

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

N191235108

FACILITY: TIDI CFI Products, LLC		SRN / ID: N1912
LOCATION: 14241 Fenton Rd, FENTON		DISTRICT: Lansing
CITY: FENTON		COUNTY: GENESEE
CONTACT: Terry Byers , Facilities Manager		ACTIVITY DATE: 05/24/2016
STAFF: Julie Brunner	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled compliance inspection of TIDI CFI Products, LLC - PTI Nos. 34-00A and 35-15		
RESOLVED COMPLAINTS:		

On May 24, 2016, I conducted a scheduled inspection of TIDI CFI Products, LLC (CFI) in Fenton. The inspection included mercury (Hg) monitoring by AQD staff. The last compliance inspection of the facility was on September 13, 2012.

Contacts:

Mr. Terry Byers, Manufacturing Manager, 810-750-5300, tbyers@contourfab.com

Ms. Cherie Isaac, Facilities Assistant, 810-750-5300 ext 5363, cisaac@contourfab.com

AQD Staff:

Ms. Julie Brunner, Inspector, Lansing District Office, phone: 517-284-6789, brunnerj1@michigan.gov

Ms. Amy Robinson, AMU, Lansing Central Office, phone: 517-284-6758, Robinsona1@michigan.gov

Ms. Cindy Hodges, AMU, Lansing Central Office, phone: 517-284-6748, hodgesc@michigan.gov

Facility Description:

CFI manufactures foam / plastic products used in the medical industry, primarily for surgical procedures. The foam products consist of a variety of head rests/supports and positioning devices. The facility cuts foam from blanks and coats them in one of 6 spray booths located in the center of the building. They primarily use solvent-based coatings on the foam products.

The facility is located in a large building behind a strip mall right off of Fenton Road.

CFI is a minor source with a potential to emit of less than 250 tons per year (tpy) of any regulated air contaminant. The facility is considered a synthetic minor for emissions of hazardous air pollutants (HAPs) with opt-out limits of less than 9.0 tpy of any single HAP, and 22.5 tpy of aggregate HAPs. The facility has opted out of the Title V - Renewable Operating Permit (ROP) Program and any applicable federal standards with the permitted restrictions on emissions of HAPs. CFI has two active Permits to Install (PTI) Nos. 34-00A and 35-15 along with some exempt processes.

Permitted Emission Units (EU) and Flexible Groups (FG) -

EU/FG ID	Emission Unit Description (Process Equipment & Control Devices)
EU-BULBCRUSHER (PTI 35-15)	One 55-gallon drum-top fluorescent light bulb crusher, controlled by a bag filter followed in series by a HEPA filter and an activated carbon filter.
EU-DUSTCOLLECTOR (PTI 34-00A)	Dust collector used to collect refuse materials such as plastic chips, sawdust and composite materials from machining operations.
EU-EMERGENERATOR (PTI 34-00A)	A 500 kW (4.35 MMBtu/hr) diesel fuel-fired emergency generator. The engine model has a manufacturer's date of January 1975 and is therefore not subject to NSPS IIII.
	Coating booths and ovens associated with the

FG-COATING (PTI 34-00A)	foam parts coating process. (EU-BOOTH1, EU-BOOTH2, EU-BOOTH3, EU-BOOTH4, EU-BOOTH5, EU-BOOTH6, EU-MISCBOOTH1, EU-MISCBOOTH2, EU-OVEN1, EU-OVEN2, EU-OVEN3, EU-OVEN4)
FG-FACILITY	All process equipment source-wide including equipment covered by other permits, grandfathered equipment and exempt equipment.

MAERS:

The facility reports to MAERS. The MAERS was audited for 2015 and corrections were made. The following emissions were reported for 2015:

EU-EMERGENERATOR (EU-DieselGenset in MAERS) -

CO = 0.0143 tpy
 NOx = 0.0665 tpy
 PM10/2.5 = 0.005 tpy
 SO2 = 0.0044 tpy
 VOC = 0.005 tpy

EU-OrthoHood –

Acetone = 0.134 tpy
 Ethyl benzene = 0.022 tpy
 Xylenes = 0.12 tpy

FG-COATING (RG-CoatingDept in MAERS) –

VOC = 10.25 tpy
 Acetone = 13.3 tpy
 Ethyl benzene = 0.485 tpy
 Methyl Ethyl Ketone (MEK) = 2.06 tpy
 Methyl Isobutyl Ketone (MIBK) = 1.12 tpy
 Toluene = 4.34 tpy
 Xylenes = 0.12 tpy

For EU-BULBCRUSHER, the emissions of Hg were not reported. Emissions from this emission unit should be reported, and it was asked that they be reported next year. (Note: CFI will be removing the light bulb crusher.)

