Iowa Department of Natural Resources Draft Title V Operating Permit Fact Sheet

This document has been prepared to fulfill the public participation requirements of 40 CFR Part 70 and 567 Iowa Administrative Code (IAC) 22.107(6). 40 CFR Part 70 contains operating permit regulations pursuant to Title V of the Clean Air Act.

The Iowa Department of Natural Resources (DNR) finds that:

- 1. MasterBrand Cabinets, LLC, located at 1205 Peters Drive, Waterloo, IA 50703 has applied to renew their Title V Operating Permit. The designated responsible official of this facility is Jared Dusthimer.
- 2. MasterBrand Cabinets, LLC is a wood cabinet manufacturing facility. This facility consists of 51 emission units with potential emissions of:

Pollutant	Abbreviation	Potential Emissions
		(Tons per Year)
Particulate Matter (≤ 2.5 µm)	PM _{2.5}	102.14
Particulate Matter (≤ 10 µm)	PM ₁₀	102.14
Particulate Matter	PM	246.24
Sulfur Dioxide	SO_2	0.08
Nitrogen Oxides	NO _x	13.62
Volatile Organic Compounds	VOC	702.12
Carbon Monoxide	CO	11.44
Lead	Lead	0.00
Hazardous Air Pollutants (1)	HAP	47.57

⁽¹⁾ May include the following: Acrylic acid, Cumene, Ethylbenzene, Ethylene Glycol, Glycol Ethers, Formaldehyde, Hydroquinone, Methanol, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, Naphthalene, Toluene, Triethylamine, Xylene.

- 3. MasterBrand Cabinets, LLC submitted a Title V Operating Permit renewal application on September 29, 2023. Based on the information provided in these documents, DNR has made an initial determination that the facility meets all the applicable criteria for the issuance of an operating permit specified in 567 IAC 22.107.
- 4. DNR has complied with the procedures set forth in 567 IAC 22.107, including those regarding public notice, opportunity for public hearing, and notification of EPA and surrounding state and local air pollution programs.

DNR procedures for reaching a final decision on the draft permit:

1. The public comment period for the draft permit will run from March 28, 2024 through April 27, 2024. During the public comment period, anyone may submit written comments on the permit. Mail signed comments to Derek Wedemeier at the DNR address shown below. The beginning date of this public comment period also serves as the beginning of the U.S. Environmental Protection Agency's (EPA) 45-day review period, provided the EPA does not seek a separate review period.

- 2. Written requests for a public hearing concerning the permit may also be submitted during the comment period. Any hearing request must state the person's interest in the subject matter, and the nature of the issues proposed to be raised at the hearing. DNR will hold a public hearing upon finding, on the basis of requests, a significant degree of relevant public interest in a draft permit. Mail hearing requests to Derek Wedemeier at the DNR address shown below.
- 3. DNR will keep a record of the issues raised during the public participation process, and will prepare written responses to all comments received. The comments and responses will be compiled into a responsiveness summary document. After the close of the public comment period, DNR will make a final decision on the renewal application. The responsiveness summary and the final permit will be available to the public upon request.

Derek Wedemeier Iowa Department of Natural Resources - Air Quality Bureau Wallace State Office Building 502 E 9th St. Des Moines, Iowa 50319-0034

Phone: (515) 725-9520

E-mail: Derek.Wedemeier@dnr.iowa.gov

DNR concludes that:

- 1. DNR has authority under 455B.133 Code of Iowa to promulgate rules contained in 567 IAC Chapters 20-35, including, but not limited to, rules containing emission limits, providing for compliance schedules, compliance determination methods and issuance of permits.
- 2. DNR has the authority to issue operating permits for air contaminant sources and to include conditions in such permits under 455B.134 Code of Iowa.
- 3. The emission limits included in this permit are authorized by 455B.133 Code of Iowa and 567 IAC Chapters 20-35.
- 4. DNR is required to comply with 567 IAC Chapter 22 in conjunction with issuing a Title V Operating Permit.
- 5. The issuance of this permit does not preclude the DNR from pursuing enforcement action for any violation.

