

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

N572236609

FACILITY: Chemico Systems, Inc.		SRN / ID: N5722
LOCATION: 50725 RICHARD WEST BLVD., CHESTERFIELD		DISTRICT: Southeast Michigan
CITY: CHESTERFIELD		COUNTY: MACOMB
CONTACT: Paul Sinko , Vice President		ACTIVITY DATE: 07/27/2016
STAFF: Kerry Kelly	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Complaint investigation and self-initiated inspection		
RESOLVED COMPLAINTS: C-16-01916		

On July 27, 2016 AQD staff I (Kerry Kelly) and Tyler Salamasick conducted a complaint investigation in the vicinity of Chemico Systems located at 50725 Richard West Blvd, Chesterfield, Michigan. At approximately 2:15 PM on July 20, 2016 the complainant called AQD staff and stated she is smelling odor outside her home that smells like chemicals burning.

Chemico Systems operates a metal cleaning and batch chemical production process located in eastern Macomb County. Chemico Systems is bordered immediately by industrial properties to the east, north and south, and residential to the west. The closest residential area is located approximately two-tenths of a mile west of Chemico Systems. Equipment at Chemico Systems includes an HCL bath, nine potassium hydroxide baths, four controlled pyrolysis furnaces, chemical blending, a drying oven, and a boiler that is disconnected.

COMPLAINT INVESTIGATION

Tyler and I (Kerry Kelly) arrived in the area of Chemico Systems at approximately 1:31 PM and conducted odor observations at one location upwind and three locations downwind of Chemico Systems between 1:31 PM and 2:58 PM. According to Accu Weather the temperature was approximately 88 degrees Fahrenheit, the wind speed was 8 mph from the west-southwest, and the sky was clear at the time of the investigation. I observed a flag near Chemico Systems blowing toward the east-northeast verifying the wind direction was west-southwest.

Upwind

An odor observation was conducted west-southwest, and upwind, of Chemico Systems at 1:31 PM. The purpose of the upwind odor observation was to eliminate any sources upwind of the plant from being a potential source of the odors reported by the complainant. We did not detect burning plastic/chemical odors at this location. The ovens appeared to be operating based on the heat refraction observed above one of the furnace stacks. We also noticed the stacks height had been extended and the rain caps that were previously on top of the stacks had been removed.

Downwind

Tyler and I conducted odor observations across from All About Hydraulics on Russell Schmidt Blvd. between 1:42 PM and 1:46 PM. This location is approximately three-tenths of a mile east-northeast of Chemico Systems. We did not detect chemical burning odors at this location.

Next we conducted an odor observation across from Turri's Italian Foods on Russell Schmidt (northeast of Chemico) with all the car windows rolled down, we did not detect any burning plastic odors from approximately 1:47 PM to 1:50 PM. Cookie-like odors were detected at this location.

A downwind odor observation was conducted near the intersection of Russell Schmidt Blvd. and 23 Mile Road, approximately 0.5 miles northeast of Chemico, at about 2:58 PM. We did not detect any chemical odors at this location.

INSPECTION

At approximately 1:59 PM we arrived at Chemico Systems, entered the office, and explained the purpose of our visit to Mr. Paul Sinko, Vice President. Mr. Sinko escorted Tyler and I on a facility walk-through. During the walk-through we inspected four burn-off ovens, a drying oven, an HCL bath, nine potassium hydroxide baths, a boiler that has been disconnected from the fuel source, and chemical mixing equipment.

BURN-OFF OVENS

Chemico uses the burn-off ovens to clean paint and powder coating from metal racks for automotive companies. The burn-off ovens at Chemico are manufactured by Pollution Control Products (PCP), ACE, and Jackson Oven and are currently unpermitted. Afterburners are used to control emissions from the pyrolysis furnaces. The furnaces are believed to be the source of the odors described by the complainant and observed by AQD inspectors during an odor complaint investigation on June 1, 2016.

A violation notice was issued to Chemico on July 6, 2016 for operating the burn-off ovens without a permit to install. A permit application for these ovens was received on July 26, 2016 by AQD permit section.

