

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

N249628340

FACILITY: WILLIAMSTON PRODUCTS INC (NORTH)		SRN / ID: N2496
LOCATION: 845 PROGRESS COURT, WILLIAMSTON		DISTRICT: Lansing
CITY: WILLIAMSTON		COUNTY: INGHAM
CONTACT: Tom Bolton, Manufacturing Engineer		ACTIVITY DATE: 01/23/2015
STAFF: Daniel McGeen	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Unannounced, scheduled inspection of facility which was last inspected in 2010.		
RESOLVED COMPLAINTS:		

On 1/23/2015, the Department of Environmental Quality (DEQ), Air Quality Division (AQD) conducted an unannounced, scheduled inspection of Williamston Products, Inc. (WPI), at their North facility.

**Facility environmental contact:**

Tom Bolton, Manufacturing Engineer; 517-655-2131, ext. 237, [tomb@wpius.com](mailto:tomb@wpius.com)

**Facility description:**

This facility produces flexible polyurethane foam in an "in mold" process, for automotive headrests that they manufacture.

**Emission units:**

Emission unit ID	Emission unit description	Relevant exemption rule	Federal regulation, if applicable	Operating status
PLACO 1	Plastic blow mold cell	286(c)	NA	Compliance
PLACO 2	Plastic blow mold cell	286(c)	NA	Compliance/not operating
PLACO 3	Plastic blow mold cell	286(c)	NA	Compliance
Krupp	PVC blow mold cell	286(c)	NA	Compliance
Krupp (not in use)	Blow mold cell not used for several years	286(c)	NA	Compliance/not operating
Regrind processes	Regrind processes for grinding plastic trim pieces from blow mold cells; exhaust to general, in-plant environment.	285(l)(vi)(B)	NA	Compliance
4 rotary foam lines	Polyurethane foam reaction injection molding lines, with a carousel style work station; closed mold system	286(e)	40 CFR Part 63 Subpart OOOOOO	Compliance
3 stand-alone foam lines	Polyurethane foam reaction injection molding lines, with a stand-alone work station; closed mold system	286(e)	40 CFR Part 63 Subpart OOOOOO	Compliance
Mold release agent application	Spraying and/or brushing liquid mold release agent into molds for foam lines	287(c)	NA	Compliance

**Regulatory overview:**

This facility is considered to be a minor source because it does not have the potential to emit (PTE) of 100 tons per year (TPY) or more of any single criteria air pollutant. Criteria pollutants are those for which a National Ambient Air Quality Standard (NAAQS) exists: carbon monoxide, nitrogen oxides, sulfur dioxide, volatile organic compounds (VOC), lead, particulate matter smaller than 10 microns (PM-10), and particulate matter smaller than 2.5 microns (PM2.5). Additionally, the facility is considered to be a minor source of Hazardous Air Pollutants (HAPs), because the PTE is less than 10 TPY for a single HAP, and less than 25 TPY for all HAPs combined. For more details, please refer to the 1/10/2008 inspection report of this facility by AQD's Brian Culham.

This facility does not have any permits to install, because all of the emission units there qualify for exemptions from the requirement of Rule 201 to obtain a permit to install. Please see the table of emission units, which indicates the relevant exemptions for each process.

WPI (North) is subject to the requirements of 40 CFR Part 63, Subpart OOOOOO, National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Flexible Polyurethane Foam Production and Fabrication Area Sources. It is subject because it is an area source (i.e., not a major source) of HAP emissions and it produces flexible polyurethane foam as defined in the regulation. However, it is not a flexible polyurethane foam fabrication facility.