Title V Renewal 3 Review Notes

Applicant: MasterBrand Cabinets, LLC
SIC Code: 2434
City: Waterloo
County: Blackhawk
EIQ#: 92-3949
Facility#: 07-01-061
Permit #: 00-TV-055R4

Date: **DATE**

Facility Identification

Facility Name: MasterBrand Cabinets, LLC

Facility Location: 1205 Peters Drive, Waterloo, IA 50703

Derek Wedemeier

Responsible Official: Jared Dusthimer Phone: 563-343-2646

Background

Reviewer:

The Title V renewal application was received 9/29/2023. The facility is subject to Title V and is a Major source for PTE for VOCs and HAPS (Individual and Total.) MasterBrand Cabinets, LLC manufactures wood kitchen cabinets. The facility has 51 emission units with 46 emission point.

Title V Applicability

Pollutant	Major for Title V?
PM_{10}	
SO_2	
NO _x	
VOC	
CO	
Lead	
Individual HAP	
Total HAPs	

Program Applicability:

• PSD: NO

40 CFR Part 60 NSPS: NO
40 CFR Part 61 NESHAP: NO
40 CFR Part 63 NESHAP: YES

Subpart A-General Provisions

- 40 CFR 63 Subpart JJ National Emission Standards for Wood Furniture Manufacturing Operations
- 40 CFR 63 Subpart DDDDD National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

Acid Rain and CSAPR: NO

Stratospheric Ozone Protection: NOPrevention of Accidental Release: NO

Emission Estimations

The potential emissions calculations were based off of construction permit limits, AP-42 emission factors, stack test data, mass balance and engineering estimates provided by the facility. The 500ppmv allowable SO₂ SIP limit overestimates the potential emissions. The AP-42 emission factors for SO₂, if available, were used instead and provide a more realistic potential value when compared to the previous year's emissions inventory.

Emission Values

PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	СО	Lead	Total HAPs*
Potential Emissions								
246.24	102.14	102.14	0.08	13.62	702.12	11.44	0.00	47.57
Actual Emissions 2022								
7.56	7.56	7.56	0.11	18.19*	149.06	15.28*	0.00	26.41

^{*} Actual emission for 2022 exceed potential emission for NOx and CO do to the removal of Boiler EP 1-7. See below for equipment removal and rescissions.

Changes Made to R4 Permit Renewal

- o Facility Name was updated
- Responsible Official changed
- o Contact Person updated
- o Page numbers were updated.

The following pieces of equipment are new or have had construction permit modifications.

EP	EP Description	Construction Permit
CF 3-24	Dynasty Cefla Sanding Operations	21-A-164
BH 2-61	Woodworking – Final Machining	13-A-316-S1
BH 4-24	Fountainhead Dust Collection System	15-A-569-S1
4-1	Fountain Head Drawer Box Spray Booth	19-A-128

The following pieces of equipment were removed from the 4th renewal.

	EP Description	Construction	Rescission
EP		Permit	Date
3-19	Vertical Oven Chamber 4 (Cooling Tunnel)	98-A-019-S2	3/2/2018
1-13	Cefla Ecosprayer	03-A-476-S2	5/24/2021
1-14	Cefla Flash Off Oven -Stack 1	03-A-477-S2	5/24/2021
1-15	Cefla Flash Off Oven -Stack 2	03-A-478-S2	5/24/2021
1-16	Cefla Flash Off Oven -Stack 3	03-A-479-S2	5/24/2021
1-17	Cefla Flash Off Oven -Stack 4	03-A-480-S2	5/24/2021
1-18A	Cefla UV Cure Oven	03-A-481-S2	5/24/2021
1-18B	Cefla UV Cure Oven	03-A-482-S2	5/24/2021
1-22	Flexispray Booth	11-A-223	5/24/2021
1-23	Cure Oven (0.0252 MMBtu/hr)	11-A-224	5/24/2021
CF 3-16	Dynasty Finish Denibbing & Sanding	03-A-591-S1	5/24/2021
6-1	Vacuum Edge Coater UV Cure Oven	06-A-1304	1/31/2024
BH 2-1	Waste Wood Silo	13-A-320	1/31/2024
1-4	Wood Fired Boiler (2.519 MMBtu/hr)	87-A-026-S4	1/31/2024
1-7	Natural Gas Boiler (9.5 MMBtu/hr)	89-A-090-S3	1/31/2024

Emission Point Specific Comments

3-20 & 3-21: Glaze Line

The construction permits for these units reference an EP 3-23 and EP3-25. These 2 pieces of equipment no longer exist and therefore references to these pieces of equipment have been excluded from the Title V permit. The engineering evaluation for project 01-662 outlines potential uncontrolled PTE for EP 3-20. These values are less than the major threshold. No testing is required during this renewal and an Agency O&M plan is included in Appendix B of the permit.

