Commonwealth of Kentucky
Division for Air Quality

STATEMENT OF BASIS / SUMMARY

Conditional Major, Construction / Operating
PERMIT ID: F-24-054
Ammann America Inc.
6800 Industrial Road
Florence, KY 41042
October 9, 2024
Jonathon Hughes, Reviewer

Source ID:	21-117-00251
Agency Interest #:	11323
Activity ID:	APE20240002

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SECTION 1 - SOURCE DESCRIPTION

SIC Code and description: 3531, Construction Machinery & Equipment

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: Kenton
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): Xylene

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

*PTE does not include self-imposed emission limitations.

Description of Facility:
The facility manufactures and assembles conveyors, bins, baghouses, silos and dryers for asphalt mixing plants.

SECTION 2 – CURRENT APPLICATION

Permit Number: F-24-054 Activity: APE20240002

Application Received: September 26, 2024 Application Complete Date(s): October 8, 2024

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:
Initial conditional major construction permit for an asphalt plant equipment manufacturing facility at an already existing site. New equipment includes emission units 01 through 05 and two insignificant activities (process pre-heater and label/decal application process).

F-24-054 Emission Summary		
Pollutant	2023 Actual (tpy)	PTE F-24-054 (tpy)
CO	NA	1.50
NOx	NA	1.75
PT	NA	8.91
PM_{10}	NA	7.99
$PM_{2.5}$	NA	7.22
SO_2	NA	0.01
VOC	NA	119*
Lead	NA	0.02
Greenhouse Gases (GHGs)		
Carbon Dioxide	NA	1608
Methane	NA	0.03
Nitrous Oxide	NA	0.003
CO_2 Equivalent (CO_2e)	NA	1610
Hazardous Air Pollutants (HAPs)		
Ethyl Benzene	NA	4.64
Manganese	NA	0.05
Xylenes (Total)	NA	18.2*
Combined HAPs:	NA	23.7

*Note: 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 Paint Booth				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
VOC	90 tpy source-wide	401 KAR 52:030	Material Balance & MSDS	Monthly recordkeeping, 12 month rolling total
HAP	9/22.5 tpy single/ combined source-wide	401 KAR 52:030	Material Balance & MSDS	Monthly recordkeeping, 12 month rolling total
PM	2.34 lbs/hr	401 KAR 59:010, Section 3(2)	Material Balance & MSDS with 65% Transfer Efficiency	Panel Filters, > 92%* C.E.
	< 20% Opacity	401 KAR 59:010, Section 3(1)	N/A	Weekly visual observation
MFHAP	> 98% capture, control.	40 CFR Part 63, Subpart XXXXXX	Material Balance & MSDS with 65% Transfer Efficiency	Panel Filters, 99.45**% C.E.,

*A 92% control efficiency is applied to the particulate emissions based on the minimum control efficiency indicated in the PM Augmentation Database (May 20, 2016) for a panel filter controlling particulate emissions from coating operations (4-02-025-01). **Control of larger MFHAP particles is higher and meets the 98% control standard in subpart XXXXXX.

Initial Construction Date: Proposed 1/2025

Process Description:
Paint booth equipped with four (4) manual airless type spray guns. Coating materials applied include Primer, Low-Temperature Topcoat and High Temperature Topcoat.

Applicable Regulations:
401 KAR 59:010, New process operations

401 KAR 63:002, Section 2(4)(vvvvv) 40 C.F.R. 63.11514 through 63.11523, Tables 1 through 2 (Subpart XXXXXX), National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories applies to all HAP emissions. Subpart 6X applies because the facility SIC code (3531) is one of the applicable source categories and at least one of the coatings used contains the target HAP (Manganese in excess of 1%).