CFI needs to submit for a new MAERS primary preparer and the MAERS contact information was sent. (The contact for MAERS is Renee Denison, phone: 517-284-6741, InfoMAERS@michigan.gov.) Also, the names of the emission units in MAERS need to be cleaned up. There appear to be old emission units still listed in MAERS and names that don't match what is permitted.

Inspection:

I arrived at 8:52 AM with Cindy Hodges. Arrangements had been made to meet Amy Robinson at the facility with the Lumex monitor. The weather conditions were ~60°F, sunny, and with little wind. No visible emissions or odors were identified upon arrival.

I met with Amy Robinson and Cindy Hodges briefly to discuss the plans for the Lumex monitoring of EU-BULBCRUSHER. We then entered the facility and meet with Cherie Isaac. Paul Martel was no longer with the company who was the environmental contact during the last inspection. Cherie had been his assistant, but this was her first inspection. I gave a brief overview of the inspection process with an "Environmental Inspections" brochure given to Cherie. We started with the inspection of EU-BULBCRUSHER so that Amy and Cindy could head back to Lansing.

EU-BULBCRUSHER (PTI 35-15):

The fluorescent light bulb crusher (DTC) Model 55-VRS is located in the general plant, along the wall between shelving units. The DTC is controlled by a bag filter followed in series by a HEPA filter and an activated carbon

filter. Cherie was not sure when the unit was installed. But, no carbon change outs or shipments of glass waste had occurred yet. The "Bulb Crusher Log" was located near the unit with log entries from 4/20/16 to 5/8/16. The highest amount of light bulbs crushed per day according to the log was eleven (11) on 5/5 which is well below the permit limit of 400 eight-foot equivalent bulbs per calendar day. The record for the 12-month rolling of bulbs crushed could not be found. CFI only crushes their spent light bulbs from the facility. There is no storage of spent light bulbs as they are crushed when replaced.

The feed chute had a cap on it as required by Special Condition (SC) IV.3 for when the unit is not in use. There was no evidence that an operator training program, standard operating procedures, and maintenance program had been developed for the DTC as recommended in Appendices 1 and 2.

The DTC had white powder on top of the unit. The bag filter was sitting on top of the DTC containing white powder, and a hole in the HEPA filter case was covered in black tape. The DTC did not appear to be operated in a satisfactory manner as required by SC III.1, SC IV.1, and Appendix 1. (Pictures attached.)

Amy and Cindy did a Hg scan using the Lumex monitor. The DTC was leaking as measured during the mercury survey. Attached is the Lumex Record for the TIDI CFI inspection. Amy's observations are below:

The bulb crusher at TIDI was found to be in poor condition. There was duct tape on the HEPA filter housing and significant amounts of white phosphorous containing mercury, as indicated by the Lumex readings. There was even a used HEPA filter on the top of the unit. When the bulb eater was turned on the amount of mercury off gassing from the unit increased dramatically, vacuum hose reading went from 185 ng/m³ to 14,420 ng/m³. When a light bulb was fed through the system the vacuum hose reading went up to 78,510 ng/m³. There are numerous permit conditions being violated, including the unit being in poor repair (duct tape), being used when white powder is on the unit, not disposing of used HEPA filters properly, and not having dedicated clean up supplies, (i.e. broom and dust pan).

CFI was advised not to operate the DTC until it was repaired, and to clean up and properly dispose of the HEPA filter and the white powder dusting the unit.

