



REGION 5

CHICAGO, IL 60604

MEMORANDUM

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Masterbrand Cabinets, Inc., Arthur, Illinois

FROM: Kenneth Ruffatto, Environmental Engineer
AECAB (IL/IN)

THRU: Nathan Frank, Section Supervisor
AECAB (IL/IN)

TO: File

BASIC INFORMATION

Facility Name: Masterbrand Cabinets, Inc.

Facility Location: 501 W Progress Street, Arthur, Illinois 61911

Date of Inspection: February 5, 2025

EPA Inspector(s):

1. Kenneth Ruffatto, Environmental Engineer

Other Attendees:

1. Richard Henry, Manufacturing and Environmental Engineer, Masterbrand

Contact Email Address: Richard Henry – rhenry@masterbrand.com

Purpose of Inspection: Coating Operations

Facility Type: Wood Furniture Manufacturing

Regulations Central to Inspection: Title V Permit and NESHAP Subpart JJ

Arrival Time: 10:45 AM

Departure Time: 12:15 PM

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Inspection Type:

- ☒ Unannounced Inspection
☐ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
☒ Stated authority and purpose of inspection
☒ Small Business Resource Information Sheet not provided. Reason: Not a Small Business
☒ Provided CBI warning to facility

Was any information collected during the inspection claimed as CBI?

☐ Yes ☒ No.

The following information was obtained verbally from Richard Henry unless otherwise noted.

Process Description:

Masterbrand Cabinets, Inc. (Masterbrand) in Arthur, Illinois is a wood kitchen cabinet manufacturer. The facility has both cabinet production and coating operations. Cabinet production is done on-site, and dust generation is controlled by approximately seven baghouses. The coating operations are composed of two large monorail systems (i.e., east and west monorails) and three smaller coating operations including trim, UV, and fiberboard coating. The east monorail primarily processes cabinet doors, drawer fronts, and trim pieces, while the west monorail primarily processes cabinet frames. Each monorail has a similar design (i.e., 9 spray booths with exhaust fans and 2 natural-gas fired ovens) and throughput. Cabinet parts are hung on the monorail and move through a series of spray booths and ovens in the following order: 1) primer and base color applied, 2) first cure oven, 3) 2nd coat applied as either front and rear stain or a primer and enamel combination, 4) second cure oven, and 5) preseal is put on the face of the piece and decorative glazes can be applied. Additionally, the three smaller operations include a trim coating system with three spray booths, UV coating system with two spray booths and a UV curing operation, and fiberboard coating system with a spray booth. All spray booths are controlled by filters, with stain, toner glaze, and pre-seal operations also controlled by a regenerative thermal oxidizer (RTO).

Staff Interview: The facility runs four 10-hour shifts and has approximately 500 employees. Coatings used at the facility are all stored in a paint kitchen including three pump rooms that pump coatings to the spray booths. The spray booths use pocket/bow-tie filters for control that are changed around based on a work plan. The filters have a magnehelic to monitor the pressure differential and can be used to indicate when filters need to be changed. Blankets are also hung in front of the filters and changed out every day to extend the life of the filters. Each spray booth is also equipped with an exhaust fan and a pressure gauge. The RTO is used to control stain, toner, glaze, and pre-seal operations and maintains a temperature of approximately 1,600°F. The RTO is consistently monitored based on an output signal. If the temperature falls below the setpoint, the monorails are automatically shut-off to prevent further emissions. The RTO is regularly maintained, and a complete preventative maintenance inspection is done annually by an outside contractor. Performance tests

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were completed on the RTO in 2018 (post-installation), 2020 (destruction efficiency), and 2023 (destruction and capture efficiency).

TOUR INFORMATION

EPA Toured the Facility: Yes

Data Collected and Observations:

No visible emissions were seen from outdoor stacks. Overspray in booths appeared to be properly vented. All coating storage containers appeared to be sealed. RTO operating temperature was between 1,605-1,627°F.

Photos and/or Videos: were not taken during the inspection.

Field Measurements: were not taken during this inspection.

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

Requested documents:

- Full 2024 Emissions Spreadsheet
- 2023 RTO Performance Test
- Sample RTO Temperature Sheet

DIGITAL SIGNATURES

Report Author: **KENNETH RUFFATTO** Digitally signed by KENNETH RUFFATTO
Date: 2025.02.14
11:06:25 -06'00'

Section Supervisor: **Frank, Nathan** Digitally signed by Frank, Nathan
Date: 2025.02.14
13:13:06 -06'00'