Comments:
Sub-assemblies are first primed in the paint booth. Once primer has dried in the paint booth, the primed sub-assemblies are taken into the main production area for final assembly. Once fully assembled equipment/assemblies are taken back into the paint booth for application of a topcoat of paint. After air drying, the painted assemblies are moved into the main production area to apply decals and conduct quality checks. Painting application within the paint booth is done by operators, who use four (4) manual airless paint guns to apply coating. Supporting pumps and feed hoses feed paint from 55-gallon drums. The paint is stored in a facility paint "kitchen" located along the periphery of the main manufacturing building. One (1) natural gas-fired pre-heater (IA 01, 2.97 MMBtu/hr total heat input capacity), will be used to maintain the appropriate temperature inside of the paint booth when temperatures fall below minimum recommended paint application temperature and worker comfort temperature. All coatings will air dry in the paint booth. A solvent will be used for cleanup activities and as a paint reducer as needed.

Emission Unit #01 Paint Booth
401 KAR 63:002, Section 2(4)(iiii) 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 since the emissions unit is already subject to Subpart XXXXXX. VOC emission factors for coatings used: Primer, 3.17 lbs/gal Low Temp Topcoat, 3.44 lbs/gal High Temp Topcoat, 3.33 lbs/gal

Emission Unit #02 Welding Operations				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
HAP	9/22.5 tpy single/ combined source-wide	401 KAR 52:030	AP-42 Chapter 12.19	Monthly recordkeeping, 12 month rolling total
PM	2.34 lbs/hr	401 KAR 59:010, Section 3(2)	AP-42 Chapter 12.19, 5.2 lbs PM per 1000 lbs welding wire.	Assumed when venting inside building.
	< 20% Opacity	401 KAR 59:010, Section 3(1)	N/A	Weekly visual observation

Initial Construction Date: Proposed 1/2025

Process Description:
Corrective welding using E70S (or similar) welding rod
Controls: None, Vents inside building
Control Efficiency: 70% applied for venting inside building
Welding Wire Usage: < 2,000 lbs annually

Applicable Regulations:
401 KAR 59:010, New process operations

401 KAR 63:002, Section 2(4)(vvvvv) 40 C.F.R. 63.11514 through 63.11523, Tables 1 through 2 (Subpart XXXXXX), National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories applies because the facility SIC code (3531) is one of the applicable source categories and the welding wire used contains the target HAP (Manganese in excess of 1%).

Comments:
The primary welding rod consumable used at the Florence facility is E70S (or similar). As such, emission factors for PM/PM10/PM2.5 and applicable metallic HAP from AP42 are used for this type of consumable. The welding operations vent to the interior of the production building and as such a 70.0% control efficiency is applied to account for the “drop-out” of particulate matter within the building.

Emission Unit #03 Abrasive Blasting				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
HAP	9/22.5 tpy single/ combined source-wide	401 KAR 52:030	AP-42 Chapter 13.2	Fabric Filter, 99.7% C.E.
PM	P≤1000 lb/hr, E= 2.34 lb/hr 1000<P≤60000 E= $3.59P^{0.62}$	401 KAR 59:010, Section 3(2)	AP-42 Chapter 13.2, 54 lbs PM per ton blasting material used, pre-control.	Fabric Filter, 99.7% C.E.
	< 20% Opacity	401 KAR 59:010, Section 3(1)	N/A	Weekly visual observation

Initial Construction Date: Proposed 1/2025

Process Description:
Abrasive Blasting Booth with Fabric Filter. Control Efficiency 99.7%,

Applicable Regulations:
401 KAR 59:010, New process operations

401 KAR 63:002, Section 2(4)(vvvvv) 40 C.F.R. 63.11514 through 63.11523, Tables 1 through 2 (Subpart XXXXXX), National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories applies because the facility SIC code (3531) is one of the applicable source categories and the blasting media used contains the target HAP (Manganese in excess of 1%).

Comments:
The blast booth is completely enclosed and controlled by a fabric filter. The "exhaust" from the fabric filter is recirculated back into the abrasive blasting booth. Abrasive blasting emission factors from AP-42 Chapter 13.2 are used for PM, PM10, and PM2.5. Since the abrasive blasting operations is conducted within a fully enclosed building, the PM emission factor associated with a 5 mile per hour wind speed was selected.