EU-EMERGENERATOR (PTI 34-00A):

Behind the main plant building in a shed is the diesel powered emergency generator. EU-EMERGENERATOR is a 16 piston Detroit Diesel capable of producing 500 kW and is covered under PTI 34-00A. CFI purchased the generator "used". A "Diesel Genset Run Log" is kept in the room. A copy of the log (attached) showed hours and operation dated 2/19/2016 to 5/17/16. The clock time on the engine is 2426 hours matching the log time of 2426.1 hours. CFI tracks the oil usage on an as purchased basis. The amount purchased in 2015 was 220.8 gallons which indicates that they are well below the permit limit of 136,000 gallons per 12-months. Ultra low sulfur diesel at 0.0015% sulfur by weight is used in the generator which is well below the permit limit of 0.05% sulfur by weight. (Oil SDS attached.) The generator has two (2) vertical stacks in compliance with SC VIII.1.

A 500 to 550 gallon horizontal fuel oil tank with secondary containment is also located in the generator shed. A 55-gallon drum of used oil was located beside the tank.

The generator is strictly for emergency use. The unit is typically only operated for load testing. The unit has a manufacturer's date of Jan. 1975 and is therefore not subject to the New Source Performance Standard (NSPS) in 40 CFR 60, Subpart IIII. The Maximum Achievable Control Technology (MACT) standard in 40 CFR 63, Subpart ZZZZ refers back to the NSPS for compliance for existing generators. Since the unit is not subject to the NSPS, there are no additional compliance requirements under the MACT.

EU-DUSTCOLLECTOR (PTI 34-00A):

Outside of the main building is a blue dust collector used for collection of dust from the machine shop. This is included in PTI 34-00A. It is inside of a fenced area. There is no pressure drop gauge on the unit, and no way to tell if it is operating properly. Also, there are holes in the discharge socks connected to the four (4) 55-gallon drums that sit under the unit to collect particulate removed. The last time the 55-gallon drums were emptied was unknown as there were no waste manifests in current records. The dust collector actually connects to a room air pickup located in the ceiling of the machine shop, so the dust collector probably does not pick up large enough particles that would end up in the 55-gallon drums. The exhaust vent stack on EU-DUSTCOLLECTOR is horizontal, and probably at the minimum height of 13 feet as allowed in PTI 34-00A. It is recommended that the discharge socks be replaced.

Also, in the fenced area is a small white vacuum unit which is exempt per Rule 281(a). Located out back is a trash compactor beside the dust collector.

Machine Shop:

CNC machining –The CNC is a high-power, high-speed router head that is used to cut three dimensional shapes in foam pieces. This method differs from traditional machining because traditional machining uses a slow speed and cuts large strips on a lathe, whereas the CNC machine cuts very small chips at high speed using a movable router head. The CNC router was cutting a ring for a foam halo. Any foam from the process is vacuumed up. The hose for the small white vacuum is on the wall.

Britten milling center and three (3) milling centers – Cut both plastic and metal parts. Bins collect plastic and metal chips. The three (3) milling centers are wet. A Havco milling center and saw located in the room are also wet. There were no emissions from the cutting of plastic and metal parts, and the units have no external exhausts.

The machining processes appear exempt per Rule 285(l)(vi)(B).

FG-COATING (PTI 34-00A):

The coating operations are located in a separate room that has six (6) spray booths. Four (4) of the booths were operating at the time of inspection. Foam medical aids were being sprayed. The foam parts arrive pre-cut and are coated manually. There are pressure pots in the booths for unusual and low use colors are sprayed using a pressure pot, and spray applicators are connected to the paint kitchen for high volume coatings. The spray guns are Binks 2100 applicators which appear to be conventional applicators. It is recommended that high volume low pressure (HVLP) applicators or air assisted airless applicators be used but this is not required by PTI 34-00A. The booths are dry filter and are changed regularly according to a preventative maintenance (PM) schedule.

We walked through the paint kitchen which has capacity for pumping paint to 10 lines from 55-gallon drums. The paint coatings are thinned with acetone. The paint kitchen is in a separate room. Outside the paint kitchen is the molding room that is no longer used.

The paint coating used is logged daily and usage is entered into a Microsoft Access database. Copies of the daily log sheets for 5/18, 5/19, and 5/20 were obtained. (Logs attached.) The highest amount of paint sprayed was 42 gallons on 5/19, and the highest amount of acetone used was 15 gallons on 5/18. Three (3) SDS were obtained for gray, white, and black coatings. The coatings are solvent-based. The VOC content ranges from 2.9 to 3.9 lb/gallon. The permit does not have any VOC coating content limits. Records for the daily, monthly and the 12-month rolling mass emission calculations could not be obtained.

