

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

Conditional Major / Synthetic Minor, Construction/Operating
Permit: F-24-028
Fitzgerald Trailers LLC
667 Capp Harlan Road
Tompkinsville, KY 42167
May 28, 2024
Ryan Anderson, Reviewer

SOURCE ID:	21-171-00037
AGENCY INTEREST:	3163
ACTIVITY:	APE20240001

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SECTION 1 – SOURCE DESCRIPTION

SIC Code and description: 3715, Truck Trailers

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: Monroe

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:

Fitzgerald Trailers LLC, located in Tompkinsville, Kentucky, is a truck trailer production plant that manufactures 53' dry van composite trailers.

Production at Fitzgerald Trailers begins with delivery of pre-cut aluminum posts and composite panels. The composite panels arrive at the facility pre-painted. Aluminum posts will be cleaned before being painted. The painting will consist of adding a topcoat mixture to the posts via a spray booth. Once painted, aluminum posts will be dried while in the spray booth. After painting is complete, the aluminum posts and composite panels will be assembled to complete the dry van composite trailers.

Additional Comments:

40 CFR 63, Subpart HHHHHH, *National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources*. This subpart does not apply to the source because the coatings do not contain target HAPs.

40 CFR 63, Subpart XXXXXX, *National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories*. This subpart does not apply to the source. The source is not in one of the nine metal fabrication and finishing source categories.

SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM

Permit Number: F-24-028

Activity: APE20240001

Application Received: April 29, 2024

Application Complete Date(s): May 24, 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:

Fitzgerald Trailers LLC submitted an application for an initial conditional major / synthetic minor permit on April 29, 2024. The application detailed the operation of an existing spray booth at the new facility and construction and operation of cleaning and welding equipment used to paint and build dry van composite trailers.

The initial conditional major / synthetic minor permit will contain the following Emission Units:

- **Emission Unit 01** – Spray Booth Topcoat Operation
- **Emission Unit 02** – Spray Booth Cleanout
- **Emission Unit 03** – Hand Applied Metal Degreaser
- **Emission Unit 04** – MIG Welding (2 units) – Insignificant Activity

F-24-028 Emission Summary		
Pollutant	PTE F-24-028 (tpy)	Source Wide Limitation (tpy)
CO	0.14	--
NOx	0.17	--
PT	70.96	--
PM ₁₀	70.96	--
PM _{2.5}	70.96	--
SO ₂	0.001	--
VOC	341.5	90
Lead	8.59E-07	--
Greenhouse Gases (GHGs)		
Carbon Dioxide	206.12	--
Methane	0.004	--
Nitrous Oxide	3.89E-04	--
CO ₂ Equivalent (CO ₂ e)	206.33	--
Hazardous Air Pollutants (HAPs)		
Ethyl Benzene	1.175	--
Toluene	2.337	--
Xylenes (Total)	4.406	--
Combined HAPs:	7.973	--

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

Emission Unit 01 – Spray Booth Topcoat Operation					
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis		Compliance Method
PM	2.34 lb/hr	401 KAR 59:010, Section 3(2)	EP01-1	0.704 lb/gal, uncontrolled; MSDS, technical sheet	Filter with 90% control efficiency
			EP01-2	1.16 lb/gal, uncontrolled; MSDS, technical sheet	
			EP01-3	0.341 lb/gal, uncontrolled; MSDS, technical sheet	
			EP01-4	7.6 lb/MMscf; AP-42, Table 1.4-2	Assumed when burning natural gas
Opacity	20%	401 KAR 59:010, Section 3(1)(a)	N/A		Weekly Qualitative Visual Observation, Monitoring, and Recordkeeping
VOC	90 tpy (Source Wide)	To preclude 401 KAR 52:020 & 401 KAR 51:017	EP01-1	4 lb/gal; MSDS	Monthly Calculations, Recordkeeping, Reporting
			EP01-2	1 lb/gal; MSDS	
			EP01-3	5.7 lb/gal; MSDS	
			EP01-4	5.5 lb/MMscf; AP-42, Table 1.4-2	

Process Description:

Emission Point	Description	Maximum Capacity	Control Device	Construction Commenced
01-1	Spray Booth Topcoat Mixture (Fitzgerald Trailer White)	25.10 gallons/hr	Fabric Filter	March 2017
01-2	Spray Booth Topcoat Mixture (Hardener)	5.28 gallons/hr	Fabric Filter	
01-3	Spray Booth Topcoat Mixture (Air Dry Additive)	1.32 gallons/hr	Fabric Filter	
01-4	Spray Booth – Heater (Natural Gas)	1.2 MMBTU/hr	None	

Emission Unit 01 – Spray Booth Topcoat Operation

Description:

Spray booth used to paint extruded aluminum posts. Aluminum posts are coated with a topcoat mixture before being dried. The spray booth will contain two Kremlin Xcite spray guns. Only one spray gun will be used at a time. Painting will take up to 60 minutes. After painting, drying will occur in the spray booth for 30 minutes. During the drying cycle, the spray booth cannot be used for painting. A natural gas direct heat exchanger with a heat capacity of 1.20 MMBTU/hr will be used for drying. EPs 01-1, 01-2 & 01-3 are controlled with a fabric filter with a 90% control efficiency.

