

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

Conditional Major, Operating
Permit: F-26-021

GE Vernova
1500 Jamike Ave
Erlanger, KY 41018

4/8/2026
Qinyi Wang, Reviewer

SOURCE ID:	21-015-00180
AGENCY INTEREST:	49467
ACTIVITY:	APE20260001

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SECTION 1 – SOURCE DESCRIPTION

SIC Code and description: 3443, Fabricated Plate Work and Boiler Shops

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 ☐ 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): Toluene, Xylenes

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

*PTE does not include self-imposed emission limitations.

Description of Facility:

GE STEAM POWER, INC. owns and operates GE Vernova, operates a power plant equipment servicing center. The activities at the service center include metal fabrication, machining operation, surface coating and welding. The potential sources of air emissions at the facility are a paint booth, part washers, and miscellaneous welding and plasma cutting activities.

SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM

Permit Number: F-26-021

Activity: APE20260001

Application Received: February 9, 2026 Application Complete Date(s): April 22, 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:

On February 9, 2026, GE Vernova submitted a renewal permit application for their manufacturing facility located in Erlanger, Kentucky. No changes to existing permit limits or construction/modification are being requested. The changes in potential to emit are due to updates to the materials currently used at the facility, not changes to the operating capacity of the equipment.

F-26-021 Emission Summary		
Pollutant	2025 Actual (tpy)	PTE F-26-021(tpy)
CO	N/A	0
NO _x	N/A	0
PT	0.026	7.65
PM ₁₀	0.026	4.19
PM _{2.5}	0.018	0.86
SO ₂	N/A	0
VOC	1.41	123.46*
Lead	N/A	0
Greenhouse Gases (GHGs)		
Carbon Dioxide	N/A	0
Methane	N/A	0
Nitrous Oxide	N/A	0
CO ₂ Equivalent (CO ₂ e)	N/A	0
Hazardous Air Pollutants (HAPs)		
Dibutyl Phthalate	0.088	0
Ethyl Benzene	0.17	4.95
Toluene	0.66	35.58*
Xylenes	0.37	42.71*
Combined HAPs:	1.29	84.03*

*The source has requested voluntary source-wide limits of 20 tpy VOC, 9 tpy single HAP, and 20 tpy combined HAPs to ensure the source remains under 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	Source wide 20 tpy	401 KAR 52:030 and preclude 401 KAR 59:225	Material Balance & SDS	Monthly recordkeeping, 12 month rolling total
HAPs	Source wide 9 tpy	To preclude 401 KAR 52:020	Material Balance & SDS	Monthly recordkeeping, 12 month rolling total
Combined HAPs	Source wide 20 tpy	To preclude 401 KAR 52:020	Material Balance & SDS	Monthly recordkeeping, 12 month rolling total
PM	2.34 lbs/hr	401 KAR 59:010, Section 3(2)	Material Balance & SDS with 75% Transfer Efficiency	Dry Filters, 98% C.E., Manufacturer's guarantee
	20% Opacity	401 KAR 59:010, Section 3(1)	N/A	Weekly Visual Observation
Initial Construction Date: 12/2006 Process Description: Paint is applied using a high volume low pressure (HVLV) spray gun within the paint booth. 4.69 gal/hr max throughput for coatings, 0.469 gal/hr for thinner and 0.0104 gal/hr for solvent usage. 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. 401 KAR 63:002, Section 2(4)(vvvvv) 40 C.F.R. 63.11514 through 63.11523, Tables 1 through 2 (Subpart XXXXXX), <i>National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories</i>, which is an additional applicable requirement under DAQ regulations. The source opts to comply with the requirements of this subpart for spray painting operations. Precluded Regulations: 401 KAR 59:225, New miscellaneous metal parts and products surface coating operations, is precluded because the source accepted a source wide emission cap for VOCs emission less than or equal to twenty (20) tons per year per Section 6(3) of this regulation. 401 KAR 63:002, Section 2(4)(rrr) 40 C.F.R. 63.3880 through 63.3981, Tables 1 through 4, and Appendix A (Subpart MMMM), <i>National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products</i>, is precluded because the source is taking the source wide emission limits of 9 tons for individual HAP and 20 tons for combined HAPs.				

Emission Unit #01 Paint Booth

Comments:

The booth is used for refurbishing parts for the utility industry but may be used for other servicing purposes.

The booth's inside working dimensions are 20' wide x 14' high x 30' deep. The booth is equipped with an exhaust system able to produce 23,000 cubic feet per minute exhaust volume at 0.5" static pressure. The exhaust plenum is mounted in a rear arrestor design. Exhaust plenum mounts 20" x 20" x 2" fiberglass arrestor exhaust filter media in forty-two (42) 20" x 20" x 2" filter frames with support grids. This results in a total filter area of approximately 116 square feet. The booth is equipped with one visual draft gauge to measure pressure differential across the arrestor exhaust media, for visual notification on the condition of exhaust filter media and the need to replace the filter media.

For the paint booth at the facility which uses GFS wave filter media, the manufacturer specifications received with the renewal application shows a removal efficiency of 99.94% for all coating including waterborne. The facility has Based on facility information, the control efficiency for PM/PM10 using dry filters is conservatively estimated to be 98 percent control efficiency for PM/PM10 using the dry filters.

No control device is utilized for volatile organic compound (VOC) and hazardous air pollutant (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 since the operation is already subject to 40 CFR 63 Subpart XXXXXX.

401 KAR 63:020, *Potentially hazardous matter or toxic substances*, is not applicable because the operation is subject to 40 CFR 63, Subpart XXXXXX.

