Commonwealth of Kentucky
Division for Air Quality

STATEMENT OF BASIS / SUMMARY

Conditional Major, Operating
Permit: F-26-010

Abrapower, Inc.
7451 Empire Drive
Florence, KY 41042

February 24, 2026
Qinyi Wang, Reviewer

SOURCE ID:	21-015-00142
AGENCY INTEREST:	47215
ACTIVITY:	APE20260001

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SECTION 1 – SOURCE DESCRIPTION

SIC Code and description: 3291, Abrasive Products (except steel wool with or without soap)

Single Source Det. ☐ Yes ☒ No If Yes, Affiliated Source AI:

Source-wide Limit ☒ Yes ☐ No If Yes, See Section 4, Table A

28 Source Category ☐ Yes ☒ No If Yes, Category:

County: Boone
Nonattainment Area ☒ N/A ☐ PM_{10} ☐ $PM_{2.5}$ ☐ CO ☐ NO_X ☐ SO_2 ☐ Ozone ☐ Lead
If yes, list Classification:

PTE* greater than 100 tpy for any criteria air pollutant ☒ Yes ☐ No
If yes, for what pollutant(s)?
☐ PM_{10} ☐ $PM_{2.5}$ ☐ CO ☐ NO_X ☐ SO_2 ☒ VOC

PTE* greater than 250 tpy for any criteria air pollutant ☒ Yes ☐ No
If yes, for what pollutant(s)?
☐ PM_{10} ☐ $PM_{2.5}$ ☐ CO ☐ NO_X ☐ SO_2 ☒ VOC

PTE* greater than 10 tpy for any single hazardous air pollutant (HAP) ☒ Yes ☐ No
If yes, list which pollutant(s): Methyl Isobutyl Ketone

PTE* greater than 25 tpy for combined HAP ☐ Yes ☒ No

*PTE does not include self-imposed emission limitations.

Description of Facility:
ABRAPOWER, INC's manufactures coated foam abrasive products. Plain foam strips are coated with a layer of MEK-based adhesive using proprietary coating heads which were designed by Abrapower engineers. Then silicon carbide or aluminum oxide grains (referred to as grit) are applied via an enclosed vertical screw conveyor to coat the foam while the adhesive is still wet. The grit-coated foam is dried and cured using unheated air drawn through a blower. Exhaust from the dryer is emitted through a stack located adjacent to the manufacturing building. Once the grit-coated foam has dried, a thinner topcoat is applied to lock the grit onto the foam product. After the topcoat is applied, the coated foam passes through another dryer for final drying and curing. The final step is cutting the cured foam strips into four (4) inch lengths.

SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM

Permit Number: F-26-010 Activity: APE20260001

Application Received: January 22, 2026 Application Complete Date(s): March 3, 2026

Permit Action: ☐ Initial ☒ Renewal ☐ Significant Rev ☐ Minor Rev ☐ Administrative

Construction/Modification Requested? ☐Yes ☒No

Previous 502(b)(10) or Off-Permit Changes incorporated with this permit action ☐Yes ☒No

Description of Action:
ABRAPOWER, INC submitted a renewal permit application with the following requests:

- Remove Line#2 Flat Products, along with the Base Coat Adhesive Applicator (EU04) and Topcoat Applicator (EU05), resulting in decrease in PTE shown in previous permit F-20-044.

F-26-010 Emission Summary		
Pollutant	2024 Actual (tpy)	PTE F-26-010 (tpy)
CO	0.08	0.72
NOx	0.10	0.86
PT	1.42	7.41
PM_{10}	1.42	7.41
$PM_{2.5}$	0.64	3.37
SO_2	0.0006	0.005
VOC	60.92	387.82*
Lead	N/A	4.29E-06
Greenhouse Gases (GHGs)		
Carbon Dioxide	120.6	1,028
Methane	0.002	0.02
Nitrous Oxide	0.002	0.002
CO_2 Equivalent (CO_2e)	121.25	1,030
Hazardous Air Pollutants (HAPs) and Toxics		
Methyl Ethyl Ketone	N/A	394
Methyl Isobutyl Ketone	0	16.79*
Combined HAPs:	0	16.81

**Emissions limited by federally-enforceable emission limitations to ensure the source remains below major source thresholds.*

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

Emission Unit # 01 Base Coat Adhesive Applicator **Emission Unit # 03 Topcoat Applicator**				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
VOC	Source wide 90 tpy	To preclude 401 KAR 52:020 & 401 KAR 51:017	Material Balance & SDS	Recordkeeping, 12 month rolling total
Individual HAP	Source wide 9.0 tpy	To preclude 401 KAR 52:020	Material Balance & SDS	Recordkeeping, 12 month rolling total
Combined HAPs	Source wide 22.5 tpy	401 KAR 52:030	Material Balance & SDS	Recordkeeping, 12 month rolling total
PM	2.34 lbs/hr	401 KAR 59:010, Section 3(2)	Material Balance & SDS with 95~98% Transfer Efficiency	Proper maintenance of emission units
	< 20% Opacity	401 KAR 59:010, Section 3(1)	N/A	Weekly Stack Visual Observation

Initial Construction Date: *See below*

Process Description:

Emission Unit 01, Base Coat Adhesive Applicator (Line #1 Block and Buffer Products)
Model: Proprietary Coating Heads by Abrapower
Construction Date: 2004
Capacity: 76.7 lbs/hr
Controls: None

Emission Unit 03, Topcoat Applicator (Line #1 Block and Buffer Products)
One custom-manufactured curtain coating applicator
Construction Date: June 2011
Capacity: 25.9 lbs/hr
Controls: None

Applicable Regulation:
401 KAR 59:010, This regulation is applicable to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates, commenced on or after July 2, 1975.