3-30: Dynasty Line with RTO

Initial VOC testing completed and passed 6/19/2018. Test result averages for VOC destruction post RTO were 0.77 lb/hr (1.93 lb/hr limit) and 87.3% control. No additional stack tests are required during this renewal. An Agency O&M is required for CE 3-11A and CE 3-11B, dry filters.

The compliance table previously included in the Title V permit has been removed since the testing requirement has been completed. The operational conditions contain the remaining items from the previously included demonstration table.

3-14 through 3-18: Toner/Stain Spray Booth

These spray booths and oven are grouped together within the permit. A VOC bubble limit shared with the Glaze Line, Dynasty Line, and Spray booths has been included in the plantwide conditions. Emission limits and operational requirements for the bubble limit can be found at the beginning of the permit in the Plantwide Conditions.

An Agency O&M plan has been included in Appendix B for units 3-14, 3-15, 3-16, and 3-17. Uncontrolled PTE does not exceed major threshold for these units, therefore CAM does not apply.

1-1A Through 3-8B: Towline and Dynasty

These units are Subject to 248.8 tons per 365 day rolling period. The application lists conflicting control efficiencies for CEs 1-1A, 1-1B, 1-2, 1-3, 1-8, 3-13-2, 3-3, 3-4, 3-5, and 3-6. Form 3.0 and facility provided spreadsheets use 90% for the CE while form CE-01 shows the control efficiency as 95%. The facility confirm 95% is the correct value. Uncontrolled PTE does not exceed the major threshold and are not subject to CAM. Units 1-1A, 1-1B, 1-2, 1-3, 1-8, 3-1, 3-2, 3-3, 3-5, and 3-6 are subject to the Agency O&M included in Appendix B of the permit.

1-20 Spray Booth:

Similar to the units above, the application lists conflicting control efficiencies. 90% control has been used in DNR calculations. Uncontrolled PTE does not exceed the major threshold. An Agency O&M plan has been included for this unit. The facility requested to move 1-24 to the insignificant activities list in the renewal application. This cannot be removed because applicable requirements exist for this unit.

4-1: Fountain Head Spray Booth

This unit is new to this renewal. The maximum capacity of the spray booth is 4.8 gal/hr. Solid contents of the coating material is 2.62lb solid/gallon. Based on this information uncontrolled PTE does not exceed the major threshold. An Agency O&M plan has been included in Appendix B for this unit.

7-2: Pump Room

The facility requested this unit be moved to the insignificant activities list. This cannot be moved because applicable requirements exist for this unit.

F-S: The fugitive source is subject to NESHAP JJ.

3-9, 3-10, B-1, B-2, B-3: Boilers

These boilers are natural gas fired and range in size from 3 MMBtu/hr to 3.6 MMBtu/hr. The boilers are subject to NESHAP DDDDD.

BH 1-45 through BH 4-24: Wood Dust Collections System

The facility requested to change the pressure drop ranges for BH 4-24 and BH 2-61 in the application. Changes to these values cannot be made within the Title V permit without modification to the construction permits. If the facility wished to adjust the pressure drop range

for these pieces of equipment, a construction permit modification application should be submitted.

Stack tests were required by the previous Title V permit for two of these emission points. Testing was initially completed at BH 7-50 and BH 2-71 on 8/24 & 8/25/2020. These test were rejected because testing was not completed at the rated capacity. The facility was required to complete stack testing for PM/PM10 at two emission points.

Below is a summary of the passing tests since the R3 permit was issued.

<u>BH 9-50</u>: Stack testing was completed on 5/21/2021 for PM₁₀. Test result averages were 0.75 lb/hr, approximately 50% of the emission limit.

