Commonwealth of Kentucky
Division for Air Quality

STATEMENT OF BASIS / SUMMARY

Conditional Major, Operating
Permit: F-25-041

Phoenix Fabricators and Erectors Inc.
1329 US Hwy 41
Sebree, KY 42455

September 25, 2025
Qinyi Wang, Reviewer

SOURCE ID:	21-233-00078
AGENCY INTEREST:	35816
ACTIVITY:	APE20250001

Table of Contents

SECTION 1 – SOURCE DESCRIPTION

SIC Code and description: 3441, Fabricated Structural Metal

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

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): Ethylbenzene, Methyl Isobutyl Ketone, Methylene Diphenyl Diisocyanate, Xylenes

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

*PTE does not include self-imposed emission limitations.

Description of Facility:
Phoenix Fabricators and Erectors Inc. fabricate steel elevated water storage tanks in Sebree, KY.

The preparation of steel water storage tank sections, prior to field assembly, involves partial fabrication, surface preparation by steel shot metallic abrasive blasting, and primer/paint application(s). These operations occur in separate buildings and at different times. Steel shot blasting is performed within a blast booth located inside the building which also houses the paint bay. Welding, gouging and cutting operations occur in separate buildings and are included as an emission unit.

SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM

Permit Number: F-25-041 Activity: APE20250001

Application Received: September 4, 2025 Application Complete Date(s): October 29, 2025

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 September 25, 2025, Phoenix Fabricators and Erectors, LLC of 182 S County line Road 900 East, Avon, IN 46123 has applied to the Kentucky Division for Air Quality for the renewal of their operating permit (F-20-033) to operate Phoenix Fabricators and Erectors Inc- a Water tower fabrication and production facility at 1329 US Hwy 41, Sebree, KY 42455. No further changes were requested.

F-25-041 Emission Summary		
Pollutant	2025 Actual (tpy)	PTE F-25-041 (tpy)
CO	N/A	0
NOx	N/A	0
PT	0.16	26.23
PM_{10}	0.16	26.23
$PM_{2.5}$	0.03	8.55
SO_2	N/A	0
VOC	5.71	282.7**
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_2e)	N/A	0
Hazardous Air Pollutants (HAPs)		
Ethyl Benzene	0.83	46.77*
Methyl Ethyl Ketone	0.14	25.35*
Methyl Isobutyl Ketone	0.91	53.73*
Methylene Diphenyl Diisocyanate	3.05	150.41*
Xylenes	3.39	175.11*
Combined HAPs:	9.67	426.02*

*Emissions limited by federally-enforceable emission limitations to ensure the source remains below major source thresholds and compliance with 401 KAR 63:020.
**Emissions limited by federally-enforceable emission limitations to ensure the source remains below major source thresholds to preclude 401 KAR 52:020 and 401 KAR 51:017.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

Emission Unit #1 (01) Abrasive Blasting				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
PM	2.34 lbs/hr ~ 10.8 lbs/hr	401 KAR 59:010, Section 3(2)	AP-42, Engineering Estimate	Dust collection system, 99.9 percent C.E., Manufacturer's guarantee
	20% opacity	401 KAR 59:010, Section 3(1)a	N/A	Compliance with requirements for 40 CFR 63, Subpart XXXXXX

Initial Construction Date: *2/2004*

Process Description:
The blasting equipment is housed in a controlled environment equipped with a full floor reclamation system.

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(2) (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 applicable to each area source of hazardous air pollutants primarily engaged in one of the nine source categories listed in paragraphs (a)(1) through (9) of 40 CFR 63.11514.

Comments:
Raw material used: Steel shot blast media
Maximum rated capacity: 11,760 lbs./hour
Location: Blast/paint building

The inside dimensions of the building are 20' wide by 13' high by 50' long, and the room is designed for a "flow thru" workflow with two sets of work doors.

The blast booth is operated under negative pressure and is equipped with a 14,000 ft^3/min Hoffman HDFT 4-24 cartridge pulse jet dust collection system. The system includes twenty-four Torit Ultra-web filters with an actual filter area of 6,000 ft^2. The dust collection system also includes an abrasive inlet plenum, 14-gauge spiral wrap galvanized ductwork, fan, and motor, and a drum collection hopper.

An efficiency of 99.9 percent is assumed for the blasting booth dust collection system for the purpose of calculating PM/PM_{10} emissions. Emission factors were updated per the 2009 actual emissions.

Potential to emit (PTE) calculations are based on 8760 operating hours per year.

Emission Unit #2 (02) Paint Spray Booth				
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 with 45% Transfer Efficiency	Filters, 99% C.E., Manufacturer's guarantee
	20% opacity	401 KAR 59:010, Section 3(1)a	N/A	Recordkeeping of weekly visual observations
VOC	Source wide 90 tpy	To preclude 401 KAR 52:020 & 401 KAR 51:017	Material Balance & SDS	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 & SDS	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 & SDS	Monthly emission calculations and a new rolling 12-month total
Ethyl Benzene	Source wide 5.2 tpy	401 KAR 63:020, Section 3	Material Balance & SDS	Monthly emission calculations and a new rolling 12-month total
Methyl Diphenyl Diisocyanate	Source wide 0.66 tpy	401 KAR 63:020, Section 3	Material Balance & SDS	Monthly emission calculations and a new rolling 12-month total

Initial Construction Date: *2/2004*

Process Description:
Priming/painting of steel water tanks utilizing one (1) airless operated spray gun.