State-Origin Requirements:
401 KAR 63:020, *Potentially hazardous matter or toxic substances.* This regulation is applicable to each affected facility which emits or may emit potentially hazardous matter or toxic substances, provided such emissions are not elsewhere subject to the provisions of the administrative regulations of the Division for Air Quality.

Precluded Regulations:
401 KAR 52:020, *Title V permits.* This regulation is precluded since the source has accepted emissions limited by federally-enforceable emission limitations to ensure the source remains below major source thresholds.

Emission Unit # 01 Base Coat Adhesive Applicator
Emission Unit # 03 Topcoat Applicator

401 KAR 51:017, *Prevention of Significant Deterioration of Air Quality*.

Comments:
401 KAR 59:225, *New miscellaneous metal parts and products surface coating operations*, is not applicable because the source applies the coating to foam blocks not to a metal substrate.

401 KAR 63:002, Section 2(4)(iiiii), 40 C.F.R. 63.11169 through 63.11180, Table 1 (Subpart HHHHHH), *National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources*, does not apply because the source applies the coating to foam blocks and the coating in use do not contain the target HAP: chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd).

401 KAR 51:052, *Review of new sources in or impacting upon nonattainment areas.* This regulation is not applicable because the source is located in Boone County, which is designated as an attainment area for ozone, and no new major stationary source or major modification is involved.

Line #1
1. EP01 Base Coat Application
   No control device is utilized for VOC emissions. Five (5) percent overspray is assumed. Construction commenced in 2004.
2. EP03 Topcoat Application
   The topcoat is mixed in an intermediate bulk container (IBC) onsite using approximately 100 liters of MEK-based adhesive mixed with 900 liters of pure MEK. The topcoat is applied using a custom-manufactured curtain coating applicator. Transfer efficiency for curtain coater is estimated to be 98 percent. VOC emissions are uncontrolled. Construction commenced in June 2011.

The process rates of base coat, topcoat and grit applications are estimated to be 18 strips per minute.

The grit applicators are self-contain units that use a short vertical screw conveyor to apply the grit. This generates no dust, therefore this unit, which is used on Line #1, is not an emission point.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Testing Requirements\Results

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
N/A										

Footnotes:

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS

Table A - Group Requirements:

Emission and Operating Limit	Regulation	Emission Unit
90 tpy of VOC emissions	To preclude 401 KAR 52:020 & 401 KAR 51:017	Source-wide
9.0 tpy of individual HAP emissions	To preclude major source status for HAP	Source-wide
22.5 tpy of combined HAP emissions	To preclude major source status for HAP	Source-wide

Table B - Summary of Applicable Regulations:

Applicable Regulations	Emission Unit
401 KAR 59:010, *New process operations*	EU 01, and 03
401 KAR 63:020, *Potentially hazardous matter or toxic substances.*	EU 01, and 03

Table C - Summary of Precluded Regulations:

Precluded Regulations	Emission Unit
401 KAR 52:020, *Title V Permits*.	Source-wide
401 KAR 51:017, *Prevention of Significant Deterioration of Air Quality*.	Source-wide

Table D - Summary of Non Applicable Regulations:

None

Air Toxic Analysis

401 KAR 63:020, *Potentially Hazardous Matter or Toxic Substances*
The Division for Air Quality (Division) has performed modeling using SCREEN View on February 27, 2026 of potentially hazardous matter or toxic substances (Methyl Ethyl Ketone, Methyl isobutyl ketone) that may be emitted by the facility based upon the process rates, material formulations, stack heights and other pertinent information provided by the applicant. Based upon this information, the Division has determined that the conditions outlined in this permit will assure compliance with the requirements of 401 KAR 63:020.

Single Source Determination
N/A

SECTION 5 – PERMITTING HISTORY

Permit	Permit type	Activity#	Complete Date	Issuance Date	Summary of Action	PSD/Syn Minor
F-09-040	Initial	APE20090001	9/10/2009	3/1/2010	Initial Construction / Operating Permit	Syn Minor
F-09-040 R1	Minor Revision	APE20110001	6/2/2011	1/1/2011	Replaced two topcoat applicators	N/A
F-14-044	Renewal	APE20140001	9/3/2014	12/8/2014	Renewal	N/A
F-14-044 R1	Revision	APE20170001	8/8/2017	1/27/2018	Cond Mjr-Admin Amend	N/A
F-20-044	Renewal	APE20200001	9/15/2020	3/7/2021	Renewal Permit	N/A

SECTION 6 – PERMIT APPLICATION HISTORY

None

APPENDIX A – ABBREVIATIONS AND ACRONYMS

AAQS – Ambient Air Quality Standards
BACT – Best Available Control Technology
Btu – British thermal unit
CAM – Compliance Assurance Monitoring
CO – Carbon Monoxide
Division – Kentucky Division for Air Quality
ESP – Electrostatic Precipitator
GHG – Greenhouse Gas
HAP – Hazardous Air Pollutant
HF – Hydrogen Fluoride (Gaseous)
MSDS – Material Safety Data Sheets
mmHg – Millimeter of mercury column height
NAAQS – National Ambient Air Quality Standards
NESHAP – National Emissions Standards for Hazardous Air Pollutants
NO_x – Nitrogen Oxides
NSR – New Source Review
PM – Particulate Matter
PM_{10} – Particulate Matter equal to or smaller than 10 micrometers
$PM_{2.5}$ – Particulate Matter equal to or smaller than 2.5 micrometers
PSD – Prevention of Significant Deterioration
PTE – Potential to Emit
SO_2 – Sulfur Dioxide
TF – Total Fluoride (Particulate & Gaseous)
VOC – Volatile Organic Compound