Commonwealth of Kentucky
Division for Air Quality

STATEMENT OF BASIS / SUMMARY

Conditional Major, Operating
Permit: F-26-013

Stewart Iron Works, LLC
30 Kenton Lands Road
Erlanger, KY 41018

March 13, 2026
Nathan Cox, Reviewer

SOURCE ID:	21-117-00227
AGENCY INTEREST:	165183
ACTIVITY:	APE20250001

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SECTION 1 – SOURCE DESCRIPTION

SIC Code and description: 3446, Architectural and Ornamental Metal Work

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): Ethyl Benzene, Xylenes

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

*PTE does not include self-imposed emission limitations.

Description of Facility:
Stewart Iron Works, LLC located at 30 Kenton Lands Road in Erlanger, Kenton County Kentucky. Stewart Iron Works is involved in forming and coating of decorative metal work for ornamental and architectural industries.

The principal operations performed at this facility are coating, welding, and machining of mild steel. The facility has coating and mixing booth and welding and machining operations to produce ornamental metalwork. The facility is in a mixed industrial and recreational area surrounded by athletic fields to the east and south, other production industrial buildings to the west and north, and light residential areas to the northeast.

SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM

Permit Number: F-26-013 Activity: APE20250001

Application Received: November 23, 2025 Application Complete Date(s): January 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:
Stewart Iron Works, LLC has requested renewal of its air permit. The facility requested a voluntary condition to limit VOC emissions below a major source threshold despite PTE for VOC not exceeding a major source threshold.
The renewal incorporates the following off-permit or 502(b)(10) changes:

APE20240001

- Application received 5/10/2024.
- Approval issued 5/5/2025.
- Addition of a polishing machine (an insignificant activity).
- Addition of a conventional HVLP spray gun to EU01 (the spray gun which was removed in APE20220001).
- Dispersion of HAP and air toxic emissions (Cumene; Ethyl Benzene; Methyl Isobutyl Ketone; Naphthalene; Toluene; Xylenes) were modeled using Screen3 during this review to ensure compliance with 401 KAR 63:020.
- PTE unchanged.

APE20230001

- Application received 6/30/2023. Approval issued 3/22/2024.
- Change in coatings used in EU01.
- PTE for VOC decreased 88 tpy. Total HAP PTE decreased by 8 tpy. PTE for Ethyl Benzene decreased by 5 tpy. PTE for Methyl Isobutyl Ketone decreased by 2 tpy. PTE for Naphthalene increased by 1 tpy.
- Dispersion of HAP and air toxic emissions (Cumene; Ethyl Benzene; Methyl Isobutyl Ketone; Naphthalene; Toluene; Xylenes) were modeled using Screen3 during this review to ensure compliance with 401 KAR 63:020.

APE20220001

- Application received 5/1/2022. Approval issued 5/31/2022.
- Change EU01 from a conventional HVLP spray gun to an electrostatic spray gun. This change was later altered to keep both the HVLP spray gun and electrostatic spray gun.
- PTE unchanged.

APE20210004

- Application received 9/21/2021. Approval issued 10/26/2021.
- Addition of new coatings to EU01.
- Total HAP PTE increased by 21 tpy. PTE for Cumene increased by 4 tpy. PTE for Ethyl Benzene increased by 8 tpy. PTE for Methyl Isobutyl Ketone increased by 9 tpy.
- Dispersion of HAP and air toxic emissions (Ethyl Benzene; Xylenes; Cumene; Toluene; 1,6-Hexamethylene Diisocyanate; Methyl Isobutyl Ketone; Naphthalene; Trimethyl

Benzene) were modeled using Screen3 on 9/27/2021 to ensure compliance with 401 KAR 63:020.

APE20210003

- Application received 4/10/2021. Approval issued 5/11/2021.
- Addition of new coatings to EU01.
- PTE for PM decreased by 1 tpy. PTE for VOC decreased by 120 tpy. Total HAP PTE decreased by 84 tpy. PTE for Ethyl Benzene decreased by 6 tpy. PTE for Methyl Isobutyl Ketone decreased by 17 tpy. PTE for Xylenes decreased by 61 tpy.

APE20210002

- Application received 3/04/2021. Approval issued 3/31/2021.
- Addition of new coatings to EU01.
- PTE for PM decreased 0.5 tpy. PTE for VOC increased by 77 tpy. Total HAP PTE increased by 69 tpy. PTE for Ethyl Benzene increased by 20 tpy. PTE for Methyl Isobutyl Ketone decreased by 9 tpy. PTE for Xylenes increased by 64 tpy.
- Dispersion of HAP and air toxic emissions (Ethyl Benzene; Xylenes; Cumene; Toluene; 1,6-Hexamethylene Diisocyanate; Methyl Isobutyl Ketone; Naphthalene; Trimethyl Benzene) were modeled using Screen3 on 3/9/2021 to ensure compliance with 401 KAR 63:020.