Applicable Regulation:
401 KAR 59:010, *New Process Operations.*

State-Origin Requirements:
401 KAR 63:020, *Potentially Hazardous Matter or Toxic Substances.*

Precluded Regulation:
401 KAR 52:020, *Title V Permits.*
401 KAR 51:017, *Prevention of significant deterioration of air quality.*

Comments:
Raw materials used: Paint and solvent.
Maximum rated capacity: 12.5 gallons/hour of paint mixed with solvent.
Transfer efficiency: 45%
Location: Blast/paint building

The painting facility consists of a paint bay that is 110 feet long by 40 feet wide by 23 feet high with negative airflow forming an air curtain at the open end of the room. The paint bay is equipped with two (2) Aerovent, 60,000 ft^3/min air make-up units. The air is filtered for particulates and then exhausted. The

Emission Unit #2 (02) Paint Spray Booth

sloped exhaust system is equipped with four (4) one (1) inch, Supraloft 100D tackified polyester, diffusion media roll type filters. The filters are three feet wide and eighty feet long. These filters create an evenly diffused air flow pattern throughout the filter.

The painting operation utilizes one airless operated spray gun. Prior to application, paint is mixed with a solvent, methyl ethyl ketone (MEK).

Volatile organic compounds (VOC) and PM/PM_{10} emissions from painting are calculated by mass balance. An efficiency of 99% is assumed for the polyester, diffusion media roll type filter for the purpose of calculating PM/PM_{10} emissions.

401 KAR 63:002, Section 2(2) (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*, does not apply because the source has taken a limit on HAPs; and therefore, is not a major source of HAPs. [40 CFR 63.3881(b)]

401 KAR 59:225, *New Miscellaneous Metal Parts and Products Surface Coating Operations*. This regulation is to be precluded because the facility has taken a limit on volatile organic compounds. [401 KAR 59:225 Section 2(1)(b)]

401 KAR 63:002, Section 2(2) (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*, is not applicable because the spray coatings do not contain chromium, lead, manganese, nickel or cadmium, collectively referred to as target HAPs. [40 CFR 63.11170(a)(3)]

Emission Unit #3 (03) Welding, Cutting, and Gouging Activities				
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)	AP-42, Engineering Estimate	Building Enclosure, 70% C.E.
	20% opacity	401 KAR 59:010, Section 3(1)a	N/A	Compliance with requirements for 40 CFR 63, Subpart XXXXXX

Initial Construction Date: *2/2004*

Process Description:
Welding, gouging & cutting operations.

Applicable Regulation:

401 KAR 59:010, *New Process Operations.*

401 KAR 63:002, Section 2(2) (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*.

Comments:
Process Equipment: 25 Welding Machines
Raw material used: Welding Rods/Wire
Maximum rated capacity: 4.1 lbs./hour

Welding, gouging & cutting operations. Potential emission calculations were based on a building enclosure control of 70%. Emissions were calculated based on AP 42 factors and SDS information.

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
5.2 tpy of Ethyl Benzene	401 KAR 63:020, *Potentially hazardous matter or toxic substances*	Source-wide
0.66 tpy of Methyl Diphenyl Diisocyanate	401 KAR 63:020, *Potentially hazardous matter or toxic substances*	Source-wide

Table B - Summary of Applicable Regulations:

Applicable Regulations	Emission Unit
401 KAR 59:010, *New Process Operations.*	EP01, EP03
401 KAR 63:002, Section 2(2) (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.*	EP01, EP03
401 KAR 63:020, *Potentially Hazardous Matter or Toxic Substances.*	EP02

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

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS (CONTINUED)

Table D - Summary of Non Applicable Regulations:

Non Applicable Regulations	Emission Unit
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 October 8, 2025 of potentially hazardous matter or toxic substances (Ethyl Benzene, Methyl Isobutyl Ketone, Methylene Diphenyl Diisocyanate, Xylene Chromium VI, Cobalt, Manganese, Nickel) and AERMOD on August 4, 2015 of potentially hazardous matter or toxic substances (Ethyl Benzene, Methylene Diphenyl Diisocyanate, Chromium VI, Cobalt, Manganese, Nickel) 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-05-028	Initial	APE20040001	12/19/2003	11/17/2005	Initial	N/A
F-10-034	Renewal	APE20100001	7/12/2010	1/3/2011	Renewal Operating Permit	N/A
F-15-030	Renewal	APE20150001	9/2/2015	1/4/2016	Renewal Operating Permit	N/A
F-20-033	Renewal	APE20200001	8/17/2020	2/28/2021	Renewal Operating Permit	N/A

SECTION 6 – PERMIT APPLICATION HISTORY

N/A

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)
SDS – 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