Compression foam molding:

They have a very large press and press handling system, and can form large parts such as full length table supports and full body supports. Specially formulated foam-boards are heated and mechanically formed into the desired shape. There are no emissions from this process.

Finishing Area:

Other processes at the facility include various sewing, binding, soldering, and fabrication of foam products. There is also an electric heated chamber pot for humidification of parts, and shipping and receiving.

We returned from the facility tour, and discussed records. Due to Paul Martel leaving, finding the records requested on the day of the inspection did not happen.

Records Requested and Reviewed:

EU-EMERGENERATOR:

1. Records of the date, duration and description of any malfunction, any maintenance performed and any testing results for EU-EMERGENERATOR.

Note: Records obtained for 2/19, 2/20, 4/13 and 5/17.

2. Records of the sulfur content calculated in percent by weight for EU-EMERGENERATOR.

Note: Fuel sulfur content (SDS) = 15 ppm, ultra-low sulfur fuel so no calculations needed.

3. Monthly and 12-month rolling time period fuel use records for EU-EMERGENERATOR.

Note: Record not found at the time of inspection. It was determined that CFI made one purchase of fuel for the generator last year. It was in December, and it was for 220.8 gallons. CFI tops off the tank at the end of every year.

FG-COATINGS:

1. For FG-COATINGS at least two of the eight paint spray booths are to be operating simultaneously. Records of the hours of operation of each paint booth including the date and time that each paint booth was operated.

Note: Records not located at the time of the inspection

2. Material Safety Data Sheets, manufacturer's formulation data, or both of **commonly used coatings**.

Note: SDS obtained for gray, white, and black coating.

3. Monthly records for each spray booth and for all coating booths combined for the last 12-months showing:

- a. Gallons of each material (coating, reducer/thinner, cleanup solvent, etc.) used.
- b. VOC content of each material (coating, reducer/thinner, cleanup solvent, etc.).
- c. Acetone content of each material (coating, reducer/thinner, cleanup solvent, etc.).
- d. VOC and Acetone combined mass emission calculations determining the monthly emission rate in tons per calendar month for each spray booth and combined for all spray booths within FG-COATING.
- e. VOC and Acetone combined mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month for each spray booth and combined for all spray booths within FG-COATING.

Note: Daily records collected at the booths. Copies of usage for 5/18, 5/19, and 5/20 obtained. Records of VOC and Acetone mass emission calculations determining the monthly and the annual emission rate in tons per 12-month rolling time period were not located at the time of inspection.

4. Daily records for the month of April of the following information for FG-COATING:

- a. Gallons (with water) of each Xylene containing material used.
- b. Gallons (with water) of each Isopropyl Alcohol containing material used.
- c. If applicable, gallons (with water) of each Xylene containing material reclaimed.
- d. If applicable, gallons (with water) of each Isopropyl Alcohol containing material reclaimed.
- e. The Xylene content (with water) in pounds per gallon of each material used.
- f. The Isopropyl Alcohol content (with water) in pounds per gallon of each material used.
- g. Xylene mass emission calculations determining the daily emission rate in pounds per calendar day.
- h. Isopropyl Alcohol mass emission calculations determining the daily emission rate in pounds per calendar day.

Note: Records of xylene and isopropyl alcohol mass emission calculations determining the daily emission rate in pounds per calendar day were not located at the time of the inspection.

FG-FACILITY:

1. Monthly records of the following information for FG-FACILITY for the last 12-months showing:

- a. Gallons or pounds of each HAP containing material used.
- b. Where applicable, gallons or pounds of each HAP containing material reclaimed.
- c. HAP content, in pounds per gallon or pounds per pound, of each HAP containing material used.
- d. Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month.
- e. Individual and aggregate HAP emission calculations determining the annual emission rate of each in tons per 12-month rolling time period as determined at the end of each calendar month.

Note: Records of individual and aggregate HAP mass emission calculations determining the monthly and the annual emission rate in tons per 12-month rolling time period were not located at the time of inspection.

I left the facility at 12:35 PM.

Summary:

The facility appeared to have multiple record keeping and compliance issues on PTIs 34-00A and 35-15. A Violation Notice (VN) was sent on May 31, 2016 in order to resolve the compliance issues. A response to the VN was received June 20, 2016. For the light bulb crusher (PTI 35-15), this equipment has been removed from service, and will be removed from the facility. It was requested to void PTI 35-15. To resolve the numerous record keeping violations, an extension until July 31st was requested. This extension was granted, and submission of the records by July 31, 2016 was requested. The records will be reviewed as part of resolving the violation.



