

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

N 0938  
FY 2019 Insp

N093847234

FACILITY: OLD WORLD REFINISHING LTD		SRN / ID: N0938
LOCATION: 32726 W EIGHT MILE RD		DISTRICT: Southeast Michigan
CITY: FARMINGTON		COUNTY: OAKLAND
CONTACT: Steve Szuba , President and Owner		ACTIVITY DATE: 11/08/2018
STAFF: Iranna Konanahalli	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: FY 2019 inspection of Old World Refinishing, Ltd. ("Old World")		
RESOLVED COMPLAINTS:		

Old World Refinishing, Ltd. (N0938)  
32726 West Eight Mile Road  
Farmington, Michigan 48336-

Phone: 248-471-1017

VN: AQD issued Violation Notice dated June 22, 2010, for Rules 336.1201 (Methylene Chloride paint stripper installed without a permit) and 336.1910 (the booth dry filters were not installed properly)

Not subject (after July 2010) to NESHAP / MACT 6H: 40 CFR Part 63, Subpart 6H, National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, Page 1738, Federal Register / Vol. 73, No. 6 / Wednesday, January 9, 2008 / Rules and Regulations / Final rule. After June 22, 2010, VN, Old World replaced HAP solvent, Methylene Chloride (CAS 75-09-2), with a non-HAP paint stripper.

Not Subject to: NESHAP/ MACT T, National Emission Standards for Hazardous Air Pollutants: Halogenated Solvent Cleaning (40 CFR, Part 63, Subpart T; NESHAP/ MACT T); Correction; 29484 Federal Register / Vol. 60, No. 107 / Monday, June 5, 1995 / Rules and Regulations; amended National Air Emission Standards for Hazardous Air Pollutants: Halogenated Solvent Cleaning (40 CFR, Part 63, Subpart T); Final Rule; Page 25138 Federal Register / Vol. 72, No. 85 / Thursday, May 3, 2007 / Rules and Regulations. According to US EPA, the solvent stripper is not cold-cleaner because wood finish is not soil.

On November 08, 2018, I conducted a level 2 self-initiated **FY 2019 inspection** of Old World Refinishing, Ltd. ("Old World") located at 32726 West Eight Mile Road, Farmington, Michigan 48336. The inspection was conducted to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451 and Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) administrative rules

During the inspection, Mr. Steve Szuba (Phone: 248-471-1017; E-mail: OWRLTD@aol.com), President and Owner, assisted me.

Old World is in the business of repairing and restoring antique / old furniture. Mr. Szuba stated that Old World never used methylene chloride after resolving 2010 Violation Notice.

Wood finishing steps are: 1. Strip old finish, 2. Apply Sealer and 3. Apply lacquer

**8 ft. \* 8 ft. \* 8 ft. Spray Booth.**

One paint spray both (8 ft. wide x 8 ft. deep x 10 ft. height) equipped with a back-draft dry filter system is present. During the May 2010 inspection, I observed that the dry filters were not installed properly; please refer to June 22, 2010 Violation Notice (VN) for Rule 336.1910. There were lots of holes in the filter system. The system was not designed properly.

I asked Mr. Szuba to install the filters such that they fit, at all times, snugly without gaps and holes. I also asked him to keep records of paint / varnish and solvent usage. The paint, sealer varnish, stain and solvent usage

records were available based upon purchase records. The usage is much less than 200 gallons per month (5-10 gal/mo).

In CY 2010, the filter system was redesigned to resolve 2010 VN. During FY 2019 inspection, the filter system was installed and operating properly. The dry filter system was installed snug and tight without holes.

The booth was redesigned as result of June 22, 2010, Violation Notice that the dry filter system was inadequate.

The booth is exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.287(2)(c).

#### **5 ft. \* 10 ft. \* < 1 ft. H Paint Stripper Pan**

In May 2010, Methylene Chloride (Dichloromethane, MeCl) based solvent was used to strip paint / varnish / stain from old antique furniture. About 130 gallons per year MeCl was used during the 12-month period (FY 2010). Please refer to June 22, 2010 Violation Notice for additional details.

During FY2019 inspection, Mr. Szuba showed me new material that replaced MeCl based paint stripper. New material is non-halogenated organic solvent blend based upon MSDS. About 20 gallons of new solvent per month are used. From the stripping tank, solvent is collected by gravity flow in a pale. The collected solvent is pumped back to the stripper; i.e., the solvent is reused / recycled. Due to lower vapor pressure of new solvent as compared with methylene chloride, less solvent used

After the replacement of MeCl solvent (July 2010) with a non-MeCl solvent, Old World is not subject to NESHAP / MACT 6H (40 CFR Part 63. Subpart 6H, National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, Page 1738, Federal Register / Vol. 73, No. 6 / Wednesday, January 9, 2008 / Rules and Regulations / Final rule).