WPI (North) is not subject to 40 CFR Part 63, Subpart III, the NESHAP for Flexible Polyurethane Foam Production, because it does not meet the specified criteria of being a major source of HAP emissions. In addition, it is not subject to 40 CFR Part 63, Subpart MMMMMM, the NESHAP for Flexible Polyurethane Foam Fabrication Operations, because it is not a major source of HAPs, nor does it perform fabrication of foam pieces

#### Fee status:

This facility is not considered fee-subject, for the following reasons. Because it is not a major source for criteria pollutants, it is not classified as Category I. Additionally, because it is not a major source for Hazardous Air Pollutants (HAPs), and is not subject to federal New Source Performance Standards, it is not classified as Category II. Because the facility is subject to 40 CFR Part 63, Subpart OOOOOO, it is considered subject to federal Maximum Achievable Control Technology (MACT) standards, and should be classified as Category III. Category III sources ordinarily pay an annual fee of \$250.00 per year, to help support the AQD Renewable Operating Permit program. However, the AQD Emission Reporting & Assessment (ERA) Unit may not bill this facility, because AQD does not have delegation of authority from the U.S. Environmental Protection Agency for this MACT. The ERA Unit will inform the AQD Lansing District Office of their determination, and I will update the company.

The facility is not required to submit an annual air emissions report via the Michigan Air Emissions Reporting System (MAERS). However, the facility environmental contact, Mr. Tom Bolton, voluntarily attended MAERS training in 2013, to see if it was applicable to their facility. He concluded, accurately, that AQD would be reaching out to the company to inform them, if they needed to report to MAERS. AQD Operational Memorandum No. 13 provides guidance that sources with over 10 tons per year of VOC emissions should report to MAERS, and WPI (North) is not considered likely to have VOC emissions over 10 tons.

#### Location:

The facility is located within an industrial park, on the south side of Williamston. The nearest residences are located about 700 feet to the west of the plant, and about 1,200 feet to the north. To the more immediate north, west, and southwest are other industries. To the south and east is undeveloped land. About 800 feet to the southeast is an office building.

#### Recent history:

There are no air pollution complaints on record for this facility. It was last inspected in 2010. There is another WPI facility in the area, on Noble Road, called WPI (South), with its own State Registration Number (SRN) N1790. It had been closed as of 2010, but now that WPI (North) has more business, WPI (South) is operating again, performing light assembly operations. The South facility was inspected later today, and this is documented in a separate activity report. There is also a relatively new Owosso facility, with the SRN N2022, which I did not inspect today.

#### Arrival:

I arrived at the facility unannounced. I detected no odors from the plant, nor any visible emissions. I met with Mr. Tom Bolton, Manufacturing Engineer, who explained that a previous environmental contact, Ms. Kirsten Hillman, is no longer with the company. I explained that one of the goals of AQD inspectors this fiscal year is to inspect facilities which have not been inspected in recent years, and this plant was last inspected in 2010. I provided Mr. Bolton with a copy of the DEQ brochure *Environmental Inspections: Rights and Responsibilities*, per AQD procedure. Mr. Bolton provided me with a copy of their visitor orientation brochure, per their procedures (please see attached).

**Inspection:**

This facility is a Tier 2 auto supplier, Mr. Bolton indicated. I was informed that no new processes/emission units have been installed at the plant. Therefore, the PTE should be the same as when AQD's B. Culham described it in his 1/10/2008 inspection activity report. However, their throughput of raw materials and actual emissions have increased somewhat.

One minor change has been that they install fabric head rest covers over most of their molded headrests, where in the past, vinyl covers were used. They still make one product which uses a vinyl cover, though, because of customer demand. The fabric covers are made offsite.

**Plastic blow mold processes; Rule 286(c):**

They have a number of plastic blow mold cells. These run 24 hours per day, I was informed, and run continuously from Sunday night or Monday, until Thursday or Friday. Mr. Bolton explained that it is easier on the machines to run them continuously, rather than to shut them down and restart them each day. Compressed air is the blowing agent. Rule 286(c) exempts plastic blow molding equipment, based on the gas used, and air is one of the acceptable gasses, so the exemption criteria has been satisfied.

