DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

N294926275

FACILITY: DURA SILL CORPORATION		**SRN / ID:** N2949
LOCATION: 22550 HESLIP, NOVI		**DISTRICT:** Southeast Michigan
CITY: NOVI		**COUNTY:** OAKLAND
CONTACT: Ray Morianti , President		**ACTIVITY DATE:** 07/14/2014
STAFF: Iranna Konanahalli	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: FY 2014 inspection of Dura-Sill Corporation		
RESOLVED COMPLAINTS:		

DURA-SILL CORPORATION (N2949)
22550 Heslip Drive
Novi, Michigan 48375-4139
Phone: (248) 348-2490

PTI No. 721-91 dated August 2, 1991, for gelcoat booth

Not subject to (<10/25 tpy area source; HAP = Styrene): NESHAP / MACT: 40 CFR, Part 63, Subpart WWWW, National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production.

On July 14, 2014, I conducted a level-2 self-initiated inspection of Dura-Sill Corporation located at 22550 Heslip Drive, Novi, Michigan 48375-4139. The inspection was conducted to determine compliance with the requirements of federal Clean Air Act; Article II, Air Pollution Control, Part 55 of Act 451 of 1994; PTI No. 721-91; and Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) administrative rules.

During the FY 2014 inspection, Mr. Steve Morianti and Mr. Ray Morianti assisted me. Mr. Ray Morianti assisted me with VOC / HAP records. Mr. Ray Morianti keeps all records and prepares MAERS report. Morianties are brothers.

Dura-Sill manufactures imitation marble widow sill products. The process consists of gelcoat spray application to the desired widow sill molds in gelcoat booth, air-drying the gelcoat at an ambient room temperature and spreading on the molds the matrix. Gelcoat contains styrene, a HAP, as solvent; almost all solvent is styrene.

PTI No. 721-91: Gelcoat booth

The gelcoat application booth (12 ft. Wide * 7 ft. Tall * 5 ft. Deep Binks Model FAEC-10-7) is equipped with Andrae Filters. On the top of this filter, another layer of a protective filter is installed to save Andrae filters, which are relatively expensive. In all, two layers of filters: primary protective filters and high efficiency expensive secondary filters. The protective top layer is replaced once every two weeks. Andrae filters are replaced once or twice a year depending upon air flow or pressure drop across the filter media. 7,400 cfm exhaust gases laden with styrene are discharged via 17-foot stack.

A whole was made in Andrae filters to check fire suppressant sprinkler system and was not repaired. I asked Steve Morianti to replace the Andrae filters. In addition, I asked him to install and inspect the filters such that they fit, at all times, snugly without gaps and holes.

Sill molding

The matrix is mixed in matrix machine called Gisco Mixer (continuous casting machine). The matrix consists of calcium carbonate or lime stone (~80%, powder), an inorganic filler (~10%), a resin (~2.5%, liquid) , a catalyst (1.5%, small amount) and a pigment. The matrix is dispensed on previously gelcoated mold and spread by a skilled technician. The catalyst initiates and promotes the exothermic polymerization reaction that releases sufficient heat to maintain mold warm. The curing continues for one and one half hour under ambient conditions.

Sill finishing booth

The matrix material is now set on the mold. The window sill fixture is removed from the mold and sent to a finishing booth / area where it is sanded to give finishing touches. Gelcoat is affixed on the fixture and not on the mold.

Finishing booth consists of one Cemco 2000 sanding machine, which is equipped with almost 100 percent capture device because all sanding is enclosed. The booth dust is controlled by a baghouse and exhaust is recycled into work area (inside the building).

The booth dust is exhausted to a fabric filter system with indoor exhaust. The dust on the bags is removed using a shaker mechanism. The system consists of 28 bags. The bags are shaken for one minute every time the baghouse is started; about three (3) times per day. The dust captured in the hopper during the shaking is emptied once every 3-4 weeks and disposed of. The finished window sill fixture is packaged and shipped.

Sanding process is exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285 (l).

Styrene (HAP and VOC) emissions

Based upon CY 2013 purchase records, annual styrene emissions, based upon 7.93 tons of gelcoat for usage, is 3.2 tons per year (PTI No. 721-91, SC 14 limit: 3.9 tons/yr VOC) based upon MSDS information of 40% styrene content in gelcoat. Dura-Sill also used 560 pounds (80 gallons) of acetone and 300 pounds (50 gallons) of methylene chloride, which is used to stop polymerization in the event of emergency, during. Methylene chloride is also used for special clean-up.

Methylene chloride is used only remove stubborn build-up on the machines.

Styrene (VOC & HAP) emissions records are based upon purchase records. With properly operating filters, the spray booth has no visible emissions potential (PTI No. 721-91, SC 15 limit: no VE). The emissions records are kept based upon purchase records (PTI No. 721-91, SC 17). Dura-Sill will be required to keep usage logs to show compliance with PTI No. 721-91, SC 14 limit. Andrae filters together with a protective filter layer are operating properly except a whole made to inspect sprinkler system; Steve stated that the filter would be replaced (PTI No. 721-91, SC 18).

Gelcoat

Maxguard GG-CM-0006 Clearcoat Gelcoat (Product Code: 126221; Ashland of Columbus 800-325-3751)

BP =293 °F. FP = 85 °F. Flammability range = 1.1 %v (LEL) - 6.1 %v (UEL). VP = 0.853 kPa at 77 °F / 25 °C.

Federal NESHAP / MACT and ROP

Dura-Sill's imitation marble window sill manufacturing process is **NOT** subject to 40 CFR, Part 63, Subpart WWWW, National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production. The Proposed Rule was published in Federal Register / Vol. 66, No. 149 / Thursday, August 2, 2001 / Proposed Rules. The Final Rule was published in Federal Register / Vol. 68, No. 76 / Monday, April 21, 2003 / Rules and Regulations.

Pursuant to 40 CFR, Part 63, Subpart WWWW, 63.5785, Dura-Sill is NOT subject to the NESHAP because it is not a major source for HAP; imitation marble manufacturing process emissions of styrene is less than major source thresholds (10 tpy single HAP and 25 tpy aggregate HAP). 4.4 tpy of styrene emissions for CY 2011 are greater than 1.2 tpy (40 CFR, Part 63, Subpart WWWW, 63.5785(d)) but the process is not located in a NESHAP major source. Area source MACT for Reinforced Plastic Composites Production is not promulgated yet. Besides, AQD has decided not take delegation for Area Source MACT rules.

Conclusion

Dura-Sill is NOT subject to the NESHAP / MACT (40 CFR, Part 63, Subpart WWWW). 3.2 tons of styrene (Sec. 112 HAP) emitted during CY 2013. Dura-Sill will be required to keep usage logs; emissions info based upon purchase records.

NAME DMcnamara DATE 08/06/2014 SUPERVISOR CTE