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

U80160228939967

FACILITY: Energy Suppliers		**SRN / ID:** U801602289
LOCATION: 73309 M-40, Lawton		**DISTRICT:** Kalamazoo
CITY: Lawton		**COUNTY:** VAN BUREN
CONTACT: Brent Robinson , Plant Manager		**ACTIVITY DATE:** 05/19/2017
STAFF: Amanda Chapel	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:**
SUBJECT:		
RESOLVED COMPLAINTS:		

On May 19, 2017 AQD's Amanda Chapel (staff) conducted an unannounced inspection of Energy Suppliers located in Lawton, VanBuren County. The purpose of the inspection was to determine compliance with all applicable state and federal air regulations, including Rule 290. The following will summarize plant operations and facility's compliance status.

I arrived at the facility at 11:20 am. There were no visible emissions from the cooling towers and there was a very faint odor of the methanol, detectable about 50 feet from the west side of the building. When I arrived on site, they were receiving a delivery of methanol. Mr. Brent Robinson, Plant Manager, was outside supervising the delivery. I walked over to him and let him know that I was there to do an air quality inspection of the facility. He asked if there had been any more odor complaints and I told him there had not been any issues. I asked him to walk me through the process they use to refine the methanol.

The facility has been open since 2013 as a methanol refinery operation. They have 6 part time and 1 full time staff person. The facility usually runs 1-2 shifts, 3 days a week. The facility currently has two natural gas fired 12.5 MMBtu/hour boilers (300 h.p) installed in 2013. The nameplate has a 1992 date. One boiler is used a backup for the first. They are exempt from air permitting under Rule 282(2)(b)(i) but they are subject to 40 CFR Part 60 Subpart Dc. There are no emergency generators or cold cleaners at the facility.

The facility receives 2 deliveries per week of waste methanol to refine in 5200 gallon shipments. The composition of the waste methanol is about 69% methanol, 30% water, and 1% other. This is verified by chemists on site. They have the capacity to handle 3 deliveries per week but the supply isn't there right now. The waste methanol is pumped into three wet tanks. Two have a 10,000 gallon capacity with about 8,000 gallons stored at a time and one has a 18,000 gallon capacity with about 15,000 gallons stored at a time. The methanol is stored under 1 pound of pressure under a nitrogen blanket.

Next, the waste methanol is sent through a distillation column which is a closed system. There is a condenser on the column. The column is vented during start up/shut down and this is recorded. Loads in and out are also recorded. The waste methanol is fed into the middle of the column where it travels down to the bottom tank to be heated. This tank holds 50 gallons and every 15 minutes, 40 gallons is sent over to the waste water tank. There is a 50 gallon tank near the top of the distillation column that has a 50 gallon capacity for the refined methanol. This has a nitrogen blanket. The refined methanol is in vapor form until cooled below 110 degrees where it turns back into a liquid. The refined methanol is stored in four containers, two 6,000 gallon tanks, one 7,000 gallon tank, and a 14,000 gallon tank. None of these are filled to capacity.

There are three gold-colored water cooling towers located outside of the facility. These towers are used to provide cooling water to the condensers and are not used for process water. They are exempt under Rule 280(2)(d). There are two 2,000 gallon storage tanks located inside the building used to recycle cooling water.

Currently, the facility is skipping storing the unrefined methanol in the day tanks due to odor. They are still connected for storage in case of an emergency. Additionally, the facility installed conservation vents on both of the 7,000 gallon wastewater tanks for odor reduction. If pressure builds in the wastewater tank, the tank will vent. The wastewater tanks are pumped out about every 2-3 weeks by Waste Services. Wastewater out is recorded. There was a faint odor from the methanol during the delivery but it appears as though the odor is being managed much more effectively with the conservation vent on the wastewater tanks. I walked around the front of the facility to determine how far the odor was traveling from the delivery truck. When the truck detached the hose was when the odor

was strongest and it could not be detected 100 feet from the loading area.

I asked Mr. Robinson if they keep the Rule 290 records at the facility and he said they did not. The consultant has a copy as well as their office person in Kalamazoo. I thanked him for his time and left the facility at about 11:45 am. I left a message for Laura, the office person, on May 19 asking for the applicable records.

Records were received on Thursday May 25, 2017. The records are from June 2016 to May 2017. The highest emission rate of methanol was on June 2016 and September 2016 where the facility emitted 11.05 lbs of methanol during those months. This is well below the Rule 290(2)(a)(i) limit of 500 lbs controlled. The facility appears to be in compliance.

NAME Anne Cheel DATE 5/30/17 SUPERVISOR MA 5/30/2017