

**STATEMENT OF BASIS
MASTERBRAND CABINETS INC.
Auburn, Alabama
Facility No. 206-0032**

On August 2, 2016, the Department received a renewal Major Source Operating Permit (MSOP) application from MasterBrand Cabinets, Inc. located in Auburn, Alabama. MasterBrand Cabinets, Inc. is a wood kitchen and bath cabinets manufacturing company. The standard industrial classification (SIC) code for this operation is 2434. The previous Title V permit was issued on February 27, 2012, for five units: one Wood Working Operation with Baghouses (Unit No. 001), two Monorail Lines Nos. 1 and 2 (Unit Nos. 002 and 003), one 4 – Touch-Up Booths (Unit No. 004), and one 5 MMBtu / Hr Cleaver Brooks Natural Gas Fired Boiler (Unit No. 005). This Title V permit will expire on February 04, 2017. Additional information was received through October, 2016.

MasterBrand proposes to make the following change: Masterbrand has removed Monorail Line No. 2 (Unit No. 003). This unit will be removed from the proposed renewal permit. Masterbrand has also added a reconstructed Monorail Line No. 3 (Unit No. 006). This unit has been constructed and will be added to the proposed renewal permit. Masterbrand also has added a Natural Gas Fired Emergency Generator for use with this expansion, and this unit will also be added to the Title V renewal.

OPERATIONS/REQUIREMENTS

The facility operations can be divided into wood working, surface coating, and assembly. The wood working operations include raw material receiving and wood shaping areas. MasterBrand receives raw wood stocks and cabinet components from suppliers. The incoming wood is chopped into lengths, and then conveyed to the various wood working operations that include shaping, sawing, drilling, and sanding. The wood working and assembly areas consist of three lines: wall, base, and oddball. Each piece of wood working equipment is vented to a dust collection system for recovery of sawdust which is disposed in a landfill. These processes are the sources of particulate emissions. The dust collection system is vented to the atmosphere through a cyclone-baghouse system for particulate control. There are three baghouse systems at this facility. Each baghouse system consists of two baghouses. Looking at the baghouse system, the gas stream is split between the two baghouses. The filtered streams are then pulled from the top of each baghouse

and are rejoined into a single stream. It is then vented back into the building. Each baghouse system has an emergency bypass. There are magnehelic manometers used to measure the pressure drop on each baghouse.

After the wood is shaped into the designed shape and size, it is conveyed to the surface coating line. MasterBrand has two Monorail lines used to apply coatings to the parts.

At Monorail Line No. 1, parts are coated on both sides with water-based stains, sealers, and topcoats in a series of nine booths (Four Stain Booths, One Stain Oven, One Pre Sealer Booth, One Pre Sealer Oven, 2 Sealer Booths, One Sealer Oven, 2 Topcoat Booths, One Topcoat Oven). After each surface coating line, there is a drying oven used to cure wooden parts: two 500,000 Btu/Hr (stain and pre-sealer ovens), two 3 MMBtu/Hr (sealer and topcoat ovens). There are also two natural gas direct-fired air handlers with a capacity of 8,640,000 Btu/Hr located on the roof above the Monorail Line area. At each of paint booth of the Monorail line, workers are manually attached parts to the paint hooks and are then applied coatings. MasterBrand uses high volume liquid pressure (H.V.L.P) and air-assisted guns to apply coating to parts. Filters are used to control particulate from each paint booth. A manometer is also attached at the paint booth to determine when the filter needs to be changed.

At Monorail Line No. 3, parts are coated on both sides with water-based stains, sealers, and topcoats in a series of ten booths (Four Stain Booths, One Stain Oven, Two Pre Sealer Booths, One Pre Sealer Oven, 2 Sealer Booths, One Sealer Oven, 2 Topcoat Booths, One Topcoat Oven). After each surface coating line, there is a drying oven used to cure wooden parts: two 500,000 Btu/Hr (stain and pre-sealer ovens), two 3 MMBtu/Hr (sealer and topcoat ovens). There are also two natural gas direct-fired air handlers with a capacity of 8,640,000 Btu/Hr and two natural gas direct-fired air handlers with a capacity of 7,850,000 Btu/Hr located on the roof above the Monorail Line area. At each of paint booth of the Monorail line, workers are manually attached parts to the paint hooks and are then applied coatings. MasterBrand uses high volume liquid pressure (H.V.L.P) and air-assisted guns to apply coating to parts. Filters are used to control particulate from each paint booth. A manometer is also attached at the paint booth to determine when the filter needs to be changed.

