

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

P044764570

FACILITY: Solvay - Cytec Industries		SRN / ID: P0447
LOCATION: 3115 MILLER RD, KALAMAZOO		DISTRICT: Kalamazoo
CITY: KALAMAZOO		COUNTY: KALAMAZOO
CONTACT: Bruce Katje , Health, Safety, and Environmental Engineer		ACTIVITY DATE: 07/07/2022
STAFF: Monica Brothers	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Unannounced scheduled inspection		
RESOLVED COMPLAINTS:		

This was an unannounced, scheduled inspection. Staff, Monica Brothers, arrived on-site at about 9:45 am and met with Bruce Katje, Health, Safety and Environmental Engineer. We first went into a conference room to discuss some preliminary questions and to go over the required recordkeeping. Cytec began operations around 1940, together with Allnex, as one company. Cytec split from Allnex in 2013, and then Cytec became Solvay in 2015. They still lease space from Allnex, and Allnex still provides Solvay with steam, nitrogen, and methanol. Solvay makes toughening agents for use in composite carbon fiber in the aerospace industry. They are currently operating under PTI # 205-19 and are an opt-out source for HAPs. The facility has about 16 employees, who work three shifts per day, five days per week, with occasional overtime on the weekends when needed. They do not have any boilers since Allnex provides their steam, they have one generator, and no parts washers. They also have chillers that are used to cool condensers.

Solvay makes three types of solid products: KM-177, KM-180 and 180p, and APC-2. The KM products are polyether sulfone and the APC-2 is a polyether ether ketone. Both the KM-180p and the APC-2 products are in powder form. The others are not finely milled. KM-180 and KM0180p are essentially the same product, except in different forms. The production process consists of the reaction, extrusion, coarse milling, washing, drying, and then fine milling for APC-2 and KM-180p. The raw materials that are used are methanol from Allnex, acetone, potassium carbonate, DPS, and DCDPS.

Records:

I reviewed their records for PTI #205-19 and Rule 290. They show that the facility is under the 500 lbs/month limit for their methanol and acetone emissions under Rule 290. The highest number I saw for either methanol or acetone was 16 lb/month within the past couple of years. They are keeping appropriate records for the scrubber water flow rates and baghouse pressure drops. Bruce said that if there is a baghouse pressure drop greater than 2.0 inches of water, they change the filters. Visible emissions checks are also conducted when the baghouse pressure drop readings are taken.

In 2019, an EPA Administrative Consent Order (ACO) determined that Cytec (Solvay) was an opt-out source of HAPs. Administrative Order EPA-5-19-113(a)-MI-01 required Cytec (Solvay) to obtain an opt-out permit from EGLE, conduct performance testing on their two scrubbers, and implement an annual leak detection and repair program (LDAR). Bruce showed me their most recent LDAR test, which was performed in November 2021. PTI #205-19 is their new opt-out permit. This PTI requires that the facility keep 3-hour block average records for the flow rate of each scrubber. A 2.9 gallon per minute (gpm) minimum was established during the required

performance testing on the scrubbers that was conducted in September 2019. Bruce showed me that they are keeping these records and are consistently above this minimum flow rate.

In PTI #205-19, they have an individual HAP limit for EUSCRUBBER203 and EUSCRUBBER204 combined of 1 tpy 12-month rolling. Their records show that they are consistently under this limit, with 136 lbs being the highest number I saw for any individual HAP within the past couple of years. They also have a limit of 0.5 tpy 12-month rolling for individual HAPs from fugitive component leaks. Records show that they are consistently under this limit, with 396 lbs being the highest number I saw within the past couple of years. They also have a limit of 0.5 tpy 12-month rolling for individual HAPs from the wastewater sump. Records show that they are consistently under this limit, with 765 lbs being the highest I saw within the past couple of years. They also have limits of less than 8.9 tpy 12-month rolling for any individual HAP and less than 22.4 tpy 12-month rolling for aggregate HAPs for the entire facility. Their records show that they are consistently under these limits.

Facility Tour:

After our initial conversation and review of records, we went on a tour of the facility. We first went to the emergency generator. It is a Cummins 250 HP diesel engine that was manufactured in 2013. The non-resettable hour meter read 381.6 hours, and it is maintained by Cummins once every six months. It is run for 30 minutes per week for testing purposes and has an EPA certification sticker. It powers a low-level ventilation system and some area lighting fixtures.

The facility has two scrubbers and two dust collectors for controlling the particulate from the powder products. They have two Donaldson Torits, one with six cartridges and the other with four cartridges. Bruce said that the dust collector for the dryer deck pulls the dirty air through the system and therefore has a lower differential pressure, while the other dust collector for the weigh-up room pushes the dirty air and has a higher differential pressure. During the inspection the dryer deck unit was reading 0.05 inches of water, and the weigh-up unit was reading 3.40 inches of water. Bruce said that they will investigate a unit and change the filters if it is above 2 inches of water for the weigh-up room, or below -2 inches of water for the dryer deck. They keep daily records of the pressure differential readings, and they will replace the cartridges after four cleanings. The areas around the dust collectors looked clean. We also observed the two scrubbers. They were reading 4.76 gpm and 5.06 gpm at the time of the inspection.

I thanked Bruce for his time and left the facility at about 11:00 am. The facility seemed to be in compliance at the time of inspection.

NAME Monica Brothers

DATE 9/15/22

SUPERVISOR RIL 9/15/22