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

M271338291

FACILITY: Taylor Entrance Systems		**SRN / ID:** M2713
LOCATION: 631 N FIRST ST, WEST BRANCH		**DISTRICT:** Saginaw Bay
CITY: WEST BRANCH		**COUNTY:** OGEMAW
CONTACT:		**ACTIVITY DATE:** 01/06/2017
STAFF: Sharon LeBlanc	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: scheduled site inspection for minor source. Onsite equipment appears to meet appropriate exemptions to Rule 201.		
RESOLVED COMPLAINTS:		

On Friday, January 6, 2017, AQD District Staff conducted a scheduled site inspection at Taylor Entrance Systems, located at 631 N. First St, West Branch, Michigan (M2713). The referenced facility was known as Taylor Building Products, Inc. at the time of the previous inspection conducted on March 23, 2012.

The facility was not in operation upon arrival. District Staff met with Mr. John Orr, Jr. Facility Manager, who provided a tour and answered questions regarding facility operations.

Site inspection activities were conducted with the intent of confirming the operational status of the facility and an evaluation of the status of previously permitted and other existing equipment onsite.

FACILITY DESCRIPTION

The subject site is located at the northwest corner of the intersection or N. First Street and "willow" street, West Branch, Ogemaw County, Michigan. The property is bounded predominantly residential properties to the south and east, by a school to the southeast and mostly undeveloped property to the north and west.

Available information indicates that the site has operated been in operation for a number of years, and at one time was involved in metal stamping, and automotive part production. The facility presently produces fiberglass and steel entry doors for residential and commercial structures. The facility has been very successful in meeting specialty and small lot production markets, and does a limited amount of "rework" for finished doors. In addition, the facility has also historically manufactured garage doors. Other information found as part of file and internet searches:

- **In mid-late 60's, the company installed a steel door manufacturing line (Uni-door) including associated paint spray booth and adhesive applicators.**
- **In 1971, the facility introduced a patented adjustable hinge plate system for their Uni-Door Line.**
- **In the early 80's, the facility installed a steel garage door manufacturing line (En-core) including the associated paint spray booth and adhesive applicators.**
- **In 1994, the company introduced the first complete line of stainable steel doors.**
- **A review of permit application records indicates that the facility was known as Taylor Door Building Products as early as 1985, and as late as 1993, after which it was known as Taylor Building Products.**
- **In 1999, the facility was purchased by the founder of Vinyl Building Products Inc.**
- **In 2012, the facility was purchased by Wassau Lumber Products, and became Taylor Entrance Systems.**

PERMIT/COMPLIANCE HISTORY

On May 2, 1985, the facility was noted to be operating two spray booths and three spray adhesive booths without having obtained an approved permit to install. The facility was notified in written correspondence dated June 3, 1985 of the requirement and was requested to contact the Roscommon Office. District files indicate that the facility was in permit and consent order negotiations with the AQD in 1988, though no copy of a final consent order was available in District Files.

On June 7, 1993, a site inspection of the facility noted the installation and use of new equipment and stack modifications without permit. The company was notified in writing on June 25, 1993, of the violations.

An application for a Renewable Operating Permit (ROP) was submitted by the facility on July 30, 1996, with supplemental information provided in response to an August 2, 1996 request. File correspondence dated June 30, 1997, indicated that the facility initiated process modifications in 1996 and 1997 in an effort to reduce emissions at the facility. These changes included but were not limited to changes in:

- **adhesive application technologies (airless applicators and hot melt),**
- **more environmentally friendly adhesive and surface coating formulations (lower VOC content), and**
- **modifications to production line that eliminate emission sources (more efficient equipment and/or product construction changes)**

These changes resulted in multiple permit revisions (see below), and significant emission reductions to below major source levels for Criteria Pollutants and HAPS.

A review of District Files indicate that the following Permits to Install (PTIs) were issued to the company.

