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

A225433271

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:** 02/04/2016
STAFF: Denise Plafcan	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT:		
RESOLVED COMPLAINTS:		

Tim Chipman –Senior Mfg. Engineer
616.328.8217
PPE – Steel toes, Safety Glasses

Denise Plafcan (DP) conducted an unannounced unscheduled inspection to determine compliance with federal and state Air Quality Division rules and regulations and Opt-out Permit to Install No. (PTI) 155-95E.

DP conducted surveillance of the area before and briefly after the inspection. No fugitive emissions, odors or abnormal operating conditions were noted. DP met with Tim Chipman and following the walk-through the plant, sat down and discussed the status of operations at the plant, any changes that were made or any changes that might be planned. Tim did say that that they have not completed installation of EU-PAINTLINE and that the Flatline is still running stain not paint. During the discussion, DP provided a copy of the Environmental Inspection brochure.

FACILITY DESCRIPTION
The facility operates one 8 hour shift five days a week. Nucraft mainly manufactures high-end conference room, reception, specialty and custom wood furniture. They do metal working and machining for support parts for the wood furniture in a second building next door. They have built a new structure connecting the two buildings and will be doing some rearranging of the operations mainly for a better flow and to eliminate trucking product from one building to the next to be shipped. 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. The three lines can be broken down as follows: Mainline, Paintline and Conference Table Line (CTLine).

REGULATORY OVERVIEW
PTI 155-95E was issued on March 19, 2015 and does not state that it is an Opt-out, however, the evaluation form does support the Opt-out classification of the facility and there are source-wide synthetic minor limits. The company is listed as an Opt-out source in both MACES and MAERS.

They have the following Rule 201 exempt equipment:

1. **They recently installed a new baghouse to handle wood working and wood grinding equipment, It is less than 35,0000 cfm and recirculated back into the plant during cold months. There are two additional existing recirculating baghouses all exempt under Rule 285(l)(vi). Even though they now have 3 baghouses there is still a lot of sawdust in the plant that should be cleaned or vacuumed on a regular basis.**
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. 155-95E 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, certification was submitted in previous inspection. 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.

COMPLIANCE EVALUATION

Records were not available at the time of the inspection as required and this is the second inspection when records were not entered into the spreadsheet by the 15th of the month. Electronic records through December 2015 were submitted the day after the inspection and an e-mail was sent to emphasize the importance of the records being maintained and up-to-date by the 15th of the month. All calculations included thinners and reducers to yield as applied emissions. No testing of any coatings were required as part of this compliance evaluation. All HVLP test caps were available and being stored in the laboratory. Stack dimensions were not verified as part of the compliance evaluation. EUOFFLINE AND EUFLATLINE were removed and added as EUPAINTLINE in PTI No. 155-95E, however, installation of EUPAINTLINE is not complete and EUFLATLINE is still running as a stain line. It appears all waste materials are being handled appropriately.

PTI No. 155-95E EMISSION UNIT SUMMARY TABLE

EU-PAINTLINE A coating line consisting of a spray booth (booth #10) with associated HVLP applicators, a flash-off booth, and an electric infra-red oven. Also, one coating line consisting of a spray booth (booth #6) with associated HVLP applicators, a flash-off booth, and an electric infra-red oven. Both of these coating booth systems are used for the application of paint to various substrates including wood furniture, metal parts, and plastic parts.

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. No metal parts or plastic parts coating is performed on this line.

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 only; no metal parts or plastic parts coating is performed on this line.