This facility has four off-line paint booths located in the paint room with the monorail lines. These booths are used to fill small orders or to coat odd-sized pieces. Each booth is able to apply stain, sealer,

and topcoat to the products. These booths also have an overhead paint lines, but will occasionally utilize small pressure pots for catalyzed coating. Each booth also has a filter system.

After the final drying process, the coated pieces are conveyed to the assembly area. Parts are assembled to form the final products. The products are then packaged and either stored in the warehouse or delivered to customers.

MasterBrand has a 5 MMBtu / Hr Cleaver Brooks Natural Gas Fired Boiler used to heat the building. There are no back-up fuels.

MasterBrand has a 127 HP Natural Gas Fired Emergency Generator used for backup power for Line No. 3. There are no back-up fuels.

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

MasterBrand is a major source for Title V since the potential VOC emissions exceed the threshold of 100 TPY. MasterBrand currently has a VOC emission limit of 235 TPY per 12-month rolling period for Monorail No. 1 and Four Touch up Booths. MasterBrand also currently has a VOC emission limit of 235 TPY per 12-month rolling period for Monorail No. 3 separately. Therefore, with both of these lines, Masterbrand's potential VOC emissions exceed the PSD threshold of 250 TPY, making them a major source. There are no other actual or potential criteria pollutants which are emitted in sufficient quantities, to exceed the Title V major source threshold of 100 TPY.

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

The surface coating line is subject to the NESHAP for the Manufacture of Wood Furniture, Subpart (JJ) since the potential HAP emission for this facility is 120 TPY. This regulation requires MasterBrand to limit emissions of certain HAPs in their coatings and to implement certain work practices and training for operators.

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

| Permit Unit No. | Description of Unit |
|------------------------|---|
| 001 | WOOD WORKING OPERATIONS WITH BAGHOUSES |
| 002 | MONORAIL LINE NO. 1 |
| 004 | 4 - TOUCH-UP BOOTHS |
| 005 | 5 MMBTU / HR CLEAVER BROOKS NATURAL GAS FIRED BOILER |
| 006 | MONORAIL LINE NO. 3 |
| 010 | 127 HP NATURAL GAS FIRED EMERGENCY GENERATOR |

MONITORING OF EMISSIONS

MasterBrand will maintain 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 will be submitted quarterly.

The wood working operations are subject to opacity and particulate standards. The baghouse will be 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.

MasterBrand has two 3 MMBtu/Hr and two 500,000 Btu/Hr natural gas fired curing ovens between its stain, pre-sealer, sealer, and topcoat coating lines. No periodic monitoring for any emissions will be required on these ovens due to the inherently clean nature of the fuel and the small size do the oven.

This facility has a 5 MMBtu / Hr natural gas fired boiler. No periodic monitoring for any emissions will be required on this boiler due to the inherently clean nature of the fuel and the small size of the boiler.

The boiler and other small natural gas burners are subject to 40 CFR 63, Subpart DDDDD, the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers for Major Sources. Because the units are fueled only with natural gas, the units are subject to a biennial tune-up.

The emergency generator is subject to an applicable MACT standard for Stationary Reciprocating Internal Combustion Engines (Part 63 Subpart ZZZZ), and they will meet this regulation by complying with 40 CFR Part 60 (JJJJ). The emergency generator is certified to meet the standards listed in the Provisos. The engine must have a non-resettable hour meter. The emergency generator will be operated and maintained in compliance with the manufacturer's emission-related written instructions and records will be kept of conducted maintenance.

COMPLIANCE ASSURANCE MONITORING

This facility is subject to the provisions of 40 CFR Part 64, Compliance Assurance Monitoring (CAM). The facility has several baghouses that are subject to the CAM provisions and CAM monitoring is required. Baghouse are used to control particulates from the wood working operations. Magnehelic manometers are utilized to measure the pressure drop across the baghouse. According to 40 CFR Part 64.3b(4)(iii), MasterBrand is required to monitor the differential pressure at each of the baghouse at least once every 24-hour period. These readings will be recorded in a log book and will be maintained.

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

Standard practice is to notify of the issuance of this major source operating permit to all states bordering Alabama.

RECOMENDATIONS

Based on the above analysis, I recommend that MasterBrand Cabinets Inc. existing Title V permit to be renewed for another five years with the above changes following a thirty day public comment period and forty-five day EPA review.

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KMF: kmf