<u>BH 9-67</u>: Stack testing was required by the previous Title V permit for PM/PM10 and was completed on 5/25/2021. Test result averages were 0.29 lb/hr (0.50 lb/hr limit), approximately 58% of the emission limit.

<u>CF 3-24</u>: This unit was re-permitted. Stack testing for PM was required for PM by construction permit 21-A-164 and completed on 6/28/2021. The stack test passed with an average of 0.26 lb/hr with an emission limit of 0.90 lb/hr.

Using Periodic Monitoring Guidance, all of these units would be required to have 1 stack test completed during this renewal. However, based on the results of the 2021 stack test, no testing will be required for BH 9-50, BH 9-67, and CF 3-24 during this renewal. No stack test will be required for BH 4-24 during this renewal. The engineering evaluation for project 15-420 states "Testing of a similar source demonstrated compliance" This would result in an emission rate well below the emission limit for PM and PM₁₀ at an emission rate of 0.002gr/scf.

The facility will be required to complete stack testing on two baghouse controlled units of their choice to demonstrate compliance with the PM and PM_{10} for all of the units. However, if the results of the representative testes exceed the PM/PM_{10} emission limits, then all the of units will be considered out of compliance.

An Agency O&M plan has been included for BH 1-45 through BH 9-67. The operational limits of CF 3-24 and BH 4-24 meet the requirements of a Facility O&M plan. The operational conditions for BH 2-61 meet the requirements of an Agency O&M.

CAM

As noted in Renewal Permit 3 and 2 reviewer notes, this facility has requested to be exempted from CAM, as the control equipment is considered to be inherent to the woodworking process by the facility. The facility claims that the woodworking at the facility cannot be completed safely without the control equipment operating properly, and there is an established procedure to shut down the woodworking operations if the control equipment is not operating properly. As additional proof of the inherency of the control equipment, MasterBrand Cabinets has previously provided a ruling against the state of Indiana indicating that the removal of wood dust and wood chips is necessary to the operation of the machinery, thus inherent to the process. The facility has highlighted this However, this ruling from October 1993 (Included at the end of these notes) has not precluded the state of Indiana from requiring CAM plans on 3 of its 4 facilities in Indiana.

The majority of emission units in question were issued initial construction permits as part of Iowa DNR Project number 03-153 and 04-047. These permits were issued based on the facility requesting to allow for the units that were venting inside the building to vent outside of the building during the summer. Based on the fact that the control equipment was installed at a time that air quality regulations would not have been in place would support the facility's claim that the control equipment would be installed if air quality regulations were not in place and that the equipment installed was installed for reasons other than to comply with air quality standards. For these reasons, along with the information provided by the facility in regards to the monitoring that is done to ensure employee safety, it has been determined that these units are considered to be "inherent to the process" and are therefore not subject to CAM requirements.

Indiana Department of Environmental Management



We make Indiana a cleaner, healthier place to live

Evan Bayh Governor Kathy Prosser Commissioner

Deid 10/4/03

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STATE OF INDIANA) SS:	BEFORE THE INDIANA DEPARTMENT
COUNTY OF MARION)	OF ENVIRONMENTAL MANAGEMENT
IN THE MATTER OF: OBJECTIONS TO THE ISSUANCE OF)
AIR CONSTRUCTION PERMIT AIR REGISTRATION KIMBALL HOSPITALITY FURNITURE INC.) CAUSE NO. 92-A-J-730) CAUSE NO. 92-A-J-833)

FINAL ORDER GRANTING SUMMARY JUDGEMENT

TO: Scott R. Storms, Esq.
Office of Legal Counsel
Indiana Department of
Environmental Management
Indiana Government Center
100 North Senate Avenue
Indianapolis, IN 46204

Lewis D. Beckwith, Esq. Baker & Daniels 300 N. Meridian Street Suite 2700 Indianapolis, IN 46204

FINDINGS OF FACT

- Kimball Hospitality Furniture, Inc. ("Petitioner") manufactures wood furniture parts at a plant in Jasper, Indiana.
- Petitioner applied to the Indiana Department of Environmental Management ("IDEM") on March 27, 1992, to register a new baghouse at its Jasper plant.
- 3. Instead of issuing the requested registration, on September 24, 1992, IDEM issued an air permit to Petitioner.
- 4. On October 11, 1992, Petitioner filed its first Petition for Review, appealing the issuance of the air permit. That action was assigned Cause No. 92-A-J-730.
- 5. On May 14, 1993, Petitioner filed a Motion for Summary Judgement in Cause No. 92-A-J-730.

