

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

A225423963

FACILITY: NUCRAFT FURNITURE CO		SRN / ID: A2254
LOCATION: 5151 W RIVER DR. COMSTOCK PARK		DISTRICT: Grand Rapids
CITY: COMSTOCK PARK		COUNTY: KENT
CONTACT: TIM CHIPMAN, SENIOR MFG. ENGINEER		ACTIVITY DATE: 12/18/2013
STAFF: Denise Plafcan	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Conduct a scheduled inspection of the Opt-out facility.		
RESOLVED COMPLAINTS:		

Denise Plafcan (DP) conducted an unannounced scheduled inspection to determine compliance with federal and state Air Quality rules and regulations and Opt-out Permit to Install No. (PTI) 155-95D. PTI 155-95D does not state that it is an opt-out, however, the evaluation form does support the Opt-out classification of the facility. The company is listed as an Opt-out source in both MACES and MAERS.

DP arrived on site and Tim Chipman was not available, DP continued to conduct surveillance of the area before returning to the plant and was met at the front door by Tim. No fugitive emissions, odors or abnormal operating conditions were noted. DP and Tim sat down and discussed the status of operations at the plant, any changes that were made or any changes that might be planned. Tim said they were doing pretty well with some good contracts, and not much had changed on the floor. They did add a floor to ceiling room enclosure to help minimize the sawdust throughout the plant. They also installed a large (5 foot flat table sander), the associated baghouse and ductwork all purchased from another company. Tim did say that that they are looking at redesigning/rebuilding the Flatline and replacing or reusing some of the equipment, plans have not been finalized but they will be sending in a PTI application (if necessary) as soon as they are sure about the changes. Later, during the inspection, DP explained the Environmental Inspection brochure.

The facility has approximately 225 employees and most of the time operates one 8 hour shift (1st and 3rd) five days a week. Nucraft mainly manufactures high-end conference room, reception, specialty and custom wood furniture. They also have a second building that they use for metal working and machining for support parts for the wood furniture. They typically use three types of finishes which are natural (clear), second a stain and seal, and third a washcoat, fill and seal. The type of finish is not contingent upon the quality of the piece but what is necessary to achieve the requested color. There are three main coating lines or emission units with 4 IR ovens. The three lines can be broken down as follows: Mainline, Flatline and Conference Table Line (CTLine). In addition, they have the following Rule 201 exempt equipment:

1. 5 foot table sander and baghouse control Rule 285(l)(vi)
2. a research/lab booth (Rule 283(1)(a))
3. several adhesive booths (Rule 287(c)),
4. a touch-up booth (Rule 287(c)),
5. a distillation unit, less than 10 gallons (Rule 285(u)),
6. spot welding operations (Rule 285(i) and
7. an Instapak packaging device (Rule 290), not subject to NESHAP III because PTI No. 155-95D is a HAPs opt-out permit since it contains federally enforceable HAPs limits.

The company has a process natural gas Boiler 300-980 MBH used to heat oil on the hot press. They also have a natural gas spark ignition Emergency Generator Generac Model No. 99A082405 35 Kw or 47 horsepower installed in 2001 (see attached certification). The only conditions for the area source of HAPs spark ignition emergency generator contained in 40 CFR Part 63 Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines) are the following three requirements:

1. Change oil and filter every 500 hours of operation or annually, whichever comes first; 1;
2. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
3. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

The regulation does not require records to document compliance so records were not requested and compliance determination was not conducted.

Regarding housekeeping, during the inspection the company had a semi-truck on site emptying the dust collection system and there was a lot of sawdust on the ground that the employees were trying to clean-up. It was obvious there

had been some type of a malfunction when disconnecting flexible duct to the haul-away container. There still seems to be a lot of sawdust in the air of the facility but definitely an improvement over past years.

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)
EU-OFFLINE	One spray booth (booth #6), associated applicator(s), and one electric infra-red oven used for wood furniture coating.
EU-FLATLINE	One spray booth (booth #10), associated applicator(s), and one natural gas fired infra-red oven used for wood furniture coating.
EU-MAINLINE	This emission unit consists of the following spray booths, flash off booth(s), and ovens used for wood furniture coating: Stain booth (booth #1), Washcoat booth (booth #5), Fill Oven, Seal booth (booth #3), Seal Oven, Shade booth (booth #8), Topcoat booth (booth #4), Topcoat flash-off booth, Topcoat Oven. Parts may go through entire line (all booths and ovens listed) or through only portions of this line. Associated applicator(s) used for wood furniture coating.
EU-CTLINE	This emission unit consists of two booths and one oven identified as: CTStain booth (booth #11), CTSeal booth (booth #12), and CTSealOven. Associated applicator(s). The line is used for wood furniture coating.
EU-GEOCELL	One spray booth (TUBE) and applicator(s) used for applying contact adhesive.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description
FG-FINISHING	Wood furniture coating operations consisting of spray booths, flash off areas/booths, ovens, associated spray equipment, cleanup and purge solvents.
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.

The following conditions apply to: FG-FINISHING

DESCRIPTION: Wood furniture coating operations consisting of spray booths, associated application equipment, flash off areas/booths, ovens, and cleanup and purge solvents.

Emission Units: EU-OFFLINE, EU-FLATLINE, EU-MAINLINE, EU-CTLINE, EU-GEOCELL

POLLUTION CONTROL EQUIPMENT: Dry filters in the spray booths

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Emissions based on records provided
1. VOC	76.8 tpy	12-month rolling time period	33.46 tpy as of November 2013
2. Acetone	14.6 tpy	12-month rolling time period	0.95 tpy as of October 2013
3. Formaldehyde (CAS 50-0-0)	0.19 pph	Test Protocol	0.0064 pounds/hour in July 2013
4. Xylene (CAS 1330-20-7)	43.2 pounds per day	Calendar day	Highest for October, November and December to date 16.78 pounds per day on November 26, 2013

II. MATERIAL LIMITS

1. The VOC content of any sealer used in FG-FINISHING shall not exceed 3.5 pounds per pound of solids, as applied. Maximum of 1.57pounds per pound of solids, as applied.
2. The VOC content of any topcoat used in FG-FINISHING shall not exceed 3.5 pounds per pound of solids, as applied. Maximum of 2.35pounds per pound of solids, as applied.

