Commonwealth of Kentucky
Division for Air Quality

STATEMENT OF BASIS / SUMMARY

Title V, Operating
Permit: V-25-004

Arcosa Marine Products, Inc.
700 Terrace Lane
Paducah, KY 42003

April 20, 2026
Ibrahim Alburai, Reviewer

SOURCE ID:	21-145-00040
AGENCY INTEREST:	3069
ACTIVITY:	APE20240001

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SECTION 1 – SOURCE DESCRIPTION

SIC Code and description: 3089, Plastic Products, NEC (except plastics pipe fittings, inflatable plastics life jackets, plastics furniture parts, and plastics sausage casings)

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: McCracken
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): Methyl Methacrylate, Styrene

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

*PTE does not include self-imposed emission limitations.

Description of Facility:
Arcosa Marine Products, Inc. is a fiberglass parts manufacturing plant involved primarily in the construction of barge and railcar covers.

SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM

Permit Number: V-25-004 Activities: APE20240001

Received: December 13, 2024 Application Complete Date(s): February 9, 2025

Permit Action: ☐ Initial ☒ Renewal ☐ Significant Rev ☐ Minor Rev ☐ Administrative.

Construction/Modification Requested? ☒Yes ☐No NSR Applicable? ☐Yes ☐No

Previous 502(b)(10) or Off-Permit Changes incorporated with this permit action ☐Yes ☒No

Description of Action:
Renewal permit with upgraded ventilation system. There are no changes to the permit as a result of this upgrade.

V-25-004 Emission Summary		
Pollutant	2024 Actual (tpy)	PTE V-25-004 (tpy)
CO	0.103	1.077
NOx	0.178	1.867
PT	3.64	24.169
PM_{10}	3.64	24.097
$PM_{2.5}$	1.44	10.567
SO_2	0.006	0.063
VOC	35.56	475.884*
Lead	0	0.000
Greenhouse Gases (GHGs)		
Carbon Dioxide	1.71	1,795
Methane	N/A	0.036
Nitrous Oxide	N/A	0.129
CO_2 Equivalent (CO_2e)	1.71	1,835
Hazardous Air Pollutants (HAPs)		
Ethyl Benzene	0.00009	1.172
Ethylene Glycol	0.000	1.199
Methyl Methacrylate	0.00045	10.690
Styrene	26.30	372.441
Combined HAPs:	26.301	385.559*

* Note: The permittee has requested federally enforceable emission limitations to preclude major source status under 401 KAR 51:017.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

EU01 (EP01) Coating Room – Fiberglass Reinforced Products				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
VOC	Source wide 225 tpy	401 KAR 52:020	40 CFR 63, Subpart WWWW & MSDS	Monthly emission calculations and a new rolling 12-month total
PM	2.34 lbs./hr.	401 KAR 59:010, Section 3(2)	Material Balance & MSDS with 98% Transfer Efficiency	Building Enclosure, 70% C.E.
PM	20% Opacity	401 KAR 59:010, Section 3(1)a	N/A	Recordkeeping of weekly visual observations

Initial Construction Date: 1981

Process Description:

The production process takes place in a large building with the molds arranged in a line along the length of the building.

Gel coat is sprayed into a mold and allowed to cure. This is followed by spraying of a mixture of chopped fiberglass and resin onto the cured gel coat using the Venus chopper guns. The next step involves laying fiberglass woven roving which has been impregnated with polyester resin on top of the chopped fiberglass and rolling any air bubbles from between the layers. The entire part is then allowed to cure thoroughly before it is removed from the mold.

The impregnation of the woven fiberglass with polyester resin is accomplished automatically in an impregnator which passes the fiberglass from a roll, through a compartment containing resin, under a baffle and through a roller which removes the excess resin and returns it to the resin compartment. The resin is applied by a dipping process and is a non-atomized process.

Barge or railcar covers are fabricated in the production area and then taken to trim area for finishing. Rough surfaces are ground with handheld air powered grinders, fiberglass imperfections repaired, and hardware installations are taking place in the trim area.

