DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

A284943469

FACILITY: WACKER CHEMICAL CORP		**SRN / ID:** A2849
LOCATION: 3301 SUTTON RD, ADRIAN		**DISTRICT:** Jackson
CITY: ADRIAN		**COUNTY:** LENAWEE
CONTACT: Michael Cannaert , Corporate EHSS Manager		**ACTIVITY DATE:** 01/18/2018
STAFF: Zachary Durham	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Scheduled inspection of the facility and processes identified in PTI 155-05A and 285-07. These processes included all plant production areas as well as the active soil and groundwater remediation activities.		
RESOLVED COMPLAINTS:		

Contact

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Purpose

This was a scheduled, announced visit of the facility located at 3301 Sutton Road in Adrian, MI. The facility is owned and operated by Wacker Chemical Corporation, which has active Permits to Install (PTI) 155-05A, 285-07, and 12-76I. Members of the Air Quality Division (AQD) present for the inspection included Paul Schleusener, Chuku Oje, and myself. We met with Michael Cannaert and Thomas Urbanowski, whom led us on the facility tour.

Background

Wacker has been located at this site for many years, and is currently looking to expand some areas of their operation. A preapplication meeting was held in September 2017 and a permit application (155-05B) received by AQD in December 2017. The application is still being reviewed at the time of the inspection.

The facility was last inspected in 2014 by Erik Gurshaw and found to be in compliance at that time. Most of the processes involve batch reactors with varying formulations as based on their customers needs, which in large part consist of silicone-based products. These processes are controlled by either dust collectors, condensers, or fume scrubbers. The attached maintenance plan describes Wacker's preventative maintenance program that is followed by staff and the electronic filing of completed work orders.

PTI 155-05A identifies five (5) process areas; EUHIBAY, EUPOLYMERS, EUCMP, EUHCR, and EURTV. Michael indicated EUCMP and related activities have not been operated at this site since about 2015.

PTI 285-07 is for a soil vapor extraction (SVE) system that was installed to clean up historical contamination from the site. The system was installed as a part of a consent order the company entered outside AQD rules and regulations, but potential emissions required a PTI from AQD.

PTI 12-76I was for a historical furnace that was used to burn about 20 pounds per day of paper generated from office processes. This unit is no longer located on site, and will be voided out as a conclusion of this inspection.

Compliance Evaluation

PTI 155-05A

EUHIBAY

This is the emission unit (EU) described as the HiBay silicones manufacturing process. The area is controlled with condensers as a means of air pollution control equipment. Many of the products produced in this EU are functional fluids and emulsions used in antifoaming agents. This is also the work area that the company is seeking to expand with new and updated equipment as contained in permit application 155-05B.

All process reactors are connected to condensers equipped with cooling water flow alarms and interlock controls, which prevent use without the condensers. Special Conditions (SC) III.1&2 allows for Reactor No. RX0905 to operate without a condenser so long as not more than 600 pounds of methanol is emitted. However, the facility staff indicated Reactor No. RX0905 is connected to its condenser at all times.

Additionally, the process for EUHIBAY is restricted to a maximum of 400 batches per month from all process units in the EU. Attached is a list generated from data on every batch in December 2017, which totaled 151 batches for the month. This was indicated to be a representative month, and is well under the 400 batch limit.

EUPOLYMERS

This is the process area that uses reactors to mix siloxanes and other fluids to make products of specific viscosity. Products manufactured in this area are used in applications from shampoos to car finishes. Both batch and continuous feed reactors are used in this area, all of which are under vacuum and routed to a scrubber identified as TK-0550.

A monthly batch limit of 750 is included in SC III.1, and review of their record keeping indicated 215 batches for December 2017. This is well below the monthly limit. SC IV.1&2 describe the control equipment connected to the processes in this area. The operator logs were viewed while onsite and seen to have been recorded three times daily; once per shift. The scrubber was observed to be operating at 2.87 inches of H2O and the continuous feed reactor was at 160°C at the time of the inspection.

