

Commonwealth of Kentucky
Division for Air Quality
STATEMENT OF BASIS / SUMMARY

Conditional Major, Operating
Permit: F-26-031

Meritor Heavy Vehicle Systems, LLC
Frankfort, KY 40601

May 7, 2026
Qinyi Wang, Reviewer

SOURCE ID:	21-073-00051
AGENCY INTEREST:	38098
ACTIVITY:	APE20260001

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SECTION 1 – SOURCE DESCRIPTION

SIC Code and description: 3714, Motor Vehicle Parts and Accessories (gasoline engines and engine parts including rebuilt)

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: Franklin

Nonattainment Area ☒ N/A ☐ PM₁₀ ☐ PM_{2.5} ☐ CO ☐ NO_x ☐ SO₂ ☐ Ozone ☐ Lead
If yes, list Classification:

PTE* greater than 100 tpy for any criteria air pollutant ☒ Yes ☐ No

If yes, for what pollutant(s)?

☐ PM₁₀ ☐ PM_{2.5} ☐ CO ☐ NO_x ☐ SO₂ ☒ VOC

PTE* greater than 250 tpy for any criteria air pollutant ☐ Yes ☒ No

If yes, for what pollutant(s)?

☐ PM₁₀ ☐ PM_{2.5} ☐ CO ☐ NO_x ☐ SO₂ ☐ VOC

PTE* greater than 10 tpy for any single hazardous air pollutant (HAP) ☐ Yes ☒ No

If yes, list which pollutant(s):

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

*PTE does not include self-imposed emission limitations.

Description of Facility:

Meritor Heavy Vehicle Systems, LLC (Meritor) manufactures heavy vehicle axles and components for trucks and trailers. Most of the parts are manufactured elsewhere. Final assembly and painting occur at this facility.

SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM

Permit Number: F-26-031

Activity: APE20260001

Application Received: April 29, 2026

Application Complete Date(s): July 1, 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

APE20250001 – Off-Permit Changes

On April 17, 2025, Meritor Vehicle Systems submitted an application for the addition of a new GMAW welding station (Fanuc Robotic Welder #2) as well as the corresponding shutdown of an existing welding station (IA1, B-Line MM2 robotic welder). This off permit change was approved and letter issued April 27, 2026.

Description of Action:

On April 29, 2026, Meritor Heavy Vehicle Systems, LLC applied for renewal of their Conditional Major permit (F-21-010) for their facility in Franklin County, Kentucky for the manufacturing of motor vehicle parts and accessories. The facility has requested the addition of a Fanuc #2 welding station to insignificant activity identified as IA#02 welding stations in Permit F-26-031.

F-26-031 Emission Summary		
Pollutant	2025 Actual (tpy)	PTE F-26-031 (tpy)
CO	0.13	8.48
NOx	0.15	6.41
PT	1.44	18.34
PM ₁₀	1.44	18.34
PM _{2.5}	0.52	6.16
SO ₂	0.0009	0.02
VOC	9.67	171.63*
Lead	8.0E-7	1.36E-5
Greenhouse Gases (GHGs)		
Carbon Dioxide	182.85	3,464
Methane	0.004	0.45
Nitrous Oxide	0.003	0.06
CO ₂ Equivalent (CO ₂ e)	183.84	3,493
Hazardous Air Pollutants (HAPs)		
Methyl Isobutyl Ketone	N/A	1.06
Combined HAPs:	N/A	1.13
Toxic Air Pollutants (TAPs)		
1-Methoxy-2-Propanol	N/A	69.12
2-Butoxy Ethanol	N/A	8.82
Methyl Ethyl Ketone	N/A	2.75

**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 – Six Open Face Spray Booths (THDPB2, TSPB3, AAPB4, FSPB5 and AAPB6)				
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	Material Balance & SDS	Monthly emission calculations and a new rolling 12-month total
PM	2.34 lbs./hr.	401 KAR 59:010, Section 3(2)	Material Balance & SDS with 60% Transfer Efficiency	Dry Filters, 90% C.E.
	20 % Opacity	401 KAR 59:010, Section 3(1)a	N/A	Recordkeeping of weekly visual observations
<p>Initial Construction and Modification Date: 1/1998 (Modified 4/2010), 1/1998 (Modified 4/2010), 4/2001, 4/2001, 12/2001, 9/2002</p> <p>Process Description: The booths are used for painting trailer hub drum, trailer suspension, truck axle, and steel axles assemblies but may paint other items.</p> <p>Applicable Regulation: 401 KAR 59:010, New process operations. 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.</p> <p>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.</p> <p>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.</p> <p>Comments: THDPB2: The booth has 96 ft² of filter area and a design airflow rate of 12,000 ACFM. The booth is used for painting trailer hub and drum assemblies but may paint other items. TSPB3: The booth has 140 ft² of filter area and a design airflow rate of 17,500 ACFM. The booth is used for painting trailer suspension assemblies but may paint other items. AAPB3: The booth has 96 ft² of filter area and a design airflow rate of 12,000 ACFM. The booth is used for painting truck axle assemblies but may be painted with other items. AAPB4:</p>				

Emission Unit 01 – Six Open Face Spray Booths (THDPB2, TSPB3, AAPB4, FSPB5 and AAPB6)

The booth has 96 ft² of filter area and a design airflow rate of 12,000 ACFM. The booth is used for painting truck axle assemblies but may be painted with other items.

FSPB5:

The booth has 105 ft² of filter area and a design airflow rate of 16,000 ACFM. The booth is used for painting steel axles and axle components but may paint other items.

AAPB6:

The booth has 96 ft² of filter area and a design airflow rate of 12,000 ACFM. The booth is used for painting steel axles and axle components but may paint other items.

