

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

DATE: APR 10 2019

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
SABIC Innovative Plastics, Mount Vernon, Indiana

FROM: Charles Hall, Environmental Engineer *C. Hall*
AECAB (MN/OH)

THRU: Brian Dickens, Section Chief *BD*
AECAB (MN/OH)

TO: File, SABIC Innovative Plastics, Mount Vernon, Indiana

BASIC INFORMATION

Facility Name: SABIC Innovative Plastics

Facility Location: 1 Lexan Lane, Mount Vernon, Indiana

Date of Inspection: 28 March 2019

EPA Inspector(s):

1. Charles Hall, Environmental Engineer
2. Marie St. Peter, Environmental Engineer

Other Attendees:

1. Mike Kharouta, Senior Environmental Engineer
2. Thomas Sommerfield, Senior Process Engineer
3. Greg Michael, Site Environmental Manager¹

Contact Email Address: Mike.Kharouta@sabic-ip.com

Purpose of Inspection: inspection of the hazardous waste burning liquid fueled boiler

Facility Type: chemical plant

Regulation Central to Inspection: The National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors (HWC MACT)

¹ Briefly for introductions at the beginning of the day and for the closing conference only.

Arrival Time: 8:40 a.m. CDT

Departure Time: 4:00 p.m. CDT

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Credentials Presented
- ☒ CBI warning to facility provided

The following information was obtained verbally from **ATTENDEE(S)**, unless otherwise noted.

Process Description:

SABIC Innovative Plastics Mt. Vernon, LLC (SABIC) collects hazardous waste from five processes at its facility in two 138,000-gallon storage tanks. Each tank is vented through an ammonia-cooled condenser that is followed by a conservation vent. SABIC feeds the hazardous waste from only one tank at any time. SABIC continuously recirculates the waste to prevent the separation of the waste into various layers.

SABIC collects and analyzes three samples of waste on two days per week (Monday and Friday at 2:00 a.m., 4:00 a.m., and 6:00 a.m.) and one sample of waste on Wednesday. SABIC analyzes each of the first two samples taken on Monday and Friday, and the Wednesday sample, for chromium and ash. SABIC analyzes each of the third samples taken on Monday and Friday for antimony, arsenic, barium, beryllium, chromium, cadmium, lead, mercury, silver, thallium, ash, and chlorine/chloride. The SABIC representatives reported that the raw materials used in the processes that generate the waste do not contain metals or chlorine. Sulfuric acid and caustic are the only two raw materials with a maximum mercury specification. SABIC wants to minimize the amount of mercury in these two raw materials to help it maintain compliance with the discharge limit for mercury in its NPDES permit. Consequently, the concentrations of metals, ash, and chlorine are very consistent and frequently at or near the method detection limits. The higher heating value of the hazardous waste (analyzed in each of the third samples on Monday and Friday) is also very consistent.

SABIC burns the waste in two hazardous waste burning liquid fuel boilers (HWLFBs), H-530A and H-530B, to generate approximately 10 percent of the steam needed across the facility. When the HWLFBs are shut down for maintenance, other boilers at the facility pick up the load.

SABIC burns only natural gas in the HWLFBs during startup and shutdown periods. SABIC burns some natural gas during normal operation in addition to hazardous waste. However, for the purposes of recordkeeping, SABIC assumes that the HWLFBs are subject to the HWC MACT at all times. SABIC does not have a mode of operating where it complies with, for

example, the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 C.F.R. Part 63, Subpart DDDDD, or another standard promulgated under Clean Air Act Sections 112 or 129, 42 U.S.C. § 7412 or § 7429.

Staff Interview:

According to the May 22, 2018 Title V, each HWLFB is an area source. *See* A.4 Section E(r) on page 17 of 446. However, using an aerial photograph of the facility, Hall asked Kharouta to identify the approximate locations of the property lines of SABIC's facility and the two HWLFBs. The two HWLFBs are located within a contiguous area and under common control of SABIC. Although Kharouta did not have the Facility's annual hazardous air pollutant emissions immediately at hand during the inspection, he acknowledged that they are greater than 25 tons per year. Kharouta stated that the decision regarding the HWLFBs' status as area sources under the HWC MACT was made in the 1990s which was before he started to work at the facility.

H-530A and H-530B were constructed in 1980 and 1982, respectively, as part of the plant's original design. Each HWLFB has one hazardous waste burner, called a tar gun, and one natural gas burner. The hazardous waste is mixed with steam to atomize the waste and to promote good combustion. The tar gun is a pipe 8-feet long with another pipe inside. The site representatives stated that SABIC cleans the burner's tips every 5 to 6 weeks and replaces burner tips two or three times per year. SABIC monitors the differential pressure between the atomizing steam pressure and the hazardous waste feed pressure, in part, to determine when cleaning or replacement of the burner tips is necessary. SABIC also monitors the hazardous waste temperature, which affects its viscosity, to maintain good combustion. SABIC replaces a tar gun roughly every 5 years and replaces the refractory in each boiler every 12 to 18 months.

As the HWC MACT requires, SABIC installed and now operates, calibrates, and maintains a carbon monoxide and an oxygen continuous emission monitoring system.

TOUR INFORMATION

EPA toured the facility: Yes

Data Collected and Observations: were not collected during this inspection.

Photos and/or Videos: were not taken during this inspection.

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

Records: were not reviewed during this inspection.

CLOSING CONFERENCE

Concerns: Hall pointed out his concern that the Title V permit considers the HWLFBs to be subject to the area source requirements for HWLFBs even though SABIC meets the definition of a major source in 40 C.F.R. § 63.2. Hall noted that EPA may issue a Clean Air Act Section 114 Request for Information.

SIGNATURES

Lead Inspector:	<u>Charles Hall</u>	Date:	<u>10 April 2019</u>
Section Chief:	<u>Sam Dickens</u>	Date:	<u>4/10/19</u>