

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

Title V, Operating  
Permit: V-24-013  
Murakami Manufacturing USA, Inc.  
575 Water Tower Bypass  
Campbellsville, KY 42718  
July 26, 2024  
Jonathon Hughes, Reviewer  
SOURCE ID: 21-217-00039  
AGENCY INTEREST: 4303  
ACTIVITY: APE20240001

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## SECTION 1 – SOURCE DESCRIPTION

SIC Code and description: 3714, Motor Vehicle Parts and Accessories

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: Taylor

Nonattainment Area  N/A  PM<sub>10</sub>  PM<sub>2.5</sub>  CO  NO<sub>x</sub>  SO<sub>2</sub>  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<sub>10</sub>  PM<sub>2.5</sub>  CO  NO<sub>x</sub>  SO<sub>2</sub>  VOC

PTE\* greater than 250 tpy for any criteria air pollutant  Yes  No

If yes, for what pollutant(s)?

PM<sub>10</sub>  PM<sub>2.5</sub>  CO  NO<sub>x</sub>  SO<sub>2</sub>  VOC

PTE\* greater than 10 tpy for any single hazardous air pollutant (HAP)  Yes  No

If yes, list which pollutant(s): Methyl Isobutyl Ketone, Toluene

PTE\* greater than 25 tpy for combined HAP  Yes  No

\*PTE does not include self-imposed emission limitations.

### Description of Facility:

Murakami Manufacturing USA, Inc. is a manufacturer of plastic assemblies and housings for the automotive industry. Some of the plastic products are coated with primer and finishing coatings.

**SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM**

Permit Number: V-24-013

Activities: APE20240001

Received: April 15, 2024

Application Complete Date: June 14, 2024

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 application with updated emission calculations based on current operations.

One new plastic molding machine has been added as an insignificant activity bringing the total number of molding machines to 16. A solvent recovery unit is also being added as an insignificant activity.

V-24-013 Emission Summary		
Pollutant	2023 Actual (tpy)	PTE V-24-013 (tpy)
CO	0.485	5.38
NOx	0.590	7.21
PT	0.389	2.21
PM <sub>10</sub>	0.389	2.21
PM <sub>2.5</sub>	0.303	1.87
SO <sub>2</sub>	0.005	0.108
VOC	85.7	243*
Lead	0	0.00003
Greenhouse Gases (GHGs)		
Carbon Dioxide	689	7349
Methane	0.013	0.138
Nitrous Oxide	0.013	0.014
CO <sub>2</sub> Equivalent (CO <sub>2</sub> e)	693	7537
Hazardous Air Pollutants (HAPs)		
Methanol	0.004	2.59
Methyl Isobutyl Ketone	0	18.0*
Toluene	0.216	10.1*
Trichloroethylene	0.311	1.12
Xylenes	1.41	0.507
Combined HAPs:	1.94	32.5*

\* Note: Emissions limited by federally-enforceable emission limitations to ensure the source remains below major source thresholds to be classified as major stationary source as defined in 401 KAR 52:001 and 401 KAR 51:001.

**SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS**

<b>Emission Unit #3 Coating Line #3</b>				
<b>Pollutant</b>	<b>Emission Limit or Standard</b>	<b>Regulatory Basis for Emission Limit or Standard</b>	<b>Emission Factor Used and Basis</b>	<b>Compliance Method</b>
VOC	Source wide 225 tpy	To preclude 401 KAR 51:017	Material Balance & MSDS	Recordkeeping, 12 month rolling total
Single HAP	9.5 tpy sourcewide	To preclude MACT PPPP	Material Balance & MSDS	Recordkeeping, 12 month rolling total
Combined HAPs	23.75 tpy sourcewide	To preclude MACT PPPP	Material Balance & MSDS	Recordkeeping, 12 month rolling total
PM	2.34 lbs/hr	401 KAR 59:010, Section 3(2)	Material Balance & MSDS with 70% Transfer Efficiency	Water wall, 90% control efficiency
Opacity	20%	401 KAR 59:010, Section 3(1)	N/A	Weekly visual observation

**Initial Construction Date:** 3/2008

**Process Description:**

Coating line consists of 3 coatings, primer, basecoat, and clear coat.