EU-GEOCELL One spray booth (TUBE) and applicator(s) used for applying contact adhesive. No metal parts or plastic parts coating is performed on this line

	Stack ID		
Booth	Nucraft ID	MAERS ID	Permit ID
1	Mainline Stain	SVSTAIN	3. SV-STAIN
3	Mainline Seal	SVSEAL	5. SV-SEAL
4	Mainline Topcoat	SVTOPCOAT	7. SV-TOPCOAT
5	Mainline Washcoat	SVWASH	4. SV-WASHCOAT
6	Paint	SVCONFLINE	1. SV-OFFLINE
7	Lab	SVLAB	11.SV-LAB
8	Mainline Shade	SVSHADE	6. SV-SHADE
9	GeoCell	SVTUBE	10. SV-TUBE
10	Flatline	SVFLATLINE	2. SV-FLATLINE
11	3-Step Stain	SV-CTSTAIN	8. SV-CTSTAIN
12	3-Step Topcoat	SV-CTSEAL	9. SV-CTSEAL

FLEXIBLE GROUP SUMMARY TABLE
FG-FINISHING Wood furniture, metal, and plastic coating operations consisting of spray booths, associated application equipment, flash off areas/booths, and cleanup and purge solvents. Metal parts and plastic parts coating is only performed on EU-PAINTLINE. Emission Units EU-PAINTLINE, EU-MAINLINE, EU-CTLINE, EU-GEOCELL
FGFACILITY All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.

EU-PAINTLINE
A coating line consisting of a spray booth (booth #10) with associated HVLP applicators, a flash-off booth, and an electric infra-red oven. Also, one coating line consisting of a spray booth (booth #6) with associated HVLP applicators, a flash-off booth, and an electric infra-red oven. Both of these coating booth systems are used for the application of paint to various substrates including wood furniture, metal parts, and plastic parts. Dry filters in each spray booth EU-PAINTLINE used for metal and plastic coatings. This currently made up of the Offline and eventually will add the Flatline. Records are still being recorded under Offline but that is being changed to accurately reflect EU-PAINTLINE.

EMISSION LIMITS
VOCs 2000 lb/month based on a calendar month. Highest month 864 pounds in December 2015.
VOCs 10.0 tpy based on 12-month rolling time period as determined at the end of each calendar month. 4.05 tpy as of December 2015.

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:

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)
1. SV-OFFLINE, 2. SV-FLATLINE	36	36

FG-FINISHING
Contains conditions for EU-PAINTLINE, EU-MAINLINE, EU-CTLINE, EU-GEOCELL Wood furniture, metal, and plastic coating operations consisting of spray booths, associated application equipment, flash off areas/booths, and cleanup and purge

EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	COMPLIANCE
1. VOC	76.8 tpy	12-month rolling time period as determined at the end of each calendar month	All metal, plastic, and wood furniture coating operations within FG-FINISHING	50 TPY
2. Acetone	14.6 tpy	12-month rolling time period as determined at the end of each calendar month	FG-FINISHING	8.4 TPY

3. Formaldehyde (CAS 50-0-0)	0.19 pph	Test Protocol*	FG-FINISHING	0.0033pph
4. Xylene (CAS 1330-20-7)	43.2 pounds per day	Calendar Day	FG-FINISHING	Less than 21 pounds per day

MATERIAL LIMITS

1. The VOC content of any sealer used in FG-FINISHING shall not exceed 3.5 pounds per pound of solid, as applied
   1.06 pounds per pound of solid.
2. The VOC content of any topcoat used in FG-FINISHING shall not exceed 3.5 pounds per pound of solid, as applied.
   2.35 pounds per pound of solid
3. The VOC content of any primer used in FG-FINISHING shall not exceed 1.0 pound per pound of solid, as applied.
   0.71 pound per pound of solid

STACK / VENT The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)
1-9 SV-OFFLINE, SV-FLATLINE, SV-STAIN, SV-WASHCOAT, SV-SEAL, SV-SHADE,SV-TOPCOAT, SV-CTSTAIN, 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

SOURCE-WIDE TO FGFACILITY Includes all process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.

EMISSION LIMITS individual

Individual HAP Less than 9.0 tpy 2.5 tpy for ~~aggregate~~ HAPs

Aggregate HAPs Less than 22.5 tpy 4.9 tpy for aggregate HAPs

Based on the physical inspection of the facility and the records provided it appears the facility is in compliance with federal and state Air Quality Division rules and regulations and Opt-out Permit to Install No. (PTI) 155-95E

NAME Denise Pelfrey DATE 2·12·16 SUPERVISOR PAB