

N3010
Manila
Washtenaw

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

N301024391

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|-------------------------------------------------------|-------------------------------|---------------------------|
| FACILITY: BLACKMORE CO | | SRN / ID: N3010 |
| LOCATION: 10800 BLACKMORE AVE, YPSILANTI TWP | | DISTRICT: Jackson |
| CITY: YPSILANTI TWP | | COUNTY: WASHTENAW |
| CONTACT: Ted Neff , Plant Manager | | ACTIVITY DATE: 02/27/2014 |
| STAFF: Diane Kavanaugh-Vetort | COMPLIANCE STATUS: Compliance | SOURCE CLASS: MINOR |
| SUBJECT: Complete scheduled inspection, Minor Source. | | |
| RESOLVED COMPLAINTS: | | |

Mr. Ted Neff, Tamhn@chartermi.net

On February 27, 2014 I conducted a complete, scheduled inspection of the above Blackmore Company facility location, unannounced. The purpose of the inspection was to determine Blackmore's compliance status with the applicable federal and state air pollution control regulations. Specifically, Part 55 Air Pollution Control of the Natural Resources and Environmental Protection Act 1994 PA 451, as amended, and the administrative rules. Blackmore Company currently operates only permit exempt process equipment, determined to qualify for exemption from the Rule 201 Air Use Permit to Install requirement under the Rule 286 Plastic processing equipment exemptions, particularly R286(a) and (d).

Upon my arrival, I provided my identification and stated the purpose of my visit. I met with Ted Neff, Plant Manager. Mr. Neff has been the plant contact since @1995 according to Department of Environmental Quality (DEQ), Air Quality Division (AQD) files. He accompanied me during the facility inspection. Blackmore manufactures only polystyrene plastic parts, specifically plastic greenhouse seedling and plant trays in a large variety of sizes and designs. They use Thermoplastic materials through plastic extrusion molding process lines (hot/cold hydraulic press). Granular (pellet) materials are fed into a hopper and forced through a heated chamber by a spiral screw. This plastic mass is forced through the various dies, cooled and trimmed.

Per Ted they have @ 40 employees and operate 24 hrs/ 7 days per week, 3 shifts. This is their busy time and business is somewhat seasonal; from Labor Day to April is their main production, mostly due to greenhouse starters. Blackmore has reduced operations from April to Labor Day. There are two buildings on site; one holds the plastic production and materials storage. The other is warehouse for materials and a machine shop for greenhouse industry machines, i.e. seed fillers, pot fillers, and new compostable / biodegradable soil cups. They repair, test, and maintain machines here.

Ted told me one change since the last AQD inspection (1/24/2008) is that their sister plant in Chatham, Canada expanded and took some of their production.

Blackmore uses some virgin plastic pellets and also uses recycled plastic that has been reprocessed into pellet form. Ted told me they also take back customer's used trays as a customer service. They grind up recycled plastic, line scrap, and spilled extruded plastic on site. I observed they have 5 plastic pellet feed bins in the main room feeding the thermoforming line hoppers. They have 5 more pellet feed bins in the room behind wall of the production area (also where 2 of 3 larger grinders are located).

Blackmore operates 3 grinders; each is a closed loop system exhausting in-plant. I observed grinder exhaust is ducted to an unusual but apparently effective particulate control collector, again located in plant. Particulate is collected by long hanging fabric filter bags - not within a structure. The exhaust air goes inside the bag and is forced out and the particulate is collected on the outside of the bag. Bags hang over 55 gal drums. They clean the system out once per week per Ted. All the particulate is collected and reused. (Exemption: Rule 285 (vi)(B))

Blackmore has three large silos, each holds 140,000 pounds, located outside the building to store plastic pellets received by truck. Have transfer chutes into the building. (Exemption: R286(a) and (d))

At the time of the last AQD inspection Blackmore was operating ten (10) extrusion/molding lines referred to as "Polyformers". During my inspection today, I observed what appeared to be new ductwork on each of

these lines and three vertical stack extensions through the roof. I asked Ted about this and he said since my last inspection they hired an engineering firm to improve their in-plant environment and this was the result. I recall from the prior inspection that there was a haze and an odor in the plant. At the time Blackmore had 2-3 general plant exhaust fans in the roof located above the Polyformers. The fans are now blocked off. The central fan used to directly exhaust the line extruder hoods/vents and is now the location of one of the new exhaust stacks. Previously Blackmore used flexible ductwork from each machine to this one exhaust point.

