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

N059948157

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| **FACILITY:** UNIVERSAL BEARINGS | | **SRN / ID:** N0599 |
| **LOCATION:** 205 INDUSTRIAL PARKWAY, ITHACA | | **DISTRICT:** Lansing |
| **CITY:** ITHACA | | **COUNTY:** GRATIOT |
| **CONTACT:** Chad DesRochers , Operations Manager | | **ACTIVITY DATE:** 03/20/2019 |
| **STAFF:** Michelle Luplow | **COMPLIANCE STATUS:** Compliance | **SOURCE CLASS:** MINOR |
| **SUBJECT:** Scheduled, unannounced inspection to determine compliance with all applicable PTI's and permit exemptions | | |
| **RESOLVED COMPLAINTS:** | | |

Inspected by: Michelle Luplow
Personnel Present: Chad DesRochers, Operations Manager (chad.d@meplasticsllc.com)

**Purpose:** Conduct an unannounced, scheduled compliance inspection to determine compliance with M & E Plastics' Permits to Install (PTI) Nos. 408-, 409-, 411-, 412-83; 20-84 and 123-93A.

**Facility Background/Regulatory Overview:** Universal Bearings became M & E Plastics (M & E) when ownership of the company changed in July 2018. M & E Plastics is a minor source that is currently involved in bulk molding, but there is the potential for M & E to expand beyond bulk molding under the new ownership: according to Chad DesRochers, Operations Manager, they plan to continue molding but may also begin 3-D printing, which involves plastic molding to create three-dimensional objects. A component of the bulk molding compound used at M & E is styrene.

M & E Plastics operates 5 days per week, 40 hours per week, 1 shift per day.

Table 1 contains a list of permitted and exempt equipment at the facility.

**Table 1.** Equipment list

| EU | Description | PTI/Exemption |
|---|---|---|
| 1 Grieve electrically heated oven | Post-curing parts made of conventional plastic, phenolic molding compound, at 350°F for 8 hours at a time. Ammonia gas is released when exposed to heat. This is the only oven that heats the phenolic molding compound. | 408-83 |
| 2 Lawton 500-ton compression molding presses | Compression molding – molding "bulk molding compound" BMC which contains 17% styrene. #63 (40,000 lb/week) and #22 (20,000 lb/week). Mold BMC into sheets. | 409-83<br>Rule 286(2)(b) |
| 2 Lawton 350-ton compression molding presses | Compression molding | 411-83<br>Rule 286(2)(b) |
| Wheelabrator tumblast with dust collector | Removes residual plastic (flash) from products out of the 375-ton Cincinatti injection modling press. Walnuts as a de-flasher. | 412-83<br>Rule 285(2)(l)(vi)(C) |
| Cincinnatti 375-ton injection molding | Mold conventional plastic, 25,000 lbs/year. | 20-84<br>Rule 286(2)(b) |
| 2 Paint Booths | Booths with fabric filter control | 123-93A<br>Rule 287(2)(c) |
| Safety Kleen parts washer | 1.5' x 2.5' Subject to Rule 707. Uses Safety Kleen solvent | Rule 281(2)(h)777 |

**Inspection:** This was an unannounced compliance inspection. At approximately 8:15 a.m. on March 20, 2019 I

met with Chad DesRochers, Operations Manager. He asked if I could come back later in the day as he was in the middle of fixing equipment to complete a job. I left at 8:30 a.m. and returned again at 10:55 a.m. Upon my return, I provided him with a January 2017 Permit to Install Exemption handbook.

We discussed various concerns he had regarding air permitting and air exemptions and their applicability to the equipment located onsite and potential future installations.