PTI No.	Approved	Voided	Comments
683-85A	12/8/1993	5/8/2002	Application for modification of two uni-door spray booths and the two existing en-core line spray booths-
684-85A	11/10/1993	3/28/2012	Adhesive application lines
684-85A Rev. 1	12/21/1993	3/28/2012	Modification of permit to lower VOC adhesive and replacement of applicators with air assisted airless spray guns.
551-90	5/13/1991	7/12/1994	Hot melt adhesive coating process and urethane foam injection process for fiberglass door manufacture.
551-90A	7/8/1994	1/20/1999	Remove urethane foam injection process and retain adhesive application process.
551-90A Rev. 1	9/9/1994	1/20/1999	New adhesive for existing source and relocated and improved urethane foam injection process.
982-92	7/8/1994	2/24/1999	Same processes as 551-90A except for a different adhesive for one of lines.
982-92 Rev. 1	9/9/1994	2/24/1999	Exempt under 287(i) and 286 (e)
147-96	7/29/1996	1/22/1999	Insulation/expansion bead application process associated with garage door production. Equipment replaced with hot melt system exempt under R 287 (i)

Multiple site inspections were made at the facility in 1998- 2002. It should be noted that discussions with the inspector during that time period indicated that the various production lines were in flux, with the facility making line changes to not only streamline production, but to reduce emission sources and costs. Many of the permit revisions and modifications reflect those changes. No compliance issues were identified during the referenced site inspections, or in the March 23, 2012 site inspection.

A void request for the ROP Application was received on May 15, 2002, and indicated that the facility had ceased it's production line painting of entrance doors (permit 683-85A) and that all future products would be produced with pre-primed steel. This change eliminated the use of multiple paint booths, drying/curing ovens and resulted in the facility no longer being a major source of HAPS. The request was determined to be appropriate on May 22, 2002.

At the time of the March 23, 2012 site inspection, the only active permit was for two adhesive application lines used on the door production lines (684-85A). It was determined during that site visit that the facility had switched to a non-VOC or HAPs adhesive provided by Hot Melt Technologies Inc. The referenced permit was voided in 2012.

No complaints or Notices of Violation are of record for the facility since the previously referenced consent order negotiations.

FEDERAL APPLICABILITY

Based on the use of polyurethane product to fill the interior door space, the facility has been evaluated to determine the applicability of 40 CFR, Part 63 Subpart III NESHAP for Flexible Polyurethane foam production, as well as Subpart OOOOOO NESHAP for Flexible polyurethane Foam Production and Fabrication Area Sources. The definition of "flexible polyurethane foam" (§63.1292) indicates that the foam possess the strength and flexibility to allow repeated distortion or compression under stress with complete recovery upon removal of the stress. It is unclear at the time of report preparations as to whether the foam product used retains those qualities.

As noted previously, it appears with 2002 and prior facility changes, that the site is not a major source of HAPs or criteria pollutants. Based on this determination, the facility would not be subject to 40 CFR, Part 63 subpart III NESHAP for Flexible Polyurethane Foam Production which only applies to major sources of HAPs.

Further evaluation would appear to indicate that under Subpart OOOOOO, should the facility be determined to be a flexible polyurethane foam fabrication facility (§63.11419) , that no existing affected sources exist, as the facilities production activities do not produce foam slabstock, molded foam, rebonded foam, or utilizes any adhesive to bond the foam to foam or other substrates (§63.11414(b)). The subpart focuses on elimination/reduction in methylene chloride use in the production activities.

40 CFR Part 63, Subpart XXXXXX NESHAP for Nine Metal Fabrication and Finishing Source Categories. Applicability under the subpart is determined based on SIC/NAICS Codes. Category #2, for fabricated metal products (SIC Code 3499 or NAICS Code 332999) may be applicable.

Information regarding the referenced subparts have been provided to the facility as well as the RICE MACT for their further review. AQD at this time has not received delegated authority to implement Subpart OOOOOO or XXXXXX.

COMPLIANCE EVALUATION / EQUIPMENT & EXEMPTIONS

As previously indicated the facility was not in operation at the time of the inspection. All previous permits have been voided, much or the equipment was determined in 2002 to be exempt from permitting. A walk thru of the existing production line(s) was conducted with attention given to any changes in the production line, or any new equipment.

Equipment/emission sources of interest at the time of the inspection included:

- Touch Up Spray Booth - As previously indicated, the company made a shift to pre-primed steel for their production line. The facility has removed all of the previously permitted spray booths with the exception of a small dry filter spray booth for use on "rework" projects. The facility reports using a water-reducible enamel in one of two colors (one of which is white), which are purchased in 5-gallon buckets, and are reported to last 3-months or more, with excess paint being disposed of at that time. A review of the Environmental Data Sheet for the product indicates that the total VOC content is less than 1 lb per gallon and volatile HAPS is less than 0.5 lb per gallon.