Ted said the newly installed exhaust ventilation combines 3, 3, and 4 machines to an actual stack exhausting through the roof. Unfortunately he said it was an expensive investment and it is not working as well as they thought. It was obvious to me that there is still a hazy, smoky atmosphere in the production area around the molding machines. I also noted a distinct odor while in the plant building. However I didn't notice any odor or see any visible emissions outside when I arrived. Ted said this is the polystyrene odor. He indicated that they are currently looking into what they can do to improve it. I asked him about worker safety under OSHA and Ted said they have had inspections by OSHA and it was determined to be safe.

In the production room on the wall across from the Polyformers is an array of windows and these were open. I informed Ted that in the spring early summer 2013 I received odor complaint from a neighborhood directly west of them and on the other side of the Ford Rawsonville Plant. At the time I only discussed the complaint with Ford due to their proximity. No source was identified and I was not able to verify the alleged odor. Based on the odor description however, chemical, burning, plastic-like, I was also suspecting Blackmore may have been a potential source, acknowledging the distance is rather far.

Ted acknowledged that they do open windows due to the heat primarily and that most of the time a WSW wind would be blowing into the plant windows. I told him fugitive plant emissions from the windows and possibly the Polyformer stacks are things we both can be aware of especially if AQD receives future odor complaints.

During the inspection I observed that each line has a pellet material holding hopper and modified transfer/loading equipment (now vacuum/automatic). The smoky emission is generated as the material is heated melted/formed. The hoods were observed to be directly over the appropriate area of the process line however it did not appear they had sufficient vacuum.

During the prior inspection Blackmore had been registering compliance under Rule 208(a) since @1997 and submitted annually with MAERs. AQD obtained additional information from the company and their consultant at that time and determined they were in compliance and could void their Permit to Install and end Rule 208(a) registration. At the time I requested and reviewed Material Data Sheets (MSDS) on the plastic components, monthly (minimum) usage records for year 2007, and revised/updated PTE and actual emission estimates. Their consultant at that time was Mr. Michael Iacopelli, Advanced Engineering Solutions. Blackmore was determined to be a true minor, exempt source.

Styrene remains the pollutant of concern in this case and is a hazardous air pollutant (HAP). Blackmore last reported emissions as volatile organic compounds (VOC) in 2006 and emitted 4.6 tons. MSDS were used for emission factors. Emission factors listed in % weight (0.2 Styron, 0.6 PS Lumps, and 0.1 Polystyrene) and were multiplied by the usage rate in pounds.

Process operations appeared to be unchanged from previous inspection with the exception of the supposedly improved exhaust ventilation. Additional detail from prior report: Outside air is brought in through a wall unit and is (ducted) used to cool motors at four remaining DC motor machines. Newer machines are AC and don't require this. A vacuum loading system is used to transfer plastic granules to each line. Front end loaders fill hoppers (10 of these, one for each line).

I observed Blackmore has one large Blender, used to mix all the different types of plastic pellets together (800 to 1000 lbs). This is also in-plant exhaust.

During the inspection I walked through both plant buildings with Ted, no additional air related processes were observed in Building #2.

COMPLIANCE SUMMARY

The Polyformers and associated plastic resin handling, and storage equipment have been determined to meet the Rule 201 exemption under Rule 286(a) and (d) and also possibly (b) per historical file. Emission estimates, specifically Styrene, will need to be revisited if there is future expansion or significant changes that exceed conditions under Rule 278. Also, pending receipt and verification of future odor complaints in the area additional

review may be necessary. The AQD has determined that Blackmore Company appears to be in substantial compliance with the applicable rules at this time.

NAME *Deane K. Vetter*

DATE *3/14/14*

SUPERVISOR *[Signature]*