EUCMP

This EU does not have any special conditions listed in the permit. Additionally, the process equipment operated here has been removed since 2015.

EUHCR

This EU describes the production of heat curable rubbers (HCR) including silicone fluids, emulsions, sealants, and rubbers. The mixers are charged with material and kneaded. The product being produced during the inspection resembled a bread dough in consistency when removed from the mixer.

Per SC III.1, the process equipment in this area is controlled by dust collects on each mixer, condensers, and two in-series wet scrubbers where remaining fumes are routed. All control devices appeared to be installed at the time of inspection. SC III.2 refers to the 2500 monthly batch limit, which they are well below at about 800 per month on average (796 for December 2017).

Also attached are representative maintenance logs for the mixers and scrubbers as required by SC IV.1-5. Staff in this area indicated that the dust collector filters are changed about quarterly with other maintenance as necessary. The log indicates regularly scheduled work is being performed. The scrubber log similarly indicates regularly scheduled maintenance and calibration of monitoring equipment. The acid scrubber was observed to be operating at 37.3 gpm and the water scrubber at 32 gpm. The system was under 5.8 inches of H2O and an outlet pH of 5.96.

EURTV

This process area produces room temperature vulcanized (RTV) products. The EU consists of RTV1 and RTV2, which are two separate mixing units that produce low volume batches for their customers (largest batch ~300 gallons). This is the only process area that uses solvents in their process, including naptha, mineral spirits, and other VOC containing materials. The products produced in EURTV are highly viscous, caulk-like substances.

SC III.2 of this EU limit batches to 1700 per month. The provided record keeping shows 473 batches for December 2017, which is representative and well below the permitted limit. The control equipment (scrubbers) in

SC IV.1 have the same conditions as EUHCR at a minimum of 20 gpm liquid flow rate, which was observed to be 37.3 gpm and 32 gpm.

FGFACILITY

This is the facility wide limit on VOC and HAPs. An audit of the 2017 MAERS report (i.e. 2016 data) showed substantial compliance with the opt-out limits.

Note: 12-month rolling emissions logs were viewed while onsite, though will be reviewed for during the 2018 MAERS cycle (i.e. 2017 emissions data).

PTI 285-07

This PTI is for the equipment associated with the remediation equipment currently installed on the property. The equipment includes soil vapor extraction wells, air sparging, and activated carbon units. Michael indicated that Wacker usually changes the carbon out every 250 days. Attached is the most recent laboratory analysis and summary report from Fibertec with three (3) samples ranging from influent, midfluent, and effluent. Also included is a 12-month rolling total and individual monthly totals of emissions for VOC. December 2017 shows 0.6 tpy of VOC emitted, which is below their 1 tpy limit.

Summary

Upon arriving at the facility we signed in at the entrance booth, whom then notified Michael Cannaert. We proceeded into the facility grounds and to meet Michael, where he showed us to a conference room for a pre-tour meeting. After briefly discussing the areas of the plant I wanted to see, we were given lab coats and visitor ID badges. Our cell phones were made to be turned off or left in the conference room during the tour for safety reasons.

We started at EUHCR, and proceeded to EUPOLYMERS, EUHIBAY, EURTV, and finally the SVE unit. Michael and Tom accompanied us on the entire tour, while various other facility staff assisted as we observed the operations in each different part of the plant. Each plant area had its own control room or equivalently installed control panels around pieces of equipment. I observed the log books and controls in each area, all of which has information entered and stored electronically. I requested this information be compiled and sent to me, which is attached to this document.

After returning to the conference room Michael and I discussed what kinds of information I required, which I had pointed out during our plant tour as well. From there, we proceeded to discuss the pending permit application 155-05B.

Compliance Determination

After site inspection and review of onsite and emailed records, I have determined this facility to be in compliance.

Recommendations

PTI 12-76I has been voided as a result of this inspection.

Review and audit of the 2017 MAERS emissions data this reporting year will complete the full compliance inspection.

NAME Zack Dunbar DATE 3/2/18 SUPERVISOR