Image 1(EU-BULBCRUSHER) : A 55-gallon drum-top fluorescent light bulb crusher, controlled by a bag filter followed in series by a HEPA filter and an activated carbon filter.

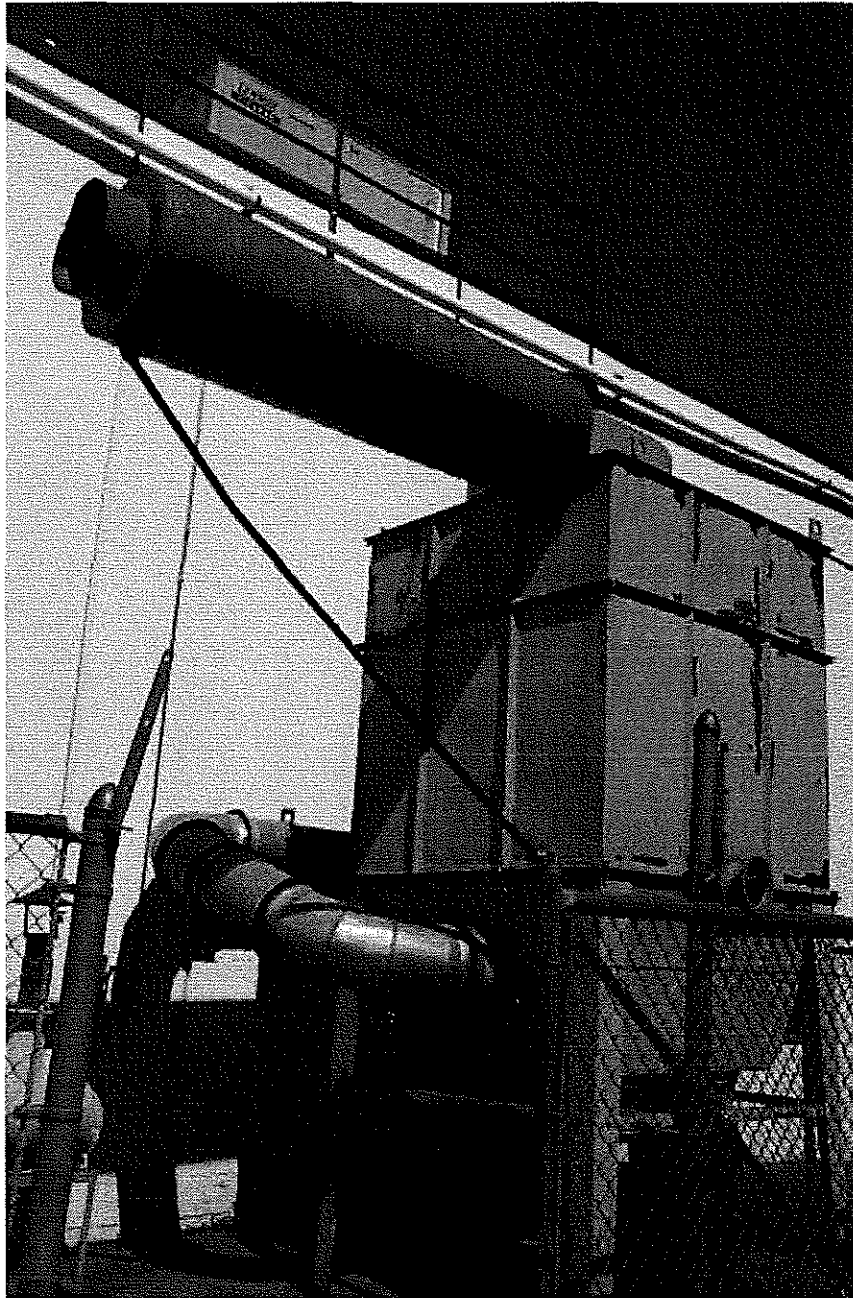


Image 2(EU-DUSTCOLLECTOR) : Dust collector used to collect particulate from machining operations.

NAME Julie L. Brown DATE 6/23/16 SUPERVISOR B. M.

