

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

N529648335

FACILITY: ARVRON INC		SRN / ID: N5296
LOCATION: 4720 CLAY AVE SW, GRAND RAPIDS		DISTRICT: Grand Rapids
CITY: GRAND RAPIDS		COUNTY: KENT
CONTACT: Doug Heyboer , President		ACTIVITY DATE: 03/26/2019
STAFF: April Lazzaro	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Unannounced, scheduled inspection.		
RESOLVED COMPLAINTS:		

Staff, April Lazzaro arrived at the facility to conduct an unannounced, scheduled inspection and met with Doug Heyboer. Mr. Heyboer and I discussed the purpose of the routine compliance inspection to include recordkeeping and the recent changes to the facility.

FACILITY DESCRIPTION

Arvron, Inc. is a polyethylene bead and foam manufacturing and recycling facility. The facility operations are covered pursuant to Opt-out Permit to Install (PTI) No. 238-94B. Equipment on-site consists of an emergency generator, storage bins for pre-puff beads, one Hirsch Model expandable polystyrene (EPS) pre-expander, two vacuum block molds, finishing area, heated storage for block curing and two foam compression/recycling machines. The old pre-expander has been removed and while the permit lists three (3) vacuum block molds there is only two (2).

In 2016 the facility received a permit to install for a new EPS bead pre-expander with a regenerative thermal oxidizer (RTO) to control emissions. The installation and proper operation of this control device has led to a 66.5% reduction in volatile organic compound emissions at the facility.

COMPLIANCE EVALUATION

EU-Engine1

This emission unit covers one small natural gas fired reciprocating emergency generator engine subject to 40 CFR Part 60 Subpart JJJJ and 40 CFR Part 63 Subpart ZZZZ. This is a certified engine and therefore no testing is required. The unit is equipped with a non-resettable hours meter and all information is tracked on a clipboard tacked to the wall. This was observed and was up-to-date. It currently has 65.6 hours and the facility conducts a monthly test to ensure reliability.

FG-EPS

This flexible group includes all equipment associated with the EPS bead processing operations as described above.

Emission Limits

Emissions of n-Pentane are limited to 457.5 pounds per eight-hour shift. A review of the records (attached) indicate that the average pounds of n-Pentane emitted is less than 50 pounds per eight-hour shift.

Process/Operational Restrictions

The permit requires that the RTO maintain a minimum VOC destruction efficiency of 95%. The facility conducted stack testing in 2017 and found the destruction efficiency is 98.4% which indicates compliance.

Design/Equipment Parameters

Observation of the RTO control panel and a discussion with Mr. Heyboer regarding the overall reliability of the unit took place. All emission units are connected to the RTO as indicated in the permit, and the unit continues to be very reliable. In December 2018 the manufacturer was in to conduct an inspection and found the unit to be in good condition. Mr. Heyboer confirmed that any recommended work is

conducted. The instantaneous temperature at the time of the inspection was 1,518°F and the hourly average was 1,534°F and the unit was in energy savings mode which indicates it is operating purely on process gas.

We discussed how they record any bypass emissions that occur if there is a trip/malfunction of the oxidizer. This has also been clarified in an email to the facility which is in the file and attached to this report. There is a clipboard next to the RTO where any trip is recorded, including the length of the RTO downtime. Then, this information is placed in the spreadsheet as VOC/Pentane Emissions from RTO During Bypass. This information was reviewed and found to be limited and of short duration. None of the incidences were of a magnitude where an excess emissions report was warranted, and it appears as though the emissions are being properly recorded.

Monitoring/Recordkeeping

All monitoring and recordkeeping requirements are being met, and the emissions spreadsheet is attached. A review of the spreadsheet did not identify any issues with emissions or calculations.

Reporting

The reporting requirement is a one-time requirement and has been met.

Stack/Vent Restrictions

The RTO stack was not measured however it has not changed since installation.

FGFACILITY

This flexible group limits facility-wide emissions of volatile organic compounds (VOC) and hazardous air pollutants (HAP) below major source thresholds.

Emission limits/Material Limits

VOC emissions are limited to less than 90 tons per 12-month rolling time period. Reported VOC emissions for the 12-month period ending December 2018 were 12.1 tons.

The facility reports that the only HAP emissions generated at the facility are from the combustion of natural gas and as such are minimal. Total HAP reported for the facility for the 12-month period ending December 2018 were 48 pounds.

The flexible group also limits material processed in pre-expanders to less than 30,000,000 lbs per 12-month rolling time period. Reported material processed for the 12-month period ending December 2018 was 11,101,200 pounds of beads.

These values indicate compliance with the permit limits.

Testing/Sampling

The most recent VOC and n-pentane content test was requested and found to have been conducted in February 2019. All information as required by the permit has been conducted and listed on the lab results sheet (attached).

Monitoring/Recordkeeping

All monitoring and recordkeeping requirements are being met, except for the speciation of HAP emissions from the combustion equipment. However, as the total HAP is only 48 pounds on a 12-month rolling basis, this will not be cited as a violation.

As a reminder, the permit requires that all bead pentane testing results are required to be submitted to the AQD within 30 days of receipt of the results. The 2019 data do not need to be submitted as they are included with this report and received on March 26, 2019.

CONCLUSION

Arvron, Inc. was in compliance at the time of the inspection.

NAME April Longman

DATE 4-8-19

SUPERVISOR [Signature]