APE20210001

- Application received 2/19/2021. Approval issued 3/31/2021.
- Addition of an abrasive finishing machine (an insignificant activity)

APE20200003

- Application received 12/17/2020. Approval issued 2/15/2021.
- Addition of two baghouses to control emissions from the welding units (insignificant activities).

APE20200002

- Application received 11/06/2020. Approval issued 2/15/2021.
- Addition of two paints to the materials used in EU01. PTE for VOC increased by 42 tpy. PTE for PM increased by 1 tpy. Total HAP PTE increased by 30 tpy. Methyl Isobutyl Ketone emissions increased by 26 tpy. Ethyl Benzene emissions increased by 4 tpy.

F-26-013 Emission Summary		
Pollutant	2024 Actual (tpy)	PTE F-26-013 (tpy)
CO	0	0.91
NOx	0	1.09
PT	0.006	0.26
PM_{10}	0.006	0.26
$PM_{2.5}$	0.003	0.22
SO_2	0	0.007
VOC	0.91	65.03*
Lead	0	5.44E-06
Greenhouse Gases (GHGs)		
Carbon Dioxide	0	1304
Methane	0	00.02
Nitrous Oxide	0	00.002
CO_2 Equivalent (CO_2e)	0	1305
Hazardous Air Pollutants (HAPs)		
Ethyl Benzene	0.15	15.75*
Methyl Isobutyl Ketone	0	6.56
Naphthalene	0	1.32
Toluene	0.01	7.28
Xylenes (Total)	0.01	18.48*
Combined HAPs:	0.18	49.71*

*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 Spray Booth				
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 & MSDS	Monthly emission calculations and a new rolling 12-month total
Individual HAP	Source-wide 9.0 tpy	To preclude 401 KAR 52:020	Material Balance & MSDS	Monthly emission calculations and a new rolling 12-month total
Combined HAP	Source-wide 22.5 tpy	To preclude 401 KAR 52:020	Material Balance & MSDS	Monthly emission calculations and a new rolling 12-month total
PM	20% Opacity	401 KAR 59:010, Section 3(1)a	N/A	Recordkeeping of weekly visual observations
	2.34 lbs/hr	401 KAR 59:010, Section 3(2)	Material Balance & MSDS with 70% Transfer Efficiency	Dry Filters, 99% C.E., Manufacturer's guarantee

Initial Construction Date: 8/2012, 1/2019

Process Description:
Mild steel fencing, pipe, or rods are processed in the welding and machining operations and coated in the spray paint booth. The paint boot has two manually operated paint guns, one conventional HVLP gun and one electrostatic gun. The guns can't be used simultaneously.

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 particulate matter, commenced on or after July 2, 1975.

State-Origin Requirement:
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.

Comments:
The spray booth uses an HVLP manual gun with an application capacity of 3.75 gallons/hour and estimated 30% overspray. The Spray Paint booth is controlled by dry filters with a 99% control efficiency for PM.

Insignificant Activity 1: GMAW welding units
Insignificant Activity 2: GTAW welding unit
Insignificant Activity 5: Metal cutters
Insignificant Activity 6: Metal grinders
Insignificant Activity 7: Material machining units

Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
PM	20% Opacity	401 KAR 59:010, Section 3(1)a	N/A	Recordkeeping of monthly visual observations
	2.34 lbs/hr	401 KAR 59:010, Section 3(2)	AP-42 Chapter 12.19	Exhausting indoors, 70% control effectiveness for PM

Initial Construction Date: 8/2012, 1/2019

Process Description:
Mild steel fencing, pipe, or rods are processed and shaped in the welding and machining operations.

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 particulate matter, commenced on or after July 2, 1975.

Comments:
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* does not apply because the source is not one of the nine source categories.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Testing Requirements\Results
N/A

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	401 KAR 52:030, *Federally-enforceable permits for nonmajor sources*	Source-wide
22.5 tpy of combined HAP emissions	401 KAR 52:030, *Federally-enforceable permits for nonmajor sources*	Source-wide

Table B - Summary of Applicable Regulations:

Applicable Regulations	Emission Unit
401 KAR 59:010**,** *New process operations.*	EU01
401 KAR 63:020, *Potentially hazardous matter or toxic substances*	EU01

Table C - Summary of Precluded Regulations:

Precluded Regulations	Emission Unit
401 KAR 52:020, *Title V permits.*	Source-wide

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 March 17, 2026 of potentially hazardous matter or toxic substances (Cumene, Ethyl Benzene, Formaldehyde, Methyl Isobutyl Ketone, Naphthalene, Toluene, 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	PSD/Syn Minor
F-20-011	Initial	APE20200001	3/11/2020	9/7/2020	Initial Permit Issuance	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