PTI No. 408-83: 3 Grieve electrically heated air circulating ovens
There is 1 Grieve electrically heated oven remaining out of the 3 that were permitted. C. DesRochers said this oven is used for post-curing parts made of conventional plastic, a phenolic molding compound, at 350°F for 8 hours at a time. Permit conditions limit the amount of ammonia from these ovens to 2.6 lb/hr from all 3 ovens, or 0.8625 lb/hr per oven, and restricts opacity from the stack to 20%. There were no visible emissions from the stack. Hexamethylenetetramine is a compound that is converted to ammonia under heated conditions. According to C. DesRochers' documentation, 3 compounds are heated in this oven that contain hexamethylenetetramine (Plenco 04466, Plenco04568, and Durez 00152), with a maximum of 15% hexamethylenetetramine by weight. I did not verify that emissions from this process exceeded the lb/hr permit limits for ammonia, as a lb/hr determination cannot be done without records of usage, hours operated, etc, all of which are not required to be recorded by the PTI. The Permit File on this PTI does not contain SDS for any of the compounds included in the PTI evaluation and therefore a determination whether the quality or quantity of emissions has changed cannot be determined.

PTI No. 409-83: 2 Lawton 500-ton compression molding presses
This equipment is used for molding "bulk molding compound" (BMC), which contains no more than 25% by weight styrene (see attached for MSDS provided by C. DesRochers). Universal Bearings labels these presses #63 and #22. C. Desrochers said that press #63 can produce approximately 40,000 lbs/week and press #22 can produce approximately 20,000 lbs/week. These two presses mold balls of the BMC into sheets for various applications. The Permit File on this PTI does not contain SDS for any of the compounds included in the PTI evaluation and therefore a determination whether the current quality or quantity of emissions has changed from time of evaluation cannot be determined. These processes can be exempt under Rule 286(2)(b) for compression molding. I requested that PTI 409-83 be voided on 3/21/19.

Based on the above information the potential to emit of styrene would be approximately 5 tons, at a BMC content of 25% by weight (top of the range range, according to the SDS), from both presses combined and using a 1.15% emission factor (as provided in the American National Standard "Estimating Emission Factors from Open Molding and Other Composite Process, p 12).

PTI No. 411-83: 3 Lawton 350-ton compression transfer molding presses
According to C. DesRochers, 2 of the 3 presses are still present onsite. The Permit File on this PTI does not contain SDS for any of the compounds included in the PTI evaluation and therefore a determination whether the current quality or quantity of emissions has changed from the time of PTI application evaluation cannot be determined. These processes can be exempt under Rule 286(2)(b) for compression molding. I requested that PTI 409-83 be voided on 3/21/19.

PTI No. 412-83: Wheelabrator tumblast w/ wheelabrator dust collector
This equipment uses walnuts as a de-flasher: it removes residual plastic (flash) from products generated by the 375 ton Cincinnati injection molding press. The dust collector is housed inside the plant, but exhausts to the outdoor air. C. DesRochers explained that the particulate from the dust collector is collected in a plastic bag that is removed from the collector and thrown away, which happens approximately once per week, or when it is noticed that there is dust remaining on the finished products. The photo of the stack, provided by C. DesRochers (attached) shows that there was no particulate present on the roof, which would indicate that the particulate is being controlled by an appropriately designed and operated fabric filter collector. This process can be exempt under Rule 285(2)(l)(vi)(C). I requested that PTI 412-83 be voided on 3/21/19.

PTI No. 20-84: Cincinnati 375-ton injection molding
There are 2 375-ton Cincinnati injection molding presses at this facility. One is covered under PTI 20-84 and the other under exemption Rule 286(2)(b). This equipment is used to mold what M & E calls "conventional plastic" and has the ability to produce approximately 25,000 lbs/year, according to C. DesRochers. The Permit File on this PTI does not contain SDS for any of the compounds included in the PTI evaluation and therefore a determination whether the current quality or quantity of emissions has changed from the time of PTI application evaluation cannot be determined. These processes can be exempt under Rule 286(2)(b) for injection molding. I

requested that PTI 20-84 be voided on 3/21/19.

PTI No. 123-93A: 2 paint booths
The original PTI 123-93 was for the installation of one paint booth, 123-93A was issued to include an additional paint booth. C. DesRochers explained that the paint booths have not been used since roughly 2008. The paint booths also have 2 associated, electrically heated ovens that are vented outside and which were not included in the permit application for the paint booths. The surface coating line (booths + ovens) is currently exempt from a permit to install under Rule 287(2)(c) because the coating usage is less than 200 gallons/month minus water. I explained to C. DesRochers that operating these booths under the exemption would offer more flexibility to M & E than the current permit (permit includes water in usage rates and restricts usages to 250 gallons per month for both booths combined). He agreed the permit should be voided in order to operate under the exemption. I requested that PTI 123-93A be voided on 3/21/19.

