

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

FY 2014 IIRAP

N279324877

FACILITY: DESIGNS UNLIMITED INC	SRN / ID: N2793
LOCATION: 3160 HAGGERTY RD, W BLOOMFIELD	DISTRICT: Southeast Michigan
CITY: W BLOOMFIELD	COUNTY: OAKLAND
CONTACT:	ACTIVITY DATE: 03/14/2014
STAFF: Iranna Konanahalli	COMPLIANCE STATUS: Compliance
SUBJECT: FY 2014 inspection of Designs Unlimited, Inc.	SOURCE CLASS: MINOR
RESOLVED COMPLAINTS:	

E-file: N2793-SAR-2014 03 14

Designs Unlimited, Inc. (N2793)
3160 Haggerty Road
West Bloomfield, Michigan 48323-2000

Phone: (248) 624-7301

Permit-to-Install No. 157-91 dated March 18, 1991

On March 14, 2014, I conducted a level 2 self-initiated inspection of Designs Unlimited, Inc. ("Designs"), located at 3160 Haggerty Road, West Bloomfield, Michigan 48323-2000. 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 Wilson (Phone: 248-624-7300), Foreman, Jim Phipps (Ph: 248-624-7300; Fax: 248-624-0354; E-mail: NA), Operations Manager, assisted me.

Designs Unlimited, Inc. ("Designs") makes custom design bookcases, counter-tops and cabinetry for expensive and upscale homes.

About 1992, Designs moved its showroom across the street from 3053 Haggerty Road, Walled Lake, to 3160 Haggerty Road, West Bloomfield. Designs also moved its spray booth in 1992 from 3280 New Farm Court, Commerce Twp., to 3160 Haggerty Road West Bloomfield. Again, in 2007, Designs closed its showroom at West Bloomfield and moved it to Birmingham due to oppressive economic conditions. Change of address for this SRN N2793 must be noted.

There are four wood cutting (saw) machines. The machines are not used every day these days due to lack of business as a result of severe economic crisis in construction industry. Each machine is equipped with a capture device and a ventilation system. Each ductwork from a machine is connected to a common manifold. The manifold is ducted outside to a baghouse, consisting of 72 bags. The bags are cleaned using pulse-jet mechanism; 1 pulse per 10 minutes. After filtration of saw dust, clean is recycled into the plant in heating season (winter) and discharged to outside air in cooling season (summer). I did not see saw dust on ground near the baghouse. Saw dust from the baghouse falls into a hopper, which is equipped with a glass window to see a level of saw dust. When sawdust level rises as observed through the window, the hopper is emptied. The wood cutting machines are exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(l). I asked Mr. Wilson to empty the hopper promptly so that damage to the bags was not caused.

Dixie Air Systems makes the baghouse. In summer, cleaned air is discharged vertically downward contrary to AQD's policy. I did not detect saw dust on the ground and AQD has not received any complaint.

PTI No. 157-91 Paint Spray Booth

One stains, lacquer, sealers and paint booth (Brinks 10 ft. x 10 ft.) with back-draft dry filter system is present for custom-made counter-tops, cabinetry finishing. Across the filter, pressure measurements can be done using an inclined manometer (inches of water). Based upon high-pressure drop, the filters are replaced.

As the business is substantially down now (reduced from 15 [2000] employees to 6 [2011] and 4 [2014]), only 10-15 gallons per month (<< 200 gallons per month) of the finish materials are sprayed. The booth is now exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1287(c). The booth is a small source of VOC emissions.

I observed pressure drop across the filters: 0.01inch H₂O when the exhaust fan was operating and -006 inch H₂O when the fan was shut off. I asked Steve Wilson to adjust the manometer's zero reading when the fan is turned off.

I asked Mr. Phipps 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 and solvent usage. I asked him to change or check filters when the pressure drop is out of the ordinary for good working conditions.

Cold-cleaner

No methylene chloride stripper is present.

There is one Hercules 2'x2' parts cold-cleaner with spray a brush and a solvent tank. The cold-cleaner is subject rule 336.611 or 336.1707 depending on if it is new or existing. A cold-cleaner is exempt from Rule 336.1201 pursuant to Rule 281(h) or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

Mechanically assisted lid was closed during the FY 2014 inspection.

Stoddard Lacquer Thinner (M. L. Campbell of Cleveland, Ohio 216-566-2902) is used

The Cold-cleaner is NOT Subject to: 40 CFR, Part 63, Subpart T, NESHAP/ MACT T, since solvents containing halogenated compounds are not used.

During FY 2014 inspection, I gave DEQ's decals for "cold-cleaner operating procedures" for posting and complying with work-practice rules. I asked the company to follow the common sense work practice in the procedures.

100% VOC solvent. Flash Point (FP) = 53 °F TCC. Auto Ignition = NA °F. Boiling Point (BP) = 222-343 °F @ 760 mm Hg. Vapor Pressure (VP) = NA mm Hg at 68 °F. Specific Gravity (SG, Water = 1.0) = 0.85. Density (ρ) @ 68 °F = 7.1 lbs / gallon.. Flammability range = 1 %v (LEL) – 10.9%v (UEL).

Conclusion

One paint spray booth and four wood cutting machines are present.

NAME Stenana Hall DATE 04/14 SUPERVISOR CTE
2014