

Statement of Basis  
Integrity Cabinets, LLC  
(Woodworking & Surface Coating Processes)

Major Source of Volatile Organic Compound Emissions and  
Hazardous Air Pollutant Emissions

Introduction

On August 7, 2020, Integrity Cabinets, LLC submitted a Title V major source permit renewal application for the manufacture and surface coating of wooden kitchen and bath cabinets (SIC # 2434). Integrity Cabinets, LLC is located in Ashland, Alabama.

Integrity Cabinets, LLC is a manufacturer of wooden kitchen and bath cabinets. Facility operations can be divided into the woodworking, surface coating, and assembly.

The woodworking operations include raw material receiving and wood shaping areas. The incoming wood is chopped into lengths, and then conveyed to the various woodworking operations that include shaping, boring, drilling, and sanding. These processes are sources of particulate emissions. All particulate generated from woodworking is controlled by a dust collection system served by a single cyclone vented to the atmosphere or bagfilters vented inside the building. Collected wood dust is shipped off-site.

After the wood is shaped into its appropriate dimension, it is conveyed to the surface coating line. The surface coating of the wood workpieces is as follows.

Integrity Cabinets has an automated overhead conveyor that feeds a stain booth, a small heat tunnel, followed by a primer booth, a small heat tunnel, a basecoat booth, a small heat tunnel, a topcoat booth, and finishing with a small heat tunnel. The heat tunnels are heated by infrared lamps powered by electricity. Most of the items are hung on the overhead conveyor with large pieces being coated on the floor line.

Integrity Cabinets also has an Offline-Booth which is used to coat large pieces or odd pieces that would slow down the main coating line and does about 10 pieces a day.

Once dry, the coated pieces are conveyed to the assembly area. The coated pieces are assembled with particleboard and plywood to form the final products. The final products are then packaged and shipped off-site.

Volatile organic compounds (VOCs) from the organic solvents in the paint, paint thinners, adhesives, and cleanup solvents, are regulated criteria air contaminants emitted to the atmosphere by the surface coating and adhesion of the wooden cabinets. The surface coating and adhesion operations are also a source of hazardous air pollutants (HAPs), as listed in Appendix G of the ADEM Air Regulations.

Potential emissions of VOCs exceeds the threshold of 100 tons per year. Therefore, Integrity Cabinets is considered a major source for Title V. The potential emissions of VOCs exceed the PSD threshold of 250 tons per year. Integrity Cabinets currently has a VOC emission limit of 245 tons per consecutive rolling 12-month period in order to avoid PSD requirements. No other criteria pollutants are emitted in sufficient quantities, actually or potentially, to exceed the major source threshold of 100 tons per year.

The potential HAP emissions from the coating operation are also emitted in such quantities as to exceed the Title III and Title V major source thresholds. The HAP emission thresholds for a major source are 10 tons for a single HAP and 25 tons for a combination of any HAPs.

The surface coating lines and adhesion operation are subject to the NESHAP for the Manufacture of Wood Furniture, Subpart (JJ). This regulation requires Integrity Cabinets to limit emissions of certain HAPs in their coatings and adhesives, and to implement certain work practices and training for operators.

The following is a list of all the facility's sources (individual emissions units) which will be part of the facility's Title V Major Source Operating Permit:

<b>Permit Unit No.</b>	<b>Description of Unit</b>
001	Surface Coating Operation
002	Off-Line Booth
010	Woodworking Operations with Cyclone

### **Monitoring of Emissions**

Integrity Cabinets maintains records of monthly coating usage and coating analysis to show compliance with both their Synthetic Minor PSD limits and their Wood Furniture MACT requirements. These are submitted quarterly.

The woodworking operations are subject to opacity and particulate standards. The cyclone is monitored weekly by observing opacity to indicate compliance with the particulate standards. If emissions that are greater than normal are noted, corrective action to minimize emissions will be taken within 24 hours, followed by an additional observation to confirm that emissions are reduced to normal. Records of weekly observations and any corrective actions will be retained for at least five years.

### **Permitting Fees**

Title V major sources are subject to operating permit fees which charge the facility a yearly amount based on the actual emission rate of pollutants for the previous year.

### **Affected States Notification**

Notification of the proposal of this major source operating permit will be sent to all affected states bordering Alabama.

### **Recommendations**

I recommend that the attached permit be issued to Integrity Cabinets.

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Kevin M. Fulmer  
 Chemical Branch  
 August, 2020