401 KAR 59:225, *New miscellaneous metal parts and products surface coating operations*, is not applicable, since emissions with the Conditional Major limitations will be below major source thresholds and the source is located in a county designated attainment for ozone.

401 KAR 63:002, Section 2(4)(rrr), 40 C.F.R. 63.3880 through 63.3981, Tables 1 through 5, and Appendix A (Subpart MMMM), *National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products*. Source is below major limits for HAP emissions.

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*, is not applicable. The coatings in use do not contain compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd).

In the renewal application, the facility identified the addition of water-based paint (N-8584 black water-reducible primer) for use in the Six (6) Open Face Spray Booths (Emission Unit 01). Because the N-9594 black water-reducible primer is not the worst-case coating for emissions, the addition of this coating does not change the facility's potential emissions calculation result.

The applicant is not seeking coverage under a permit shield in this renewal application.

Emission Unit 02 (002) – Generac 25 kW Emergency Generator

Initial Construction Date: 11/2014

Process Description:

Emergency natural gas for backup power to the computer system.

Applicable Regulation:

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

401 KAR 60:005, Section 2(2)(pppp), 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.*

Comments:

Generac 25 kW Emergency Generator,
Built November 2014
380 ft³/hr. Natural Gas Fuel Consumption

IA-2 – Welding Stations

Construction Commenced Date: 1995 to 2026

Process Description:

Robotic, hand, and ring welders used to shape metal pieces before further processing.

Applicable Regulation:

401 KAR 59:010, *New process operations.*

State-Origin Requirement:

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

Comments:

16 Welding Stations:

B-Line:

- MM1, robotic welder
- MM2, robotic welder
- MM3, robotic welder
- MM4, robotic welder
- (2) handheld welders
- Ringwelder/Spider press

D-Line:

- Handheld welder
- Ringwelder/Spider press
- Repair weld booth

A-Line:

- (3) Handheld welders
- Ringwelder/Spider press

Shipping:

- Two Fanuc robotic welders

All welders are controlled by Clean Air America Collector. A control efficiency of 90% has been calculated based on the typical performance of this type of collector. An additional 70% control efficiency for the two Fanuc robotic welding was used based on the building enclosure, with a total control efficiency for the two Fanuc welding operations of 97%.

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*, is not applicable. The SIC code for Meritor is not included in the list of source categories subject to this regulation.

The Two Fanuc Robotic welders use the GMAW welding process. The facility submitted an emission factor of 0.528 lb/1,000 lb for chromium and chromium compounds, based on AP-42, Table 12.19-2. The Division added Chromium (VI) emissions based on the emission factor provided in AP-42, Table 12.19-2 for the electrode used. No RSL value is available for chromium and chromium compounds. The Division has confirmed that the affected facility complies with 401 KAR 63:020 with respect to Chromium (VI) emissions.

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	To preclude 401 KAR 52:020	Source-wide

Table B - Summary of Applicable Regulations:

Applicable Regulations	Emission Unit
401 KAR 59:010, <i>New process operations</i>	THDPB2 TSPB3, AAPB3, AAPB4, FSPB5, AAPB6
401 KAR 60:005, Section 2(2)(pppp), 40 C.F.R. 60.4230 through 60.4248, Tables 1 through 4 (Subpart JJJJ), <i>Standards of Performance for Stationary Spark Ignition Internal Combustion Engines</i>	002
401 KAR 63:002, Section 2(4)(eeee), 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (Subpart ZZZZ), <i>National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines</i>	002
401 KAR 63:020, <i>Potentially hazardous matter or toxic substances.</i>	THDPB2 TSPB3, AAPB3, AAPB4, FSPB5, AAPB6

Table C - Summary of Precluded Regulations:

Precluded Regulations	Emission Unit
401 KAR 52:020, <i>Title V permit</i>	Source wide

Table D - Summary of Non Applicable Regulations:

N/A

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS (CONTINUED)

Air Toxic Analysis

401 KAR 63:020, *Potentially Hazardous Matter or Toxic Substances*

The Division for Air Quality (Division) has performed modeling using AERMOD on November 17, 2016 of potentially hazardous matter or toxic substances (Methyl Isobutyl Ketone, Methyl Ethyl Ketone, 1-Methoxy-2-Propanol, 2-Butoxy Ethanol, Acetone, Toluene, Manganese, Nickel, and Chromium - VI) and using AERMOD on June 30, 2026 of potentially hazardous matter or toxic substances (Cobalt, Manganese, Nickel, and Chromium - VI) 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
S-94-006	Initial Permit	I.D.# 102-1320-0051		3/16/1994	Initial Permit	N/A
F-99-019	Initial Issuance	# G045	6/25/1999	10/10/1999		N/A
F-99-019 R1	Significant Revision	53615	6/25/1999	7/5/2001	Construction of two paint booths and removal of an old paint booth	N/A
F-99-019 R2	Significant Revision	54253	6/25/1999	1/15/2002	Construction of paint booth and limitations accepted on VOC	N/A
F-99-019 R3	Minor Revision	54824	6/25/1999	9/13/2002	Construction of paint booth, AAPB6	N/A
F-06-040	Renewal	APE20040001	8/8/2004	10/18/2006		N/A
F-06-040 R1	Minor Revision	APE20100001	8/8/2004	6/14/2010	Modification of two paint booths and name change	N/A
F-06-040 R2	Minor Revision	APE20100002	8/8/2004	8/22/2010	Addition of a paint line	N/A
F-11-038	Renewal	APE20110001	5/19/2011	8/25/2011	Permit Renewal	N/A
F-16-027	Renewal	APE20160001	5/17/2016	8/16/2016	Permit Renewal	N/A
F-21-010	Renewal	APE20210001	4/16/2021	10/31/2021	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 Compounds