Applicable Regulation:

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

State-Origin Requirement:

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

Comments:

Emission factors for EPs 01-1, 01-2 & 01-3 based on MSDS and spray gun technical sheet provided. PM emission factors account for a transfer efficiency of 86%, which is based on information provided on the technical sheet for the spray gun. EPs 01-1, 01-2 & 01-3 represent individual components of a mixture, with a total throughput of 31.7 gallons/hr. Emission factors for EP01-4 based on AP-42, Table 1.4-2.

EPs 01-1, 01-2 & 01-3 consist of the following:

EP01-1: LV151 DTM Fitzgerald Trailer White

EP01-2: LV151 DTM Hardener

EP01-3: LV151 DTM Air Dry Additive

Emission Units 02 & 03					
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis		Compliance Method
VOC	90 tpy (Source Wide)	To preclude 401 KAR 52:020 & 401 KAR 51:017	EU 02	2000 lb/ton; MSDS	Monthly Calculations, Recordkeeping, Reporting
			EU 03	2000 lb/ton; MSDS	
Initial Construction Date: June 2024					
Process Description:					
Emission Unit 02 (02) – Spray Booth Cleanout					
Description: Cleaning solvent used to clean booth and spray equipment.					
Maximum Capacity: 0.167 gallons/hr					
Control Device: None					
Construction Commenced: June 2024					
Emission Unit 03 (03) – Hand Applied Metal Degreaser					
Description: Metal degreaser used to clean aluminum posts. The degreaser will be hand applied.					
Maximum Capacity: 0.19 gallons/hr					
Control Device: None					
Construction Commenced: June 2024					
Applicable Regulation:					
State-Origin Requirement: 401 KAR 63:020, <i>Potentially hazardous matter or toxic substances.</i>					
Comments: Emission Units 02 & 03 were established with permit F-24-028. Emission factors for EU02 & EU03 based on MSDS provided.					
EUs 02 & 03 consist of the following:					
EU 02: Akzo Nobel Coatings Cleaning Solvent					
EU 03: Akzo Nobel Coatings OTO Quick Degreaser					

Emission Unit 04: MIG Welding (2 units)

Initial Construction Date: June 2024

Process Description:

MIG welding units to assemble the frame and other sub structural components of the dry vans.

Applicable Regulation:

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

State-Origin Requirement:

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

Comments:

Emission Unit 04 was established as an insignificant activity with permit F-24-028. Emission factors based on estimations for electrode type E70S (GMAW) found in AP-42, Table 12.19-1 and Table 12.9-2. Hexavalent Chromium emission factor based on the chromium emission factor from AP-42, Table 12.19-2 and a hexavalent chromium conversion rate of 5% for GMAW welding processes. The 5% rate is based on the San Diego County Air Pollution Control District's guidance for welding process emission factors.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Testing Requirements/Results

The source, at the time of initial conditional major / synthetic minor permit F-24-028, has not been required to perform any testing.

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 and 401 KAR 51:017	Source-wide

Table B - Summary of Applicable Regulations:

Applicable Regulations	Emission Unit
401 KAR 59:010 , <i>New process operations</i> . Applicable to any affected facility or source, associated with a process operation, which is not subject to another emission standard with respect to particulates in 401 KAR 59, commenced on or after July 2, 1975	EU01 EU04
401 KAR 63:020 , <i>Potentially hazardous matter or toxic substances</i> .	EU01 EU02 EU03 EU04

Table C - Summary of Precluded Regulations:

Precluded Regulations	Emission Unit
401 KAR 51:017 , <i>Prevention of significant deterioration of air quality</i> . Precluded by limitations to keep facility emissions below major stationary source thresholds.	Source-wide
401 KAR 52:020 , <i>Title V permits</i> . Precluded by limitations to keep the facility emissions below major stationary source thresholds.	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 May 16, 2024 of potentially hazardous matter or toxic substances (Chromium, Cobalt, Ethyl benzene, Isopropanol, Manganese, Nickel, Propylene glycol monomethyl ether, Xylenes, Toluene) 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.

Note: In the absence of chromium speciation data from the facility for welding, the potential emissions of hexavalent chromium were determined based on the information listed in **SECTION 3** for the welding activities at the facility. Using the above information, the facility will be in compliance with 63:020 for all HAPs identified above.

Single Source Determination

N/A

SECTION 5 – PERMITTING HISTORY
None.

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