

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1035-AOP-R5 AFIN: 04-00247

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

2. APPLICANT:

Mid-America Cabinets, Incorporated
20980 Marion Lee Road
Gentry, Arkansas 72734

3. PERMIT WRITER:

Jesse Smith

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Wood Kitchen Cabinet and Countertop Manufacturing
NAICS Code: 337110

5. SUBMITTALS:

Date of Application	Type of Application (New, Renewal, Modification, Deminimis/Minor Mod, or Administrative Amendment)	Short Description of Any Changes That Would Be Considered New or Modified Emissions
7/23/2015	Renewal	Updated emission and materials information

6. REVIEWER'S NOTES:

Mid-America Cabinets, located at 20980 Marion Lee Road, Gentry, Arkansas, manufactures wooden kitchen cabinetry. The permittee has submitted an application to renew this Title V permit. Material and emission data was updated to be more in line with the actual emissions from the facility. The specific limit on Toluene (former Plantwide Conditions #7 and #8) was also removed due to the new Single HAP limit being more limiting. The permitted emission changes are as follows: -50.9 tpy VOC, -31.8 tpy Single HAP, -36.12 tpy Total HAP, and -78.1 tpy Acetone.

7. COMPLIANCE STATUS:

The following summarizes the current compliance of the facility including active/pending enforcement actions and recent compliance activities and issues.

The last inspection for this facility was performed on December 16, 2014. The facility was in compliance at the time of inspection.

8. PSD APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N

b) Is the facility categorized as a major source for PSD? N
• *Single pollutant ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list*

If yes, explain why this permit modification is not PSD.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
Facility	HAP	40 C.F.R. 63, Subpart JJ

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. AMBIENT AIR EVALUATIONS:

a) Reserved.

b) Non-Criteria Pollutants:

This permit contains a TLV table for non-criteria pollutants. Modeling was used to determine the permitted emission rates for ranges of non-criteria pollutants (grouped by TLV) that pass the PAER or PAIL. Therefore, modeling of specific non-criteria pollutants was not performed.

c) H₂S Modeling:

A.C.A. §8-3-103 requires hydrogen sulfide emissions to meet specific ambient standards. Many sources are exempt from this regulation, refer to the Arkansas Code for details.

Is the facility exempt from the H₂S Standards Y
 If exempt, explain: No H₂S present.

Pollutant	Threshold value	Modeled Concentration (ppb)	Pass?
H ₂ S	20 parts per million (5-minute average*)		
	80 parts per billion (8-hour average) residential area		
	100 parts per billion (8-hour average) nonresidential area		

*To determine the 5-minute average use the following equation

$$C_p = C_m (t_m/t_p)^{0.2} \text{ where}$$

C_p = 5-minute average concentration

C_m = 1-hour average concentration

t_m = 60 minutes

t_p = 5 minutes

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	Material Balance	7.6 lb/gal VOC 3.5 lb/gal Acetone	None	N/A	Spray rate of 7.5 gallons/hr; tpy is actual usage & Maximum HAP content of 1.8 lb/gal
02	Material Balance	7.6 lb/gal VOC 3.5 lb/gal Acetone	None	N/A	Spray rate of 7.5 gallons/hr; tpy is actual usage & Maximum HAP content of 1.8 lb/gal
03	Material Balance	7.6 lb/gal VOC 3.5 lb/gal Acetone	None	N/A	Spray rate of 3.75 gallons/hr; tpy is actual usage & Maximum HAP content of 1.8 lb/gal
04	Material Balance	7.6 lb/gal VOC 3.5 lb/gal Acetone	None	N/A	Spray rate of 7.5 gallons/hr; tpy is actual usage & Maximum HAP content of 1.8 lb/gal