- 6. On July 2, 1993, IDEM issued an air registration, registering both a baghouse and forty-two (42) individual pieces of woodworking equipment, to Petitioner, and refunded the difference between the registration fee and the permit fee to Petitioner. Concurrently, IDEM filed a Motion to Dismiss, alleging that Cause No. 92-A-J-730 was now moot.
- 7. On July 21, 1991, Petitioner filed its Response to Motion to Dismiss, and concurrently filed a Petition for Review, appealing the air registration, which was assigned Cause No. 93-A-J-833.
- 8. At an August 4, 1993 prehearing conference, the two causes were ordered joined and the Motion to Dismiss was taken under advisement.
- 9. On August 23, 1993, Petitioner filed its second Motion for Summary Judgement. IDEM responded on September 3, 1993, and Petitioner filed its Reply on September 10, 1993.
- 10. Petitioner uses a variety of woodworking equipment to make furniture parts. The equipment used varies according to the product.
- 11. Most of the wood dust and chips generated by Petitioner's woodworking machinery is not regulated particulate matter because its size exceeds the 10 micron limit by which regulated particulate matter is defined. See 326 IAC 1-2-52.
- 12. Wood dust and chips are collected from woodworking machinery by a collection system consisting of wood duct pipe attached to the machinery, piping, fans, a baghouse, an auger, and a collection bin. This system collects the wood dust and wood chips and conveys it to a central location from which it is transferred for reuse by Petitioner as boiler fuel.
- 13. The removal of wood dust and wood chips from the machinery is necessary to the proper operation of the machinery.

X

- 14. A fan pulls the wood dust and wood chips from the woodworking machines through the piping system and pushes it toward the baghouse. Larger material hit the bags and drop to the bottom of the unit. A reverse air system also periodically cleans the bags of fine dust. This dust is collected at the bottom of the unit as well. An auger conveys the dust and chips from the bottom of the unit to a collection bin.
- 15. From at least 1981 through 1990 IDEM had registered or exempted woodworking operations from the requirement of 326 IAC 2-1 or predecessor rules by calculating the potential particulate emissions as if the baghouse control device were the source of such emissions. IDEM changed its policy in 1990 by considering the equipment generating the particulate matter to be the source

of emissions as opposed to considering the control device on such operations as the source. There had been no changes in or since 1990 in any of its promulgated rules dealing with the calculation of potential emissions from woodworking facilities.

- 16. The July 2, 1993 registration registered not only the baghouse but also 41 woodworking machines. The registration also requires any change or modification in the "equipment" covered by the registration that may have the effect of increasing potential emissions to be first approved by IDEM.
- 17. For the purposes of the original permit issuance, IDEM calculated Petitioner's potential emissions, prior to the baghouse, at 1,014 tons per year. With the use of the baghouse, IDEM calculated Petitioner's potential emissions at 1.1 ton per year.

CONCLUSIONS OF LAW

- 326 IAC 2-1-2 reads in pertinent part:
 - Sec. 2. (a) No person subject to 326 IAC 2-1-1(b)(2) and (3) shall commence construction, operation or modification of any source, facility or emission control equipment without registering the same with the commissioner.
 - (b) The registrant shall submit the following information to the commissioner.
 - (1) A description of the nature, location, design capacity and operating schedule of the source, facility or emission control equipment including the design specifications.
 - (2) A time schedule for construction, or modification of the source, facility or emission control equipment.
 - (3) Information on the nature and amount of pollutants to be emitted and any other information determined by the commissioner as necessary to demonstrate compliance with ambient air quality standards.
 - (c) Upon receipt of the information requested above, the commissioner shall have no more than ninety (90) days to accept the

registration or request additional information.