**Applicable Regulations:**

**401 KAR 59:010**, New Process Operations (applicable to each affected facility associated with a process operation commenced on or after July 2, 1975);

**401 KAR 50:012** General Application;

In the absence of a standard specified in 401 KAR 50 to 65, administrative regulations, all major air contaminant sources shall as a minimum apply control procedures that are reasonable, available, and practical (RAP). See comments below

**401 KAR 63:020**. Potentially hazardous matter or toxic substances, applicable to each affected facility which emits or may emit potentially hazardous matter or toxic substances.

**Precluded Regulations:**

**401 KAR 63:002, Section 2(4)(uuu)** 40 C.F.R. 63.4480 to 63.4581, Tables 1 to 4, and Appendix A (Subpart PPPP), National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products is precluded since the source has accepted limits on HAP emissions below a major source threshold.

**Comments:**

401 KAR 50:012, General application, RAP determination

On May 8, 2009, the Division received documentation from the facility that outlines a proposal for control procedures that are RAP. While it was determined that controlling emissions through an RTO would be cost prohibitive, there were work practice standards proposed as control procedures. These work practice standards include special attention to minimizing open containers, collecting purge from paint lines and utilizing large lot batch operation. While these standards have been incorporated since V-08-032, they have been added in the permit as operating requirements to clarify 50:012 requirements in issuance V-24-013.

<b>Emission Point #18 (Boiler #1) and #19 (Boiler #2)</b>				
<b>Pollutant</b>	<b>Emission Limit or Standard</b>	<b>Regulatory Basis for Emission Limit or Standard</b>	<b>Emission Factor Used and Basis</b>	<b>Compliance Method</b>
PM	0.56 lb/MMBtu, Boiler #1 0.519 lb/MMBtu Boiler #2	401 KAR 59:015, Section 4(1)(c)	AP-42 Chapter 1.4.	Assumed based upon natural gas combustion
Opacity	20% opacity	401 KAR 59:015, Section 4(2)	N/A	Assumed based upon natural gas combustion
SO <sub>2</sub>	3.0 lbs/MMBtu, Boiler #1 2.62 lbs/MMBtu Boiler #2	401 KAR 59:015, Section 5(1)(a)1. And 401 KAR 59:015, Section 5(1)(c)1.b.	AP-42 Chapter 1.4.	Assumed based upon natural gas combustion
<p><b>Initial Construction Date:</b> 5/2004, Boiler #1, 3/2008, Boiler #2</p> <p><b>Process Description:</b>                      Natural Gas Fired Boilers, Boiler #1, 5.91 MMBtu/hr. Boiler #2, 7.88 MMBtu/hr</p> <p><b>Applicable Regulations:</b>  <b>401 KAR 59:015</b>, New Indirect Heat Exchangers, applicable to indirect heat exchangers having a heat input capacity greater than one (1) MMBtu/hr commenced on or after April 9, 1972 (401 KAR 59:015, Section 2(1)).</p> <p><b>401 KAR 63:020</b>. Potentially hazardous matter or toxic substances, applicable to each affected facility which emits or may emit potentially hazardous matter or toxic substances.</p> <p><b>Precluded Regulation:</b>  <b>401 KAR 63:002, Section 2(4)(iii)</b> 40 C.F.R. 63.7480 to 63.7575, Tables 1 to 13 (Subpart DDDDD), National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters is precluded since the source accepted limits on HAP emissions below a major source status.</p> <p><b>Comments:</b>                      Boiler #1 limits calculated based on total heat input capacity of 5.91 MMBtu/hr. Boiler #2 limits calculated based on total heat input capacity of 13.79 MMBtu/hr.</p> <p>401 KAR 63:002, Section 2(4)(jjjjj) 40 C.F.R. 63.11193 to 63.11237, Tables 1 to 8 (Subpart JJJJJ), National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources does not apply since the boilers combust only natural gas.</p>				

