car. In a one-step process, styrene monomer is suspended in water and polymerized with heat in the presence of initiators to form polystyrene beads. After the majority of the polymerization reaction is complete, pentane is added, and the polymerization reaction is completed by additional heating. After the beads are formed, they are dried, screened, lubed, and packaged.

Staff Interview: The staff interview used the RMP Program Level 3 Process Checklist as an outline and focused on questions B13.d, B13.e, D4, D5, D6-13, D16, D21, D23, D24, D26, D27, D30, D29, D31-34, D38-41, D42-46, D47-54, D55-57, D58-61, D62-66, E1a(4), E2-7, G2-5, G7, and H2.

TOUR INFORMATION

EPA Tour of the Facility: Yes.

Data Collected and Observations: The RMP Program Level 3 Process Checklist (Appendix B) summarizes the observations of whether Epsilyte has the required documents in its Risk Management Plan.

Photos were taken during the inspection.

Field Measurements were not taken during the inspection.

RECORDS REVIEW

Before the inspection, the inspector requested the following documents:

1. Management structure in terms of RMP and who has responsibility for the different program elements and how that is documented;
2. Off-site Consequence Analysis supporting documentation;
3. Process Safety Information;
4. Process Hazard Analysis;
5. Operating Procedures specific to the covered process;
6. Lockout/Tagout procedures;
7. Training documentation on employees who operate and maintain the covered process;
8. Mechanical Integrity program procedures;
9. Management of Change written procedures;
10. Pre-Startup Safety Reviews completed in the covered process areas;
11. Compliance Audits, the two most recent audits, audit reports, findings of the audits, and how these findings have been resolved or corrected. (if applicable);
12. Incident Investigations performed for each of the covered processes, reports from the investigations, documentation on how the report findings and recommendations were addressed and resolved;
13. Employee participation plan of action regarding the implementation of the employee participation;
14. Hot work permit program/policy, examples of active permits issued for the processes;
15. Contractor policy, a list of contractors who have worked on or near the covered processes within the past two years, documentation on the safety performance and programs evaluated when selecting a contractor, work practices that control the entrance/exit or present of contractors, documentation on how applicable provisions of the emergency response program are explained to contractors; and
16. Emergency Response Plan or Emergency Action Plan.

CLOSING CONFERENCE

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

Requested documents: The inspector requested and received an example mechanical integrity inspection report.

Compliance Assistance: The inspector did not provide compliance assistance.

Concerns: The alternate case scenario assumes that the mishandling of one rail tank car causes a break or puncture which leads to a spill. Considering that Epsilyte has had two rail tank cars at the unloading rack at one time, Hall noted that he needs to investigate whether the alternate case scenario must include the maximum quantity.

DIGITAL SIGNATURES

CHARLES HALL

Digitally signed by CHARLES HALL
Date: 2023.09.07 13:53:27 -05'00'

Report Author:

Brian Dickens

Digitally signed by Brian Dickens
Date: 2023.09.07 14:35:42 -05'00'

Section Chief:

APPENDICES AND ATTACHMENTS

A. Digital Image Log

B. RMP Program 3 Checklist

APPENDIX A: DIGITAL IMAGE LOG

Photographer: Pamela Yuell Camera: Due to safety concerns, Yuell used an intrinsically safe tablet with a camera.

Image Number	Date	Description of Image
1	07/27/2023	Pentane Unloading Station

Facility Name: Epsilyte LLC **Facility Location:** 501 Brunner Street, Peru, Illinois
Date of Inspection: 27 July 2023

Image Number	Date	Description of Image
2	07/27/2023	Pentane Tanks and Production Pumps

Facility Name: Epsilyte LLC **Facility Location:** 501 Brunner Street, Peru, Illinois
Date of Inspection: 27 July 2023

Image Number	Date	Description of Image
3	07/27/2023	Pentane Safety System and Flow Meter

Facility Name: Epsilyte LLC **Facility Location:** 501 Brunner Street, Peru, Illinois
Date of Inspection: 27 July 2023

Image Number	Date	Description of Image
4	07/27/2023	Pentane Tanks and Production Pumps

Facility Name: Epsilyte LLC **Facility Location:** 501 Brunner Street, Peru, Illinois
Date of Inspection: 27 July 2023

Image Number	Date	Description of Image
5	07/27/2023	Pentane/Isopentane Flow Meter

Facility Name: Epsilyte LLC **Facility Location:** 501 Brunner Street, Peru, Illinois
Date of Inspection: 27 July 2023

Image Number	Date	Description of Image
6	07/27/2023	Pentane sensor (right) and Styrene sensor (left)

Facility Name: Epsilyte LLC **Facility Location:** 501 Brunner Street, Peru, Illinois
Date of Inspection: 27 July 2023

Image Number	Date	Description of Image
7	07/27/2023	One of three Pilot Plant Reactors.

Facility Name: Epsilyte LLC **Facility Location:** 501 Brunner Street, Peru, Illinois
Date of Inspection: 27 July 2023

Image Number	Date	Description of Image
8	07/27/2023	Building 4, 5th Floor, Top of Reactor 14.

Facility Name: Epsilyte LLC **Facility Location:** 501 Brunner Street, Peru, Illinois
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Image Number	Date	Description of Image
9	07/27/2023	Entrance of Pentane Pipe into Building 4.

APPENDIX B: RMP PROGRAM 3 CHECKLIST