

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

P042836353

FACILITY: UNIVERSAL TUBE INC.		SRN / ID: P0428
LOCATION: 2607 BOND STREET, ROCHESTER HLS		DISTRICT: Southeast Michigan
CITY: ROCHESTER HLS		COUNTY: OAKLAND
CONTACT: Karl Konen , VP-Operations		ACTIVITY DATE: 08/24/2016
STAFF: Francis Lim	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT:		
RESOLVED COMPLAINTS:		

On August 24, 2016, I conducted an unannounced inspection at Universal Tube Inc. located at 2607 Bond St. Rochester Hills, Michigan. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; and Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) Administrative Rules. During the inspection, I was assisted by Rick Webb, Maintenance and Safety Manager and Karl Konen, VP-Operations.

Facility Description

Universal Tube is a manufacturer of tubing for the auto industry. Since facility operates a TCE vapor degreaser, it is a Category III fee-subject facility.

Product applications include automotive heating and air conditioning. Raw materials come in various tubing length and diameter (less than ½ inch). Tubing is mostly stainless steel or aluminum, with some tubing made of copper.

Tubing is cut to size in the lathe machines. A water based coolant (Unicool 383 VLF) is used in the lathe machines. I did not notice any odor from the machine coolant. The tubing is shaped in the hydraulic bending machine. Facility no longer uses mechanical bending machines. Depending on customer specifications, brazing and or heat treating is done in one of two electric furnaces. Brazing rods and paste flux are used during brazing. Usage of paste flux is very small. During heat treating (annealing only), furnace temperature is kept at approximately 1500 °F. Metals parts are air-cooled, no oil quenching during the heat treating. Other equipment used for manufacturing includes a welding table using either MIG or TIG welding, and drill press. MIG and TIG are types of gas metal arc welding. In MIG welding, a consumable electrode is used; in TIG welding a nonconsumable electrode (tungsten) is used. All cutting and drilling tools emit indoors. A TCE vapor degreaser and mineral spirits cleaning tank are used for parts cleaning. The mineral spirits is disposed as waste when it becomes dirty. Rags are also used for mineral spirits wiping on some tubing. Rags used for mineral spirits wiping is disposed as hazardous waste.

Halogenated Solvent Cleaning NESHP

On October 17, 2012 facility installed a Baron Blakeslee TCE vapor degreaser with a solvent/air interface area of 5.33 sq. ft. The halogenated solvent vapor degreaser has a freeboard ratio of greater than 1.0, equipped with a freeboard refrigeration device and an automated hoist. The vapor degreaser has 2 sumps: dip tank and rinse tank. With the degreaser cover slid in the open position, parts are placed into a small basket and raised by the automated hoist, lowered into the TCE dip tank (boil sump), transferred to the TCE rinse

tank, raised to the refrigerated freeboard area and goes back to the loading station. . At the freeboard refrigeration area, the basket spins very slowly. Dip tank is heated to 189 °F just enough to boil the TCE. Complete cycle lasts for about 5 minutes Dip time, rinse time and dwell time in the refrigerated freeboard lasts about 40 seconds each. As the TCE vapors rise (due to boiling), it is condensed back to liquid in the condenser coils and refrigerated freeboard area. Employee exposure to TCE is reduced since the opening of the vapor degreaser is about 8 ft. above ground.

TCE removed from the degreaser is kept in a closed hazardous waste container. Very little solids are in the waste solvent. Stabilizers are added to the solvent. Additionally, a small amount of NAOH is also added to prevent the solvent from turning acidic.

The vapor degreaser is subject to 40 CFR 63 Subpart T, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Halogenated Solvent Cleaning (Area Source). Facility chose to comply with the alternative standard, complying with an overall emission limit. Since the facility chose the alternative standards, the facility does not have to comply with any additional equipment monitoring or work practice standards. Operators of machines complying with the alternative standard are not subject to a solvent cleaning procedures test. In the previous inspection, Mr. Konen informed staff that they still asked their operators to do the test for training purposes. Facility has to submit an annual compliance report and a semiannual exceedance report.

The overall emission limit for this vapor degreaser is 163.63 pounds (5.33 x 30.7) per month based on a 3-month rolling average. The degreaser is topped off to a predetermined level every 16th of the month. Any solvent removed is subtracted from the TCE usage calculation. This procedure is in compliance with the NESHAP. I reviewed monthly emissions and previous semi-annual and annual reports.

The annual report for 2015 showed a higher emission level compared to previous years. The three month rolling emission average from March 17, 2015 to June 16, 2015 was reported as 159.6 pounds. Limit is 163.6 pounds per month. Karl mentioned that the facility lost a contract where usage of the TCE degreaser is required. So for 2016, reported usage will be lower. See attached monthly records. I also noticed in the annual report that the rolling three month calculation is being done every quarter, not monthly. The facility was notified of this.

The Initial Notification Report and Initial Statement of Compliance Report were submitted on February 25, 2013. Since this is an area source for the degreaser NESHAP, a Renewable Operating Permit (ROP) is not required. Universal Tube is a Category III fee-subject facility (Halogenated Solvent Cleaner).

Alternatives to the alternative standard were discussed, since Universal Tube was very close to the monthly limit. The facility can use more TCE, they just have to comply with a different standard which has more requirements.

Miscellaneous Operations

Brazing and welding equipment are exempt under Rule 285(i). Bending equipment is exempt under Rule 285(l)(i). Cutting and drilling is exempt under Rule 285(l)(vi)(B). The vapor degreaser and mineral spirits cleaning operation is exempt under Rule 285(r)(iv).



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