

Attachment B

1. Proposed Limitations – PTE & Actual Emissions

Pollutant	Allowable (tons/year)	Proposed PTE (with controls & Restrictions) (tons/year)	Actual Emissions (tons/year)
PM	100	10	0.473
PM10	100	10	0.139
PM2.5	100	10	0.040
Sox	>1	NA	>1
NOx	>1	NA	>1
CO	>1	NA	>1
VOCs	249	45	6.26*
Pb	Insignificant	Insignificant	Insignificant
Combined Federal HAPs	<25	24.99	1.95
Single Federal HAP	<10	9.99	0.45 (MIK)
NH3	Insignificant	Insignificant	Insignificant
Fluorides	Insignificant	Insignificant	Insignificant
H2SO4	Insignificant	Insignificant	Insignificant
H2S	Insignificant	Insignificant	Insignificant
TRS	Insignificant	Insignificant	Insignificant
RSC	Insignificant	Insignificant	Insignificant

**Based on deducting solvent waste taken off site for hazardous waste disposal
Facility emissions listed as insignificant are either not emitted or through none significant sources*

2. Proposed Testing, Monitoring, Recordkeeping Requirements

Three Spray Booths – Two existing, one a replacement for one removed.

Proposed Testing: None, maintain panel filters with a control efficiency of not less than 98%

Proposed Monitoring: Inspect and document panel filters daily for proper placement, rips, loading, repairs and maintenance.

Recordkeeping Calculate monthly VOC & HAP emissions from combined spray booths to maintain synthetic minor status.

Baghouse for Woodworking Operations – Existing

Proposed Testing: None, stack testing was performed in 2007, report enclosed with “Registration for Existing Source”.

Proposed Monitoring: Collect and document pressure drop once for every 8 hours of operation. Pressure drops are read from a magnehelic gauge.

Proposed Recordkeeping: Maintain written records of pressure drop, repairs, maintenance and inspections.

One Oven- New

Proposed Testing: None

Proposed Monitoring: None

Recordkeeping Annual gas usage

3. Estimated Control Efficiency of Pollution Control Equipment

Baghouse for Woodworking Operation (P04/C04/S04)

Manufacturer: DISA, NFG 5HJ-1BL

Control Efficiency: 99% at 3 microns (see enclosed specification and stack test report contained in the “*Registration for Existing Sources*”).

Spray Booth Panel Filters (P01/C01/S01, P02/C02/S02, P03/C03/S03)

Manufacturer: Bonded Fibers Midwest, Series 98 Green

Control Efficiency: 99.57% (see enclosed specification contained in the “*Registration for Existing Sources*”).

4. Estimates of Facility Emissions

Estimates of VOC/HAP/PM10/PM2.5 emissions from the coating lines were based on the following assumptions:

- Maximum hourly usage of the spray guns are 3.5 gallons (use only HVLP).
- VOC, HAP, solids contents were obtained from material safety data sheets, technical data sheets and/or provided in writing by the manufacturer.
- Control efficiencies were obtained from the filter manufacturer.
- All VOCs/HAPs are assumed to vent through the spray booth stacks.
- Microsoft Excel spreadsheets were used to calculate emissions, Actual and PTE
- General formula for VOC emissions: Product Used (gal) * VOC content (lbs/gal) = VOCs (lbs) emitted
- General formula for HAP emissions: Product Used (gal) * HAP by weight (%) * Density of the Product (lbs/gal) = HAPs (lbs) emitted
- General formula for uncontrolled PM emissions: Product Used (gal) * Solids by Weight (%) * Density of the Product (lbs/gal) * Capture Efficiency (%) = Uncontrolled PM (lbs) emitted
- General formula for controlled PM emissions: Product Used (gal) * Solids by weight (%) * Density of the Product (lbs/gal) * Capture Efficiency (%) * Collection Efficiency (%) = Controlled PM (lbs) emitted
- All PM is assumed to be PM10 and of that, 16% is assumed to be PM2.5, per the December 2003, “*Size Distribution of Chromate Paint Aerosol Generated in a Bench-Scale Spray Booth*”.
- Annual PTE was based on 8,760 hours.
- Please refer to the calculations present in the “*Registration for Existing Sources*” for Product Data, PTE Calculations without Controls and Restrictions, PTE with Controls and Restrictions, and 2012 Actual Emissions.

Estimates of PM/PM10/PM2.5 emissions from the woodworking operations were based on the following assumptions:

- Total PM loading to the baghouse was based on the actual amount of material collected in the trailers assuming that 1 percent of the total mass was emitted during a known period of operation. The hourly MTE was the actual multiplied by a 1.2 safety factor.
- The bags used in the baghouse are assumed to be 99% efficient at removing PM3, per manufacture's specification (enclosed in "*Registration for Existing Sources*" packet).
- PM, PM10, and PM2.5 speciation were based on the July 1998 "*Estimating Emissions from Generation and Combustion of Waste Wood*" and the July 2007 "*Woodworking Emission Calculator*", both published by the North Carolina Department of Air Quality.
- Annual PTE was based on 8,760 hours.
- General formula for uncontrolled PM emissions: Maximum amount of Sawdust Generated (lbs) (MTE) / 8760 hours * Specific Specification of PM (%), PM10 (%), and PM2.5(%) = PM, PM10, PM2.5 (lbs).
- General formula for controlled PM emissions: Maximum amount of Sawdust Generated (lbs) / 8760 hours * Specific Specification of PM (%), PM10 (%), and PM2.5 (%) * Control Efficiency of the Bags(%) = PM, PM10, PM2.5 (lbs).
- A copy of a 2007 stack test report is enclosed with "*Registration for Existing Source*".

Estimates of PM/PM10/PM2.5/CO/NOx/SOx emissions from the drying oven were based on the following assumptions:

- Unit is rated at 150,000 BTUs/hr
- Utilized Fire Emission Factors for SCC 10500106

5. PTE - Greenhouse Gas

The facility only burns natural gas for convenience heating of offices and manufacturing areas, and an oven for drying the coated cabinets. The facility does not have the ability to exceed PSD thresholds.

6. PTE of federal HAPs

The facility's PTE without controls or restrictions would exceed 25 tons for combined federal HAPs and 10 tons for individual federal HAPs. Therefore, the facility requests restrictions be placed on it to limit the PTE of combined federal HAPs to be below 25 tons and single HAP to be below 10 tons. Copies of the calculations are enclosed with "*Registration for Existing Source*".