2002 District correspondence indicated that the booth would be exempt from permitting under Rule 287(c). The referenced exemption requires records of coating usage, an exhaust system serving the coating spray equipment that is supplied with a dry filter, and usage of less than 200 gallons per month less water. The facility does maintain purchase records, and could verify compliance with the monthly usage limit; however no formalized recording documentation exists. This may be at least in part due to staffing changes since the 2002 decision to operate under the referenced exemption. A copy of the Rule 287(c) exemption recording forms have been provided to the company.

- Insulation injection- Prior to completion of the doors, expandable urethane insulation is injected into the door "shell", and is allowed to cure prior to completion of the door. Files indicate that the activity and it's associated equipment appear to meet exemption 286 (e) for Reaction Injection Molding (RIM), open or closed mold. The existing process is not an open mold process and does not utilize a mold release or mold cleaner (refer to 1/20/1999 void request submitted by the facility, and inspector notes dated 2/1/1999).

  This exemption does not require recordkeeping, nor does there appear to be any material restrictions. At the time of the exemption, RIM was documented to make use of various isocyanate compounds; MSDS provided by the facility confirms that isocyanates are still used.

  The facility has multiple tanks for storage of polyol and isocynate. Based on the limited information available, and comparison with other facilities that have exempted similar material storage tanks, it appears that the tanks would be exempt under Rule 284 (2)(i), which exempts storage mixing, blending or transfer operation of VOC or non-carcinogenic liquids in a vessel with a capacity of no more than 40,000 gallons and true vapor pressure of no greater than 1.5 psia under actual storage conditions.

  Also part of the process is a curing oven (120 degrees) for the doors. The oven is located in the general work area, and there is no stack involved.

- Baghouse – Reported to be installed to collect predominantly for wood shavings the baghouse is housed in an interior room with no exterior ventilation. Collected materials are bagged prior to disposal.

  The referenced baghouse serves equipment and exhaust systems or collectors that may be exempt under Rule 285 (l)(vi). Which includes equipment used exclusively for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planning, buffing, sand blast cleaning.....of metals....wood, wood products,.....fiberglass.....which meets any of the following: (B) equipment with emissions that are released only into the general in-plant environment. (C) equipment that has externally vented emissions controlled by an appropriately designed and operated fabric filter collector that, for all specified operations with metal, is preceded by a mechanical precleaner. In this case, there is no external venting of emissions.

- Adhesive Application – At present the facility applies a hot melt adhesive via metal rollers and appears to meet the exemption (Rule 287)(i), which exempts hot melt adhesive applications.

- Product Line – The door exteriors as previously discussed are composed of pre-primed steel. One step in the production line involves bending the cold steel, the activities of which are exempt under Rule 285(2)(l)(i).

- Maintenance Area – The facility houses a maintenance area, which includes equipment used for repairs on a non-production basis, as well as small parts cleaner. Units in this area would appear to be exempt under Rule 285(2) (l)(A), Rule 281 (2)(h) (cold cleaners with an air/vapor interface of not more than 10 sq ft) and/or Rule 281 (2)(k) (aqueous based parts washers.

Other exemptions that may apply to the facility include:

- Rule 280 – cooling and ventilating equipment
- Rule 283 – equipment associated with testing and inspection of equipment

No changes were noted for the facility that would require permitting. The facility reports increased production since the previous site inspection. Discussions with the facility were centered around being

proactive regarding potential changes in production that might require permitting, and maintaining appropriate records for exempted equipment.

SUMMARY

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The facility was not in operation upon arrival. District Staff met with Mr. John Orr, Jr. Facility Manager, who provided a tour and answered questions regarding facility operations.

Site inspection activities were conducted with the intent of confirming the operational status of the facility and an evaluation of the status of previously permitted and other existing equipment onsite. No compliance issues were noted at the time of the inspection. Information has been provided to the facility as an area source of federal regulations that may apply to their facility. sgl

NAME Sharon O'Blanc DATE 2/28/17 SUPERVISOR C. Hare