

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

B878623527

FACILITY: Sekisui Voltek LLC.		SRN / ID: B8786
LOCATION: 17 ALLEN AVE., COLDWATER		DISTRICT: Kalamazoo
CITY: COLDWATER		COUNTY: BRANCH
CONTACT: Jeffrey Kelley, Manager Facilities Planning and Safety/Environment		ACTIVITY DATE: 10/29/2013
STAFF: Dale Turton	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Compliance Inspection and Stack Test Observation		
RESOLVED COMPLAINTS:		

An inspection was conducted on the same day as a scheduled stack test at Sekisui Voltek. The plant produces plastic foam sheet material by mixing raw polyolefin ingredients and other additives, extruding, and then thermally crosslinking and expanding. The foam material is produced for a variety of customers in many industries.

The facility is a major source permitted under ROP #MI-ROP-B8786-2009.

Stack Test

Two of the ovens were being tested for VOC and Ammonia to determine compliance with the emission limits in the FGOVENS table of the ROP. The oven and catalytic oxidizer exhaust for Line #3 and line #7 were being tested on this date. Two more lines were tested the next day (10-30-13) but AQD staff was not present.

Network Environmental was the contractor performing the testing. Steve Byrd, Dave Englehard, Scott Cargill, and Rick Eerdmans were all in attendance from Network. Sam Johnson was the company contact helping facilitate the testing. In addition to me, Tom Gasoli from the AQD Technical Programs Unit was present. Tom was able to monitor the testing contractor to assure the methods were being followed properly. I focused on assuring that the process was operating at normal to maximum production conditions during the testing.

Tom has filed a separate report on his observations. Method 25A was used for VOC emissions, method CTM 027 was used for ammonia emissions, and methods 1-4 were used to determine the exhaust gas parameters.

The company claims to have chosen grades of material to run on the lines that represent normal to maximum emission potential. The grade types will not be listed in this report since they wish to keep the codes confidential. However these grade numbers are being kept in the AQD confidential file.

The conditions during the test were observed as follows:

Run #1

	Chilled Roll Speed (fpm)	Oven Exhaust (deg. F)	Lbs per Hour Run Rate	Catalyst Temp In	Catalyst Temp Out
Oven #3	35.7	449	172.4	831	729
Oven #7	21.44	427	293.5	724	950

Run #2

	Chilled Roll Speed (fpm)	Oven Exhaust (deg. F)	Lbs per Hour Run Rate	Catalyst Temp In	Catalyst Temp Out
Oven #3	35.6	449	172.4	832	727
Oven #7	21.19	427	290.0	724	948

Note: The material expands in the oven. The length, width, and thickness of the finished sheet after expansion (chilled roll) are increased by a factor over that of the feed material. The pounds per hour fed vs. final product out of the oven should not change other than a small percentage of volatiles driven off during the expansion process.

Inspection

In conjunction with, and also during downtime before, during, and after the testing, staff was able to tour the facility in order to complete the inspection. Staff met with Jeff Kelley and Sam Johnson and explained the purpose of the inspection. During the inspection, Staff observed the following processes.

1. EUSCTRFURNACE

The natural gas fired burn off oven used for cleaning extruder dies has been removed. It has been replaced with an electric oven. Records are being kept of the number of charges into the furnace.

2. FGOVENS

Prior to the oven lines, the powdered materials are mixed together into a specific recipe, then heated and extruded into a sheet. These wound sheets are then moved to one of eleven ovens (EUOVEN01-11) used to expand (foam) the extruded plastic.

The sheets are fed onto the line at a set speed and introduced into a multi-zoned oven. The ovens have various temperature zones to maintain quality and consistency during the foaming process. The exhaust gas from each of the ovens is routed to a catalytic oxidizer. Condition III.2 of the ROP requires a minimum temperature of 600° F is to be maintained at the inlet of the catalyst bed of the associated catalytic oxidizer. The lowest set point for the temperature for any of the catalytic oxidizers is around 650° F, but it is often higher. The temperature of both the inlet and outlet of the oxidizer is monitored and recorded. A small portion of the exit gas from the oxidizer is exhausted through a stack to the atmosphere. A larger percentage is rerouted back to the oven to reuse the heat. The foam sheet exits the oven in the expanded form of being thicker, wider, and longer than the feed material.

All of the oven line and catalytic oxidizer parameters are recorded electronically and can be retrieved from the computer at a later time. Staff did not see any ovens operating under the 600 deg F minimum for the catalyst. The stack tests being performed at this time will determine compliance with the emission limits.

The stack heights and diameters appeared to be in compliance with the permit.

3. FGPARTICULATE

A flexible group that consists of five plastic mills (EUMILL01-05) and ten storage silos (EUSILO01-10).

Plastic resin is mostly unloaded from railcars pneumatically to the storage silos. Visible emissions checks are performed during loading and recorded. Only one silo is equipped with a bin vent filter. Staff was shown the VE recording sheet. Records are also being kept of the maintenance being performed according to Appendix 3 of the ROP.

The resin pellets are transferred from the silos to the mills. The mills reduce the size to specification and then it is sent to storage bins located inside the plant. The milling machines are equipped with fabric socks located on each machine inside the room to control particulate. The material collected in the socks is reused.

4. EXTRUDING

The bins supply the extruders with resin. The powdered resins and other additives are fed into a hopper and fed through screws to mix the recipe according to the customer's specification. The mixture is heated and extruded and taken up on spindle rolls. The extrusion process is considered exempted from permitting under Rule 286(a).

5. FGCOLDCLEANERS

There were two Safety-Kleen cold cleaners located in the maintenance department. One is a sink over drum style and one is an immersion style. Both use mineral spirits. The operating procedures were posted. These units are in compliance with the permit conditions and Rule 707.

NAME Dale Tutor

DATE 11/4/2013

SUPERVISOR MA 11/4/13