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall capture all waste materials (i.e. topcoat, clearcoat, lacquer, varnish, cleanup, purge solvents, etc.) and shall store them in closed containers. The permittee shall dispose of all waste materials (i.e. topcoat, clearcoat, lacquer, varnish, cleanup, purge solvents, etc.) in an acceptable manner in compliance with all applicable state rules and federal regulations. Some solvents are reclaimed in a still and used again for cleanup. Reclaim and waste are not deducted from any calculated totals.
2. The permittee shall dispose of spent filters in a manner which minimizes the introduction of air contaminants to the outer air.
3. The permittee shall handle all VOC and / or HAP containing materials (including coatings, reducers, solvents and thinners), in a manner to minimize the generation of fugitive emissions. The permittee shall keep containers covered at all times except when operator access is necessary.

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate any spray booth associated with FG-FINISHING unless its respective exhaust filter(s) is/are installed, maintained and operated in a satisfactory manner.
2. The permittee shall equip and maintain the spray booths associated with FG-FINISHING with HVLP applicators or comparable technology with equivalent transfer efficiency, except when applying lacquer. For HVLP applicators, the permittee shall keep test caps available for pressure testing. HVLP applicators are being used except for the lacquer or polyurethane coating, that is being applied by air assisted airless. Test caps are being maintained on site and they no longer having an outside contractor test the guns monthly.

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years.

1. The permittee shall determine the VOC content, water content and density of any material (i.e. coating, reducer, etc.), as applied and as received, using federal Reference Test Method 24. Upon prior written approval by the AQD District Supervisor, the permittee may determine the VOC content from manufacturer's formulation data. If the Method 24 and the formulation values should differ, the permittee shall use the Method 24 results to determine compliance. The company uses formulation data to calculate emissions and testing was not requested as part of this compliance inspection.

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years.

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. Records for September, October and November had not been calculated by December 18, 2013 the date of this inspection. Additional records were received within 2 days of the inspection. During the inspection DP emphasized the importance of maintaining current and accurate records. A Violation Notice will not be sent at this time for this incident.
2. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each material (i.e. stain, sealer, lacquer, varnish, topcoat, reducer, cleanup solvent, etc.), including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. Records were readily available but not current, printed copies are attached

3. The permittee shall keep VOC records on a monthly basis for FG-FINISHING: Electronic records were readily available and printed copies are attached
4. The permittee shall keep Acetone records on a monthly basis for FG-FINISHING: Electronic Records were readily available and printed copies are attached
5. The permittee shall keep Xylene records on a daily basis for FG-FINISHING: Electronic Records were readily available and printed copies are attached

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted: Due to weather conditions stack vent dimensions were not verified during the inspection.

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)
1. SV-OFFLINE	36	36
2. SV-FLATLINE	36	36
3. SV-STAIN	36	36
4. SV-WASHCOAT	36	36
5. SV-SEAL	36	36
6. SV-SHADE	36	36
7. SV-TOPCOAT	36	36
8. SV-CTSTAIN	36	36
9. SV-CTSEAL	36	36
10. SV-TUBE	32	36
11. SV-LAB	18	36
12. SV-TOPCOATFLASH	10	36
13. SV-FLATLINEOVEN	12	36
14. SV-FILLOVEN (2 stacks)	10 (each)	36 (each)
15. SV-SEALOVEN	10	36
16. SV-TOPCOATOVEN	10	36
17. SV-OFFLINEOVEN	10	36
18. SV-CTSEALOVEN	10	36

The following conditions apply Source-Wide to: FG-FACILITY

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Compliance based on attached records.
1. Individual HAP	Less than 9.0 tpy	12-month rolling time period	2.5 tpy, each month all HAPs are evaluated, highest HAP emissions are reported.
2. Aggregate HAPs	Less than 22.5 tpy	12-month rolling time period	4.6 tpy aggregate HAPs, even below the 9 tpy individual HAP limit.

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years.

1. The permittee shall determine the HAP content of any material (coating, reducer, cleanup solvent, etc.) as received and as applied, using manufacturer's formulation data. Upon request of the AQD District Supervisor, the permittee shall verify the manufacturer's HAP formulation data using EPA Test Method 311.

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years.

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. Records were not being maintained as required. Records for September, October and November had not been calculated by December 18, 2013 the date of this inspection. Additional records were received within 2 days of the inspection. During the inspection DP emphasized the importance of maintaining current and accurate records. A Violation Notice will not be sent at this time for this incident.
2. The permittee shall keep the following information on a monthly basis for FG-FACILITY:
 - a) Gallons or pounds of each HAP containing material used.
 - b) Where applicable, gallons or pounds of each HAP containing material reclaimed.
 - c) HAP content, in pounds per gallon or pounds per pound, of each HAP containing material used.
 - d) Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month.
 - e) Individual and aggregate HAP emission calculations determining the annual emission rate of each in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. Records are being maintained (see attached).

Based on the physical inspection and records review the facility appears to be in compliance with federal and state Air Quality rules and regulations and Opt-out PTI 155-95D. A complete review of the 2013 MAERS submittal will be conducted and if the compliance status should change a revised report will be issued.

NAME Denise Pagan

DATE 1.3.14

SUPERVISOR PAB