Other Exempt Units
There is a 17" x 29" Safety Kleen cold cleaner that is exempt per Rule 281(2)(h) because its air/vapor interface is less than 10 square feet. C. DesRochers said that the cold cleaner was installed approximately 10 years ago, which is considered to be a "new cold cleaner" which is subject to Rule 707.
Rule 707 requires that operating procedures be kept in a conspicuous location near the cold cleaner. M & E did not have operating instructions posted. I provided C. DesRochers with an MDEQ "Cold Cleaner Operating Procedures" stickers to adhere to the cold cleaner. After the inspection, C. DesRochers took a photo of the posted MDEQ cold cleaner operating procedures, attached.

The lid is required to be closed when not in use. The lid was open and I explained to C. DesRochers that the lid must be closed when not in use. I shut the lid during the inspection, to remain in compliance.

**Compliance Statement:** M & E Plastics appears to meet the exemption requirements as well as all permit requirements at this time.

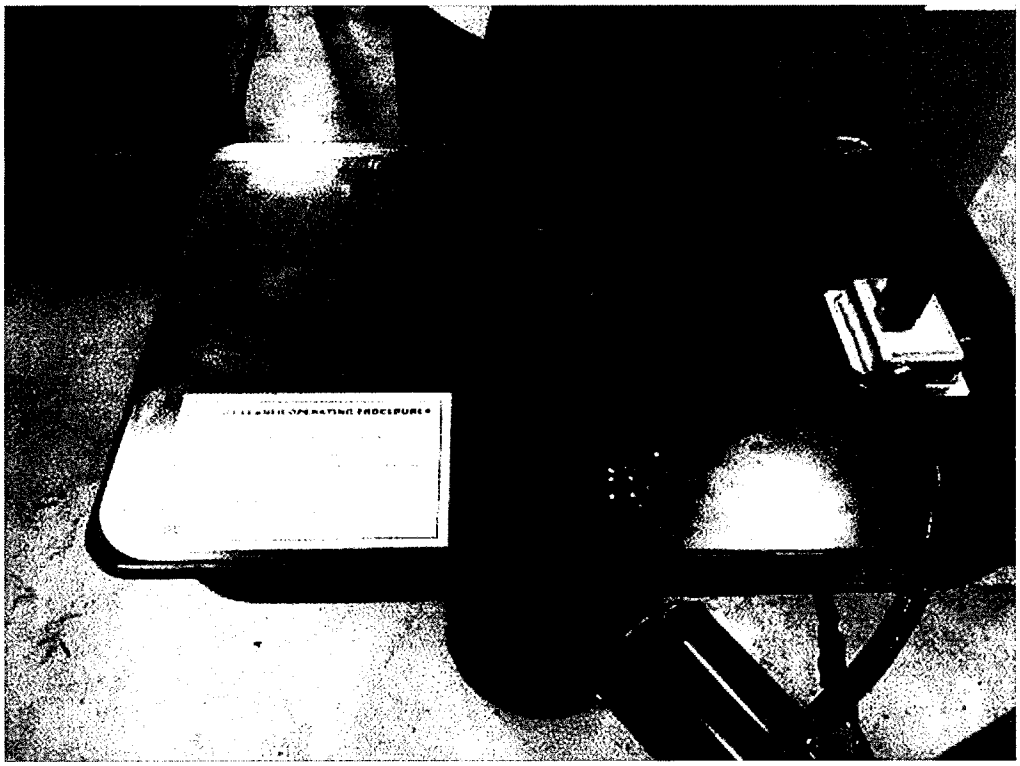

**Image 1(Parts Washer) :** Photo Cred: Chad DeRochers. Operating instructions posted and lid has been closed

**Image 2(Wheelabrator Exhaust) :** Photo Cred: Chad DesRocher. Exhaust stack for wheelabrator on top of roof. I did not go on the roof to observe this exhaust point. There appears to be no dust build-up on the roof. Particulate appears to be controlled properly.

NAME _____ DATE _____ SUPERVISOR_____