In an effort to potentially mitigate odors and to be in compliance with the stack requirements anticipated to be in the PTI for which he had submitted an application, Mr. Sinko proactively had the stacks for the burn-off ovens raised and the rain caps removed on July 8, 2016. Prior to Mr. Sinko having the stacks raised and rain caps removed AQD had received one odor complaint in April 2016 and four in June 2016 that were attributed to Chemico. Following the raising of the stacks, AQD received one complaint in July 2016, zero in August 2016 and zero in September 2016 (as of 9/16/2016). In addition, Mr. Sinko also ordered, and was planning to install, temperature monitors for each of the burn-off ovens in an effort to be operating in compliance with the pending PTI upon approval. Currently, the temperature of the primary burner and after burner are monitored and recorded by employees every hour when the ovens are operating. During the inspection the temperature are listed in the table below:

OVEN NUMBER	1	2	3	4
PRIMARY BURNER TEMP	802*	847	602	712
AFTERBURNER TEMP	1143*	1574	1630	1605

*The primary and afterburner temperatures were both decreasing due to the end of the process cycle

TANKS

The HCL bath and nine potassium hydroxide baths are used to clean metal parts for automotive companies. Metal parts are first dipped in the HCL bath then each of the potassium hydroxide baths. After being dipped in the tanks the parts are washed with water. The HCL bath and nine potassium hydroxide baths are vented to the general in-plant environment It appears these tanks are exempt from the requirement of R336.1201 to obtain a permit to install per R336.1285(r)(i), (ii),(iii), and (iv).

DRYING OVEN

After parts are washed in the tanks they are dried in a 175,000 BTU/hr, natural gas-fired oven. The oven typically operates at about 250 degrees Fahrenheit according to Mr. Sinko. This oven appears to be exempt from the requirement of R336.1201 to obtain a permit to install per

R336.1281(e) because the equipment is used to dry materials (metal) where the material itself cannot become an air contaminate, no volatile organic compounds are used in the process, and no oil or solid fuel is burned.

BATCH CHEMICAL MIXING

There are 5 chemical blending machines at Chemico used to produce products such as glass cleaners, paint booth coatings (applied to booth walls to prevent paint from adhering to the booth), water-based paint cleaners, and floor cleaners. Mr. Sinko said there are no hazardous air pollutants in the approximately 150 raw ingredients used in the chemical manufacturing process. According to Mr. Sinko the Chemico 7954 Thick Paint Booth Stripper has the highest volatile organic compound content (5.97lb/gal) of the products produced. Mr. Sinko provided records of the VOC containing products produced for August 2016 and the VOC emissions (attachment 1). The EPA AP-42 and MAERS uncontrolled VOC emission factor for Paint and Varnish Manufacturing is 30 lb/ton of product, which was used by Mr. Sinko. The calculated VOC emissions for August 2016 were 68.475 lbs. Mr. Sinko stated the VOCs are non-carcinogenic. This information will be used to demonstrate the batch chemical manufacturing is exempt from the requirement in R336.1201 to obtain a permit to per R33.1290 (i) because the uncontrolled non-carcinogenic volatile organic compounds emissions are not more than 1,000 pounds per month.

BOILER

The boiler at Chemico Systems is a Cleaver Brooks model CB200-125, serial number L-79398 manufactured on March 3, 1985, and a rated capacity of 5,230,000 Btu/hr according to the nameplate. Mr. Sinko said the boiler has not been used in about 1.5 years. It appeared the gas line was shut-off and disconnected. It appears this boiler is exempt for the requirement of R336.1201 to obtain a permit to install per R336.1282(b) because it was previously used for space heating, fired sweet natural gas, and has a heat input capacity less than 50,000,000 Btu/hr. Compliance with the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters and for Industrial, Commercial, and Institutional Boilers Area Sources (40 CFR 63 Subparts DDDDD and JJJJJJ) because the DEQ-AQD has not accepted delegation to enforce these regulations. It appears this boiler is not subject to the New Source Performance Standards Subparts D, Da, Db, and Dc because the rated heat capacity (5.23 MMBtu/hr) is less than 10 MMBtu/hr.

CONCLUSION

Based on the results of the investigation complaint number C-16-01916 is considered to be resolved because no burning plastic odors were detected downwind of Chemico Systems during this investigation. Based on the information collected during the July 27, 2016 inspection it appears Chemico is operating in compliance with conditions the State and Federal air quality laws and regulations evaluated.

BURN-OFF OVEN UPDATE

On September 9, 2016, PTI 127-16 was approved by AQD permit section. Compliance with PTI 127-16 was not evaluated during the July 27, 2016 inspection because the permit had not been approved. In a phone conversation with Mr. Sinko on September 15, 2016 I was informed the burn-off oven temperature monitors have been installed and the temperature data is being collected and maintained.

NAME K Kelly

DATE 9/19/16

SUPERVISOR SK

