

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

P070554483

FACILITY: Panther Machine, Inc.		SRN / ID: P0705
LOCATION: 50613 Varsity Court, WIXOM		DISTRICT: Warren
CITY: WIXOM		COUNTY: OAKLAND
CONTACT: Ralph Christensen , Quality Control and Logistics Manager		ACTIVITY DATE: 07/21/2020
STAFF: Iranna Konanahalli	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: FY 2020 self-initiated inspection of Panther Machine, Inc. ("Panther"). PTI to be voided: PTI No. 144-16 due to liquidation.		
RESOLVED COMPLAINTS:		

Panther Machine, Inc. (P0705)
50613 Varsity Court
Wixom, Michigan 48393-3694

Name change: Panther Crankshaft Inc. (P0705) until 2016 → Panther Machine, Inc. (P0705)

Rule 702 BACT: No control (black oxide = no VOC, sulfuric acid = no VOC, rust preventative = mostly VOC)

VN: AQD issued Violation Notice dated April 29, 2016, for failure to obtain a permit (Rule 336.1201) for sulfuric acid cleaning and black oxide process. VN was resolved upon issuance of the permit (PTI No. 144-16).

PTI: AQD issued PTI No. 144-16 (AQD Permit Engineer Daniel Schwanik; SC EU-BL-OX1, II.1 Material Limits: 2,000 gallons of rust preventative material per year (≈ 6.5 tpy VOC)) dated October 31, 2016, for black oxide dip coating line (EU-BL-OX1) as a result of April 29, 2016, Violation Notice. The coating line has been removed.

PTI to be voided: PTI No. 144-16 dated October 31, 2016, for black oxide dip coating line, as the entire line has been removed about June 2018.

Liquidation: Entire Panther's Wixom facility will be liquidated by September 2020 per Mr. Ryan Groat.

On July 21, 2020, , I conducted a level-2 **FY 2020** self-initiated inspection of Panther Machine, Inc. ("Panther"), located at 50613 Varsity Court, Wixom, Michigan 48393-3694. The inspection was conducted to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994, PA 451; and Michigan Department of Environment, Great Lakes and Energy, Air Quality Division (EGLE-AQD) administrative rules.

During the inspection, Mr. Ryan Groat (Phone: 248-921-6604; Fax: 248-960-3639; E-mail: rGroat@PantherGT.com), Operations Manager, assisted me.

About Dec 2018, Mr. Ralph Christensen (Phone: 248-960-3636; Fax: 248-960-3639; E-mail: RalphChristensen@PantherGlobalTech.com), Quality Control and Logistics Manager, and Mr. Tim Carrier (Phone: 248-960-3636; Fax: 248-960-3639; E-mail: tCarrier@PantherGlobalTech.com), Operations Manager, separated.

Panther is in a business of crankshaft manufacturing for lawn and garden equipment. The manufacturing processes involve electric induction heating, melting zinc (Zn) to molten state (850 °F) and molding crankshaft parts, quench oil usage, etc.

Injection molding

Three injection molding machines were present: one propane (BBQ size cylinder) heated and two electrically heated machines. All negligible emissions were released to in-plant environment. The machines were exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(2)(i) or 336.1282(2)(iv).

About 2018, the machines were sold to another company

Broaching machine

Broaching machine that removed material from metal part was removed about January 2018. All negligible emissions were released to in-plant environment. The machine was exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(2)(i).

Machines

Of five (5), only two (2) grinders, currently (July 2020), exist and will cease operation as all Wixom equipment will be liquidated by September 2020.

Two (2: 3 of 5 grinders have been removed about 2018) grinders with water-based oil coolant are present. The machines are exhausted to one Smog-hog filter. All emissions are released to in-plant environment. All grinders will be liquidated by September 2020.

14 Swiss City screw machines are present. While most machines are equipped with Tri-Mist filters, some machines are equipped with Cool Blaster Mist Control filters. i.e., each machine is equipped with a dedicated filter. Exhaust air from each machine, upon filtration, is released to in-plant environment.

One thru-feed grinder machine is present and is not equipped with an exhaust.

Two heat treating machines release exhaust gases to in-plant environment upon filtration using one common Smog-hog filter.

The machines are exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(2)(i) or 336.1282(2)(iv).

Black oxide dip coating line (PTI No. 144-16)

The black oxide dip coating line using sulfuric acid for cleaning has been removed about June 2018. PTI No. 144-16 that covers this coating line will be voided.

Sulfuric acid

Sulfuric acid exists in the sulfuric acid cleaning process gas stream as aerosol droplets because the acid has very low vapor pressure and its partial pressure is very low for 10 percent aqueous solution (0.353×10^{-13} bar at 100 degrees Celsius). See Perry's Chemical Engineers Handbook (pages 3-68 thru 3-69). Hence, sulfuric acid practically does not exist in vapor phase in the gas stream.

Conclusion

Violation Notice dated April 29, 2016, was resolved upon issuance of the permit (PTI No. 144-16). Entire Wixom facility will be liquidated by September 2020. Sulfuric Acid Tank and the coating line have been removed and the PTI No. 144-16 must be voided.

NAME *J. S. Marshall*

DATE January 4, 2021 SUPERVISOR *Joyce*