I observed the PLACO 1 blow mold cell in operation, and observed how the plastic is melted and formed around a metal supporting rod, to make the core component of the headrest. The odors of melted plastic were minimal. Some manual trimming of flash from the plastic parts occurs. Today was a Friday, and the PLACO 2 plastic blow mold cell had finished running on Thursday, this week. The PLACO 3 was running. The first Krupp PVC plastic blow mold cell was running, but the second Krupp unit has not been used in some years.

The pieces of plastic trim from all of the blow mold cells are ground up, and reused, here onsite. The regrind processes have a vacuum hose to convey the regrind to containers, which are located next to each blow mold unit. They appear to satisfy the exemption criteria under Rule 285(l)(vi)(B) from needing an air use permit, because they exhaust to the in-plant environment.

**Polyurethane foam reaction injection molding lines; Rule 286(e); 40 CFR 63, Subpart OOOOOO:**

For spraying mold release agents into molds, they replaced their high pressure, high volume spray guns with low pressure, high volume guns, Mr. Bolton informed me. He explained that this has greatly reduced the amount of mold release agents that get atomized and emitted into the air. There is no longer a cloud of mist around those work areas, he said, and throughput of mold release agents has been reduced by half.

I was able to see one of the spray guns in operation, and there appeared to be very little atomization of the mold release agent. The stations where the mold release agent was sprayed were previously exhausted to the outside air, but the vents are now closed off. So little liquid is atomized, that they no longer exhaust the spraying to the outside air. For one of the foam lines, the mold release agent, a water-based wax, is applied with a brush.

I explained that the application of mold release agents could technically be considered a coating line, and we discussed the Rule 287(c) exemption for coating lines, including the requirement for filters for any exhaust system to the outside air exclusively serving the coating operation (the spray guns). Mr. Bolton informed me that for all 7 foam lines combined, they used approximately 475 gallons of mold release agent per month. This averages out to 68 gallons per month, below the 200 gallons per month threshold allowed for exempt coating lines, so they appear to meet the exemption criteria. They use receiving records to estimate the amount of mold release agent used, and keep these records for a period of 10 years.

WPI (North) is subject to the NESHAP requirement to not use a material containing methylene chloride as an equipment cleaner to flush mixheads, nor as an equipment cleaner for other equipment. Additionally, it is subject to the requirement to not use a mold release agent containing methylene chloride in a molded flexible polyurethane foam manufacturing process. They do not use any methylene

chloride as an equipment cleaner, or as a mold release agent, according to the Initial Notification Report for Subpart OOOOOO, which AQD received on 2/26/2008. I was informed that this is still the case. This satisfies the requirements of the MACT standard.

Mr. Bolton informed me that for making polyurethane foam, they use a methylene diphenyl diisocyanate (MDI) system, instead of a more toxic toluene diisocyanate (TDI)-based system. He indicated that they have 4 rotary foam lines, which utilize a carousel type work station, and 3 foam lines with a stand-alone work station. We were able to see almost all of them operate, although Line 4 was down, as it is in the midst of being modified for an upcoming job.

A metal U-shaped riser, and as appropriate, a plastic molded head rest cover are placed into a mold on a reaction injection molding (RIM) machine, after the release agent has been applied to the mold. The RIM machine injects polyurethane resin and an isocyanate catalyst through a port. The two materials combine to make polyurethane foam. The molds are considered a closed mold system. Per B. Culham's 1/10/2008 inspection report, no additional blowing agents (ABAs) are used to make the foam.

**Conclusion:**

I could not find any instances of noncompliance, nor any areas of concern. Facility staff were very knowledgeable and professional. Mr. Bolton and I then traveled from this site, to the WPI (South) facility, to conduct an inspection there. That inspection is documented in a separate activity report.

Note: because the facility is subject to 40 CFR Part 63, Subpart OOOOOO, it is classified as a Category III fee source. The AQD ERA Unit may not charge the facility the annual Category III facility fee of \$250.00, because AQD does not have delegation of authority on Subpart OOOOOO. Once I have been informed of their decision, I will update the company.

NAME



DATE

2/27/2015

SUPERVISOR