Applicable Regulation:

401 KAR 50:012, *General application*
401 KAR 52:020, *Title V permit.*
401 KAR 59:010, *New process operations*

401 KAR 63:002, Section 2 (4) (bbbb) 40 C.F.R. 63.5780 through 63.5935, Tables 1 through 15, and Appendix A (Subpart WWWW) National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production

Comments:

- Arcosa Marine Products supplied information on the hazardous air pollutant (HAP) content of the resin and gel coats used in the operations. Emission Factors were calculated using equations from 40 CFR 63, Subpart WWWW, Table 1, “Equations to Calculate

EU01 (EP01) Coating Room – Fiberglass Reinforced Products

Organic HAP Emission Factors For Specific Open Molding and Centrifugal Casting Process Streams." Emissions from liquid propane gas (LPG) fired space heaters were estimated using emission factors from AP-42, Table 1.5-2, "Emission Factors for LPG Combustion." Emission estimates from resin tanks supplied with the application were verified using USEPA Emission Factor and Inventory Group Tanks 4.0 software.

Two percent (2%) overspray is assumed for gelcoat sprayed into the mold.

70% capture efficiency for PM is assumed due to the enclosure.

Prevention of Significant Deterioration of Air Quality (PSD) regulation is not applicable, since the source was constructed prior to September 22, 1982 and has no major modification that causes a significant emissions increase.

- **401 KAR 63:002, Section 2 (4) (aaaa)***, National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing*, is not applicable because the facility manufactures only parts of boats, which is not considered a boat manufacturing facility for the purpose of this subpart.

- **401 KAR 63:020**, *Potentially Hazardous Matter or Toxic Substances*, is not applicable because organic HAP emissions are covered by 40 CFR Part 63, Subpart WWWW.

- **401 KAR 50:012**, *General application*, 40 CFR Part 63, Subpart WWWW is determined as engineering practices required "in the absence of a standard specified in administrative regulations **401 KAR Chapters 50 to 65,** all major air contaminant sources shall as a minimum apply control procedures that are reasonable, available, and practical.

- **40 CFR 64**, *Compliance assurance monitoring* (CAM) applies to a pollutant-specific emissions unit at a major source that is required to obtain a part 70 or 71 permit if the unit satisfies all of the following criteria:
  (1) The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under 40 CFR 64.2(b)(1);
  (2) The unit uses a control device to achieve compliance with any such emission limitation or standard; and
  (3) The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source.

Emission Unit	Criteria 1 (Y/N)	Criteria 2 (Y/N)	Criteria 3 (Y/N)	Does CAM apply? If Y for criteria 1, 2, AND 3, then Yes, Otherwise, No.
1	N	N	Y	No

EU02 (EP02) Cold Cleaner
Initial Construction Date: 2017 **Process Description:** Miscellaneous Manual Parts Washer **Applicable Regulation:** **401 KAR 59:185,** New solvent metal cleaning equipment **Comments:** NA

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
01	None	PM lb./hr.	401 KAR 52:020	Initial	Methods 1-4, 17	N/A	0.0175lb./hr.	12 parts/shift	CMN20060002	7/31/2006

Footnotes:

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS

Table A - Group Requirements:

Emission and Operating Limit	Regulation	Emission Unit
225 tpy of VOC emissions	To preclude 401 KAR 51:017	Source-wide

Table B - Summary of Applicable Regulations:

Applicable Regulations	Emission Unit
401 KAR 50:012, General application	Source-wide
401 KAR 59:010, New process operations	EU01
401 KAR 59:185**,** New solvent metal cleaning equipment	EU02
401 KAR 63:002, Section 2 (4) (bbbb) 40 C.F.R. 63.5780 through 63.5935, Tables 1 through 15, and Appendix A (Subpart WWWW), National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production.	EU01

Table C - Summary of Precluded Regulations:

Precluded Regulations	Emission Unit
N/A	

Table D - Summary of Non-Applicable Regulations:

Non-Applicable Regulations	Emission Unit

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
V-04-016	Initial	APE20040002	11/12/2003	1/19/2005	Initial Title V Permit	Syn Minor
V-09-022	Renewal	APE20090001	7/1/2009	1/11/2010	Renewal	N/A
V-14-020	Renewal	APE20140004	9/6/14	2/25/15	Renewal Permit and Removal of EP25	N/A
V-14-020 R1	Revision	APE20190002	1/24/2019	2/3/2019	Name change from Trinity Marine Products, Inc. to Arcosa Marine Products, Inc.	N/A
V-19-026	Renewal	APE20190003	10/8/2019	6/29/2020	Permit Renewal	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