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
05	AP-42	0.03gr/scf	Cyclone	70%	
06	Material Balance	7.6 lb/gal VOC 3.5 lb/gal Acetone	None	N/A	Spray rate of 3.75 gallons/hr; tpy is actual usage & Maximum HAP content of 1.8 lb/gal
07	Material Balance	7.1 lb/gal VOC 0.7 lb/gal Acetone	None	N/A	Spray rate of 0.5 gallons/hr; tpy is actual usage & Maximum HAP content of 0.3 lb/gal
08	Material Balance	Mol fraction Vinyl Acetate = 0.15% Area of Surface = 446.1 m ² /hr	None	N/A	Method from Alliance for the Polyurethanes Industry for Adhesives/Coatings
09	Material Balance	7.1 lb/gal VOC 0.7 lb/gal Acetone	None	N/A	Spray rate of 0.5 gallons/hr; tpy is actual usage & Maximum HAP content of 0.3 lb/gal
10	Material Balance	7.6 lb/gal VOC 3.5 lb/gal Acetone	None	N/A	Spray rate of 7.5 gal/hr, tpy is actual usage & Maximum HAP content of 1.8 lb/gal

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
N/A				

14. MONITORING OR CEMS:

The permittee must monitor the following parameters with CEMS or other monitoring equipment (temperature, pressure differential, etc.)

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
N/A				

15. RECORDKEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content, etc.) that must be tracked and recorded.

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
01 – 04, 06, & 08	TLV values	Varies (See TLV Table)	Continuously	Y
	VOC/HAP content	7.6 lb VOC per gallon 7.5 lb HAP per gallon	Continuously	Y
07 & 09	TLV values	Varies (See TLV Table)	Continuously	Y
	VOC/HAP content	7.1 lb per gallon	Continuously	Y
Facility	Annual VOC emissions	120.0 tons per year	Monthly	Y
	Single HAP	19.60 tons per year	Monthly	Y
	Total HAPs	23.00 tons per year	Monthly	Y
Facility	Acetone Content	3.5 lb per gallon	Continuously	Y
	Acetone Usage	19.60 tons per year	Monthly	Y
01 – 04, 06, 07, and 10	Subpart JJ Compliance	1.0 lbs solid deposit/lb VHAP emitted of compliant materials usage	Twice yearly	Y
	Subpart JJ Compliance	Various reports including work plans, operator training	As required	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
		documentation, and usage of HAP		
08	Laminate area	4,800 ft ² per hour	Hourly	Y
09	Toluene Usage	3 gallons per month	Monthly	Y

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
05	20%	Department Guidance	Weekly observations

17. DELETED CONDITIONS:

Former SC	Justification for removal
PC #7 & #8	Conditions for specific limit for toluene. Was redundant as the single HAP limit was more restrictive than these conditions.
SC #16 & #17	Source calculations performed at 8760 hours and hours of operation limit deemed to be unnecessary.

18. GROUP A INSIGNIFICANT ACTIVITIES:

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
N/A								

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

List all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
1035-AOP-R4

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 08-26-15

Facility Name: Mid-America Cabinets, Incorporated
 Permit Number: 1035-AOP-R5
 AFIN: 04-00247

\$/ton factor	23.93	Annual Chargeable Emissions (tpy)	148.6
Permit Type	Modification	Permit Fee \$	1000

Minor Modification Fee \$	500
Minimum Modification Fee \$	1000
Renewal with Minor Modification \$	500
Check if Facility Holds an Active Minor Source or Minor Source General Permit	<input type="checkbox"/>
If Hold Active Permit, Amt of Last Annual Air Permit Invoice \$	0
Total Permit Fee Chargeable Emissions (tpy)	-129
Initial Title V Permit Fee Chargeable Emissions (tpy)	

HAPs not included in VOC or PM: Chlorine, Hydrazine, HCl, HF, Methyl Chloroform, Methylene Chloride, Phosphine, Tetrachloroethylene, Titanium Tetrachloride

Air Contaminants: All air contaminants are chargeable unless they are included in other totals (e.g., H2SO4 in condensable PM, H2S in TRS, etc.)

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
PM		17.6	17.6	0		
PM ₁₀		17.6	17.6	0	0	17.6
SO ₂		0	0	0	0	0
VOC		170.9	120	-50.9	-50.9	120
CO		0	0	0		
NO _x		0	0	0	0	0
Single HAP	<input type="checkbox"/>	51.4	19.6	-31.8		
Total HAP	<input type="checkbox"/>	59.12	23	-36.12		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Acetone	<input checked="" type="checkbox"/>	89.1	11	-78.1	-78.1	11