Parts processed in the blasting booth are of various sizes with some exceeding 8 feet in any one dimension. The facility chooses to comply with Subpart 6X **for all blasting** by following the requirements of 40 CFR 63.11516(a)(2), *Standards for dry abrasive blasting of objects performed in vented enclosures*. **For only the parts greater than 8 feet in any one dimension**, the facility has the **option** to comply with 40 CFR 63.11516(a)(3) instead of 40 CFR 63.11516(a)(2) which would allow for blasting of these larger parts to take place outside of the booth without capture/control and require visual monitoring of fugitive emissions and additional work practice standards. Since all blasting (regardless of part size) takes place inside an enclosure with emissions being captured and controlled it is more practical to comply with (a)(2) for all part sizes. This also negates the need to monitor/keep record of the sizes of all blasted parts to determine which compliance method pertains to which parts.

Emission Unit #04 N.G. Fired Emergency Generator				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
NO_x	10 g/HP-hr	40 CFR Part 60, Subpart IIII, Table 1	AP-42 Section 3.2	Assumed when purchasing a certified engine
CO	387 g/HP-hr	40 CFR Part 60, Subpart IIII, Table 1	AP-42 Section 3.2	Assumed when purchasing a certified engine

Initial Construction Date: Proposed 1/2025

Process Description:
Natural Gas Fired Emergency Generator, Maximum Engine Power: 67 bhp, (50kW).

Applicable Regulations:
401 KAR 60:005 Section 2(2)(eeee) 40 C.F.R. 60.4230 through 60.4248, Tables 1 through 4 (Subpart JJJJ), Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.

401 KAR 63:002 Section 2(4)(eeee) 40 C.F.R. 63.6580 through 63.6675, Tables 1a tthrough 8, and Appendix A (Subpart ZZZZ), National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

Comments:
500 hours annual maximum usage assumed for potential to emit calculations.

Emission Unit #05 32 Gallon Parts Washer

Initial Construction Date: Proposed 1/2025

Process Description:
Cold Cleaner Parts Washer using Safety-Kleen solvent

APPLICABLE REGULATIONS:
401 KAR 59:185, New solvent metal cleaning equipment.

401 KAR 63:020, Potentially hazardous matter or toxic substances

Comments:
Emission factors are taken from a document published by the San Diego Air Pollution Control District (APCD) for degreasing and solvent cleaning operations. The APCD document provides emission factors for Safety-Kleen cold cleaners using Safety-Kleen branded solvents.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Testing Requirements\Results

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	401 KAR 52:030, *Federally-enforceable permits for nonmajor sources*	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	01, 02, 03
401 KAR 59:185, New solvent metal cleaning equipment.	05
401 KAR 60:005 Section 2(2)(eeee) 40 C.F.R. 60.4230 through 60.4248, Tables 1 through 4 (Subpart JJJJ), Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.	04
401 KAR 63:002 Section 2(4)(eeee) 40 C.F.R. 63.6580 through 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.	04
401 KAR 63:002, Section 2(4)(vvvvv) 40 C.F.R. 63.11514 through 63.11523, Tables 1 through 2 (Subpart XXXXXX), National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories applies to MFHAP emissions.	01, 02, 03
401 KAR 63:020, Potentially hazardous matter or toxic substances.	05

Table C - Summary of Precluded Regulations:
N/A

Table D - Summary of Non Applicable Regulations:
N/A

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 December 11, 2024 of potentially hazardous matter or toxic substances (Ethyl Benzene, Naphthalene, Xylenes) 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
NA	NA	NA	NA	NA	NA

SECTION 6 – PERMIT APPLICATION HISTORY:

N/A

APPENDIX A – ABBREVIATIONS AND ACRONYMS

Btu – British thermal unit
CO – Carbon Monoxide
Division – Kentucky Division for Air Quality
GHG – Greenhouse Gas
HAP – Hazardous Air Pollutant
HF – Hydrogen Fluoride (Gaseous)
MSDS – Material Safety Data Sheets
mmHg – Millimeter of mercury column height
NO_x – Nitrogen Oxides
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
PTE – Potential to Emit
SO_2 – Sulfur Dioxide
TF – Total Fluoride (Particulate & Gaseous)
VOC – Volatile Organic Compounds