



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

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Chemtrade Solutions LLC, Fairmont City, IL

FROM: Brittany Cobb, Environmental Engineer
AECAB (MI/WI)

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

TO: File

BASIC INFORMATION

Facility Name: Chemtrade Solutions LLC

Facility Location: 2500 Kingshighway, Fairmont City, IL

Date of Inspection: 7/22/2022

EPA Inspector(s):

1. Brittany Cobb, Environmental Engineer
2. Ethan Chatfield, Environmental Engineer

Other Attendees:

1. Gustavo Tonding, Plant Manager
2. Robb Woolen, EHS Manager

Contact Email Address: rwoolen@chemtradelogistics.com

Purpose of Inspection: Determine compliance with the CAA

Facility Type: Chemical manufacturer

Regulations Central to Inspection: IL State Implementation Plan

Arrival Time: 11:00 AM CT

Departure Time: 1:00 PM CT

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☒ Provided Small Business Resource Information Sheet via email
- ☒ Provided CBI warning to facility

The following information was obtained verbally from Gustavo Tonding or Robb Woolen unless otherwise noted.

Company Ownership:

Chemtrade purchased this facility from General Chemical in 2014.

Process Description:

Chemtrade produces liquid, dry and bulk chemicals for water and wastewater treatment. The primary chemicals produced are aluminum chloride and aluminum sulfate. The raw materials include 36% concentrated HCl, 93% concentrated sulfuric acid, ferric sulfate, hydrate, a polymer and aluminum ingots, which are delivered by rail. Ferric sulfate is delivered in bulk bags and the rest of the material is offloaded into storage tanks.

There are two reactors, 5,000 gallons each, used to produce pressurized poly-aluminum chloride (PPAC) and 7 blending vessels to produce poly-aluminum chloride (PAC). The PAC blending vessels run 24 hours per day, 7 days per week. One PPAC reactors operates 17 hours per day and the other operates 9 hours per day. There are also two 15,000-gallon sulfuric acid storage tanks and one HCl storage tank. Additionally, there are two digestors open to the atmosphere used to produce aluminum sulfate with no air emission controls.

Chemtrade has one scrubber to control emissions from the HCl storage tank and both PPAC reactors. Chemtrade measures scrubber fluid flow rate and conductivity, in order to calculate the concentration of HCl, which is monitored from the PPAC control room. Chemtrade does not measure the pH of the scrubber. Chemtrade disposed of the waste liquid from the scrubber weekly. There are also four baghouses: one baghouse for the hydrate silo, one baghouse for the PPAC, one baghouse for milling and one baghouse for aluminum unloading. Only one of the baghouses has a gauge for differential pressure. There are four controls rooms at the facility: Aluminum Production, Liquid Aluminum production, PAC area production, and PPAC production.

Staff Interview:

This facility is operational 24 hours per day, 7 days per week and has 34 employees. There have been recent changes in management in the past year.

The facility is currently operating under a construction permit. In Chemtrade's Lifetime Operating Permit, there are two aluminum sulfate mix tanks and one liquid aluminum sulfate mix tank controlled by scrubbers. Chemtrade informed EPA that they no longer use these tanks and instead use digestors with no air emissions controls. The Lifetime Operating Permit also requires a dust collector to control emissions from bulk bag unloading in PAC production, Chemtrade was unsure if they have this dust collector.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:

EPA observed excess hydrate on the ground near the railcar (IMG_0117.JPG), silo and throughout the building (IMG_0121.JPG). EPA observed the seed hopper, where very fine dry aluminum hydrate is added to accelerate the drying process. EPA observed the scrubber fluid flow rate to be 15.2 gallons per minute and the concentration of the liquid was 3.56% HCl.

Photos and/or Videos: were taken during the inspection.

Field Measurements: were taken during this inspection.

RECORDS REVIEW

1. PMs on scrubber up until 7/18/2019
2. Lifetime operating permit

CLOSING CONFERENCE

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

Requested documents:

- SDSs of all raw materials
- Construction permit
- Construction permit application
- FESOP, if approved yet
- PM on the scrubber since 7/18/2019
- PM on baghouses since 7/18/2019
- Records of scrubber fluid flow rate, temperature, and pH since January 1, 2021
- Records of differential pressure on all baghouses, if these records are kept, since January 1, 2021
- Process flow diagram, including all vessels and air emission control devices

Concerns:

1. EPA identified concerns with excess hydrate and liquid spills on the ground.
2. EPA identified the concern that the same scrubber used to control emissions from the HCl storage tanks is being used to control emissions from the PAC reactors, as the permit identified separate control devices.
3. EPA identified concern that there is no dust collector for the PAC bulk bag unloader, as required in the lifetime operating permit

DIGITAL SIGNATURES

Report Author: _____

Brittany Cobb Digitally signed by
Brittany Cobb
Date: 2022.09.08
11:05:39 -05'00'

Section Supervisor: _____

**SARAH
MARSHALL** Digitally signed by
SARAH MARSHALL
Date: 2022.09.08
12:24:52 -05'00'

Facility Name: Chemtrade Solutions LLC
Facility Location: 2500 Kingshighway
Date of Inspection: July 22, 2022

APPENDICES AND ATTACHMENTS

1. Digital Image Log

Facility Name: Chemtrade Solutions LLC
Facility Location: 2500 Kingshighway
Date of Inspection: July 22, 2022

APPENDIX A: DIGITAL IMAGE LOG

1. Inspector Name: Brittany Cobb	2. Archival Record Location: <i>Onedrive</i>
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Image Number	File Name	Date and Time (Central Time)	Description of Image
1	IMG_0117.JPG	7/22/2022 12:08 PM	Railcar offload location for hydrate, excess hydrate on the ground.
2	IMG_0118.JPG	7/22/2022 12:26 PM	Wet scrubber for HCl tank and reactors
3	IMG_0119.JPG	7/22/2022 12:26 PM	Digital gauge for conductivity of wet scrubber (3313 mS/cm)
4	IMG_0120.JPG	7/22/2022 12:27 PM	Scrubbant for wet scrubber
5	IMG_0121.JPG	7/22/2022 12:35 PM	Hydrate and liquid spilled on floor.