Emission Unit #02 Welding and Metal Cutting Operations

Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
PM	2.34 lbs/hr	401 KAR 59:010, Section 3(2)	Material Balance & SDS	Dust collector with 99% control efficiency
	Tiered limits for opacity in 40 CFR Part 63, Subpart XXXXXX	40 CFR Part 63, Subpart XXXXXX	N/A	Graduated monitoring specified in 40 CFR 63, Subpart XXXXXX
HAPs	Source wide 9/20 tpy single/combined	401 KAR 52:030	Material Balance & SDS	Monthly recordkeeping, 12 month rolling total

Initial Construction Date: 2006

Process Description:

Includes eight (8) welding machines connected to a dust collector, Plasma/Oxyfuel downdraft metal

Emission Unit #02 Welding and Metal Cutting Operations

cutting & welding table with CNC control connected to a dust collector and shop floor welding stations.

Applicable Regulation:

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

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 are applicable since the source SIC code is 3443 and there are emissions of chromium, manganese and nickel compounds.

Comments:

Eight (8) welding machines:

Miscellaneous welding emissions are controlled by an Amtech AT-28 cartridge dust collector with 99 percent control efficiency. Emissions from welding are calculated using emission factors for gas metal arc welding (GMAW) from AP-42, Chapter 12, Section 12.19, Tables 12.19-1 and 12.19-2.

One (1) Plasma/Oxyfuel downdraft metal cutting & welding table with CNC control:

Emissions are controlled by a dust collector with a control efficiency of 99 percent.

Emission Unit #03 Abrasive Blasting

Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
PM	$P \leq 1000 \text{ lb/hr, } E = 2.34 \text{ lb/hr}$ $1000 < P \leq 60000$ $E = 3.59P^{0.62}$ $P > 60000$ $E = 17.31P^{0.16}$	401 KAR 59:010, Section 3(2)	Material Balance & SDS	Dust Collectors, 95~99% C.E.
	20% Opacity	401 KAR 59:010, Section 3(1)	N/A	Weekly Visual Observation

Initial Construction Date: 2006

Process Description:

Abrasive Blasting Room with Modular Dust Collector. Control Efficiency 95%, constructed 2006.
 Wheelabrator Roto Blaster with Dust Collector. Control Efficiency 95%, constructed Jan 2017
 Empire Abrasive Blaster with Dust Collector. Control Efficiency 99%, constructed Jan 2018
 SB-2 Blast Room (Clemco) with Dust Collector. Control Efficiency 99%, constructed Aug 2021
 SB-3 Blast Cabinet (Econoline) with Dust Collector. Control Efficiency 99%, constructed Aug 2021

Applicable Regulation:

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

Emission Unit #03 Abrasive Blasting

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*. The source opts to comply with the requirements of this subpart for abrasive blasting operations.

Comments: Emission factors supplied by the source. Emission factor accounts for enclosure recovery.

Emission Unit #04, 05, Parts Washers

Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
VOC	Source wide 20 tpy	401 KAR 52:030 and preclude 401 KAR 59:225	Material Balance & SDS	Monthly recordkeeping, 12 month rolling total

Initial Construction Date: 2006

Process Description:

Emission Unit 04 40 Gallon Parts Washer

Emission Unit 05 80 Gallon Parts Washer

Cold Cleaner Parts Washers using Safety-Kleen solvent

Applicable Regulation:

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

Comments: Emission factors supplied by the source and verified from the SDS. The total material usage is 120 gallons with a density of 6.67 lb/gal, and the changeout frequency is four times per year.

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
20 tpy of VOC emissions	401 KAR 52:030, <i>Federally-enforceable permits for nonmajor sources</i> . Also to preclude 401 KAR 59:225	Source-wide
9.0 tpy of individual HAP emissions	To preclude major source status for HAP	Source-wide
20 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 , <i>New process operations</i> .	01, 02, 03
401 KAR 59:185 , <i>New solvent metal cleaning equipment</i> .	04, 05
401 KAR 63:002, Section 2(4)(vvvvv) 40 C.F.R. 63.11514 through 63.11523, Tables 1 through 2 (Subpart XXXXXX), <i>National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories</i> .	01, 02, 03

Table C - Summary of Precluded Regulations:

Precluded Regulations	Emission Unit
401 KAR 59:225 , <i>New miscellaneous metal parts and products surface coating operations</i> .	01
401 KAR 63:002, Section 2(4)(rrr) 40 C.F.R. 63.3880 through 63.3981, Tables 1 through 4, and Appendix A (Subpart MMMM), <i>National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products</i> .	01

Table D - Summary of Non Applicable Regulations:

None

Air Toxic Analysis

N/A

Single Source Determination

N/A

SECTION 5 – PERMITTING HISTORY

Permit	Permit Type	Activity #	Complete Date	Issuance Date	Summary of Action	PSD/Syn Minor
F-06-043	Initial	APE20060001	7/31/2006	10/4/2006	Initial Construction Permit	N/A
F-11-026	Renewal	APE20110001	4/27/2011	8/25/2011	Renewal	N/A
F-11-026 R1	Admin Amend	APE20120001	2/16/2012	3/5/2012	County Location Change	N/A
F-16-023	Renewal	APE20160001	3/29/2016	6/1/2016	Renewal	N/A
F-16-023 R1	Minor Revision	APE20160003	10/26/2016	12/5/2016	Add MACT 6X	N/A
F-21-002	Renewal	APE20210001	1/21/2021	8/9/2021	Renewal Permit	N/A
	Revision	APE20210002	6/24/2021		Minor Revision to add 2 new blasting operations to EU 03	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