According to US EPA, the solvent stripper is not cold-cleaner because wood finish is not soil.

#### **New replacement solvent**

The stripper solvent that replaced MeCl is Benco #B20 Industrial Paint Remover (Benco, Inc. of Crossville, Tennessee; Phone: 931-484-9578). The stripper solvent is a blend of alcohols, ketones and aromatic hydrocarbons: methanol, acetone, methyl ethyl ketone (MEK), toluene, 2-butoxy ethanol and wetting agents.

97% VOC solvent. Flash Point (FP) = 15 °F COC. Boiling Point (BP) = 135 °F @ 760 mm Hg. Vapor Pressure (VP) = 300 mm Hg at 68 °F. Specific Gravity (SG, Water = 1.0) = 0.83. Density ( $\rho$ ) = 6.56 lbs. / gallon (0.83 kg /L) Flammability range = 3.13 %v (LEL) – X%v (UEL).

#### **BENCO B#20, Benco Sales, Inc., Crossville, TN 38557**

Methanol (15-25%), Acetone (15-25%), Methyl Ethyl Ketone (MEK, 15-25%), Toluene (4-10%), 2-Butoly Ethynol (1-4%)

BENCO B#20 does not work as well as MeCl. It requires scrubbing and, hence, increases labor costs.

Lacquer, Mohawak Finishing Products, Amsterdam, NY 12010

Flash Point (FP) = 44 °F COC. Boiling Point (BP) = 160 °F @ 760 mm Hg. Vapor Pressure (VP) = 76 mm Hg at 68 °F. Specific Gravity (SG, Water = 1.0) = 0.92. Density ( $\rho$ ) = 7.6 lbs. / gallon (0.93 kg /L) Flammability range = 1%v (LEL) – 19%v (UEL).

27% Toluene CAS # 108-88-3

**15% Xylene CAS # 1330-20-7**

8% Methyl Ethyl Ketone (MEK) CAS # 78-93-3

13% Methyl Isobutyl Ketone CAS # 108-10-1

1% Others

Lacquer Thinner, Mohawak Finishing Products, Amsterdam, NY 12010. Used for thinning lacquer.

15-20% Toluene CAS # 108-88-3

**15-20% Acetone CAS # 67-64-1**

10-15% 2-Butanone CAS # 78-93-3

5-10-% Butoxy Ethanol CAS # 111-76-2

5-10% Isopropyl Alcohol (IPA) CAS # 67-63-0

BENCO #M3 Sealer. Sealer is like a clear primer that helps lacquer stick.

Flash Point (FP) = 73 °F COC. Boiling Point (BP) = 148 °F @ 760 mm Hg. Vapor Pressure (VP) = 50 mm Hg at 68 °F. Specific Gravity (SG, Water = 1.0) = 0.87. Density ( $\rho$ ) = 7.2 lbs. / gallon (0.87 kg /L). Flammability range = 1.2%v (LEL) – x%v (UEL). VOC = 646 grams per liters.

20-25% Aliphatic Petroleum Distillates CAS # 64-742-89-8

15-20% Toluene CAS # 108-88-3

Rest Others

### **Rule 285(2)(I) wood cutting / grinding / saw machines**

One wood cutting machine is present. The wood cutting, grinding, saw machines are **not** equipped with a particulate matter control systems, i.e. filter systems. Due low usage rate indoor air quality is not significantly impacted. There is no exhaust to outside ambient air.

The machines are exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(2)(I).

### **MIOSHA inspection**

Based upon AQD's referral, Mr. James E. (Jim) Hensley (Phone: 517-242-5828; E-mail: hensleyj1@michigan.gov) of MIOSHA conducted an inspection after MeCl was replaced. Because Old World had already replaced methylene chloride with a VOC solvent, indoor air monitoring by MIOSHA showed no worker safety standards violation in connection with MeCl.

### **Conclusion**

After June 22, 2010, VN, Old World replaced HAP solvent, Methylene Chloride (CAS 75-09-2), with a non-HAP paint stripper. Old World is in compliance with Rule 287.

NAME St. Brennan DATE 12/11/2018 SUPERVISOR Joyce