- (d) As a condition to accepting a source or facility registration, the commissioner may impose emission limitations on operating conditions for said registration if necessary to maintain the ambient air quality standards or otherwise protect the public health.
- 2. 326 IAC 2-1-1(b)(2) and (3) state in pertinent part:
 - (2) Facilities or sources currently operating or proposed to be operated, constructed or modified or which would as a result have potential emissions of less than or equal to twenty-five (25) tons per year of any regulated pollutant in the following minimum amounts, shall be registered in accordance with 326 IAC 2-1-2.
 - (A) particulate matter in excess of either five (5) pounds per hour or twenty-five (25) pounds per day;
 - (B) sulfur dioxide in excess of either ten (10) pounds per hour or fifty (50) pounds per day;
 - (C) Nitrogen oxides in excess of either five (5) pounds per hour or twenty-five (25) pounds per day;
 - (D) volatile organic compounds in excess of either three (3) pounds per hour or fifteen (15) pounds per day;
 - (E) carbon monoxide in excess of either twenty-five (25) pounds per hour or one hundred twenty-five (125) pounds per day.
 - (3) Construction or modification of any emission control equipment for any source or facility required to be permitted or registered shall require registration of said emission control equipment in accordance with 326 IAC 2-1-2.
- 3. 326 IAC 1-2-55 defines "Potential Emissions," as follows:
 - Sec. 55. Emissions of any one pollutant which would be emitted from a facility if that facility were operated without the use of pollution control equipment unless such control equipment is (aside from air pollution control requirements) necessary

for the facility to produce its normal product or is integral to the normal operation of the facility. Potential emissions shall be based on maximum annual rated capacity unless hours of operation are limited by enforceable permit conditions. Potential emissions from a facility shall take into account the hours of operation per year and shall be calculated according to federal emission guidelines in AP-42 most recent edition—Compilation of Air Pollution Factors, or calculated based on stack test data or other equivalent data acceptable to the commissioner.

- 4. Because it is undisputed by IDEM that the baghouse is necessary to the facility to produce its normal product and is integral to the normal operations of Petitioner's facility, potential emissions from the facility must be calculated with the use of pollution control equipment, or more specifically, the baghouse.
- 5. In order to qualify for a registration, which in this case IDEM issued unilaterally, Petitioner's potential emissions of a regulated pollutant, after the baghouse, must have been calculated as greater than twenty-five (25) tons per year (326 IAC 2-1-1 (b)(1)(A)), been less than twenty-five (25) tons per year, but more than five (5) pounds per hour or twenty-five (25) pounds per day, again after the baghouse (326 IAC 2-1-1(b)(2)(A)), or, been less than twenty-five (25) tons per year, five (5) pounds per hour or twenty-five (25) pounds per day, and the baghouse must have qualified as emission control equipment (326 IAC 2-1-1 (b)(3)).
- 6. Because under IDEM's calculations, Petitioner's emissions would not exceed 1.1 ton per year after the baghouse, it follows that the registration issued by IDEM was done pursuant to 326 IAC 2-1-1 (b)(3) because the baghouse qualified as emission control equipment.
- 7. IDEM attempts to justify the registration's inclusion of the woodworking equipment under 326 IAC 2-1-2(b)(3), set out in Conclusion of Law 1 above. That Section, however, relates only to information which must be submitted to the commissioner along with the application for an air registration, and bears no relation to what may be required in the registration itself.

ORDER

Summary Judgement is granted in favor of the Petitioner. IDEM is ordered to modify the registration so that it applies only to the baghouse under 326 IAC 2-1-1 (b)(3). IDEM may require the Petitioner, in such registration, to notify IDEM of any change or modification in its equipment or process which

may increase its potential emissions, after the baghouse, to more than twenty-five (25) tons per year or in excess of any of the hourly or daily requirements of 326 IAC 2-1-1(b)(2).

An Order Granting Summary Judgement upon all the issues involved in this proceeding in a final order. The administrative law judge herein acts as the ultimate authority in disposing of the proceeding. IC 4-21.5-3-29(a) and IC 4-21.5-5-4(a). A Petition for Judicial Review is timely only if it is filed within thirty (30) days after the date that notice of the agency action was served. IC 4-21.5-5-5. See IC 4-21.5-5 generally regarding rights and duties with respect to judicial review.

Dated: Wolce 5 /993

James M. Garrettson

Administrative Law Judge

Office of Hearings

N1345

cc: Office of Air Management