<b>Emission Point #24 Mold Cleaner</b>				
<b>Pollutant</b>	<b>Emission Limit or Standard</b>	<b>Regulatory Basis for Emission Limit or Standard</b>	<b>Emission Factor Used and Basis</b>	<b>Compliance Method</b>
VOC	Source wide 225 tpy	To preclude 401 KAR 51:017	Material Balance & MSDS	Recordkeeping, 12 month rolling total
Single HAP	9.5 tpy sourcewide	To preclude MACT PPPP	Material Balance & MSDS	Recordkeeping, 12 month rolling total
Combined HAPs	23.75 tpy sourcewide	To preclude MACT PPPP	Material Balance & MSDS	Recordkeeping, 12 month rolling total
<p><b>Initial Construction Date:</b> 5/2004</p> <p><b>Process Description:</b>                      Cleaning of molds</p> <p><b>Applicable Regulation:</b>  <b>401 KAR 50:012</b> General Application;                      In the absence of a standard specified in 401 KAR 50 to 65, administrative regulations, all major air contaminant sources shall as a minimum apply control procedures that are reasonable, available, and practical.</p> <p><b>401 KAR 63:020.</b> Potentially hazardous matter or toxic substances, applicable to each affected facility which emits or may emit potentially hazardous matter or toxic substances.</p> <p><b>Comments:</b>                      Process rate: 195 lbs/month</p>				

<b>Emission Unit #05 Fire Pump</b>
<p><b>Initial Construction Date:</b> 2001</p> <p><b>Process Description:</b> Emergency Fire Pump.</p> <p><b>Applicable Regulation:</b>  <b>401 KAR 63:002 Section 2(4)(eeee)</b>, 40 C.F.R. 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, as published July 1, 2016</p> <p><b>Comments:</b>                      Rated Capacity: 120 bhp                      Total Displacements: 6L                      Model year: 2001</p>

**SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)**

**Testing Requirements/Results**

N/A

**Footnotes:**

**SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS**

**Table A - Group Requirements:**

<b>Emission and Operating Limit</b>	<b>Regulation</b>	<b>Emission Unit</b>
225 tpy of VOC emissions	To preclude the applicability of 401 KAR 51:017	Source-wide
9.5 tpy of individual HAP emissions	To preclude major source status for HAP, and MACT PPPP	Source-wide
23.75 tpy of combined HAP emissions	To preclude major source status for HAP, and MACT PPPP	Source-wide

**Table B - Summary of Applicable Regulations:**

<b>Applicable Regulations</b>	<b>Emission Unit</b>
<b>401 KAR 50:012</b> General Application	EP 03 & 24
<b>401 KAR 59:010</b> , New Process Operations	EP 03
<b>401 KAR 59:015</b> , New Indirect Heat Exchangers	EP 18 & 19
<b>401 KAR 63:020</b> . Potentially hazardous matter or toxic substances	EP 03, 18, 19 & 24
<b>401 KAR 63:002 Section 2(4)(eeee)</b> , 40 C.F.R. 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	EP 05

**Table C - Summary of Precluded Regulations:**

<b>Precluded Regulations</b>	<b>Emission Unit</b>
<b>401 KAR 63:002, Section 2(4)(uuu)</b> 40 C.F.R. 63.4480 to 63.4581, Tables 1 to 4, and Appendix A (Subpart PPPP), National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products.	Source-wide
<b>401 KAR 63:002, Section 2(4)(iii)</b> 40 C.F.R. 63.7480 to 63.7575, Tables 1 to 13 (Subpart DDDDD), National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters	EP 18 & 19



## **SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS (CONTINUED)**

### **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 July 26, 2024 of potentially hazardous matter or toxic substances (Ethyl benzene, Methanol, Methyl Isobutyl Ketone, Toluene, Trichloroethylene and Xylene) 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**

<b>Permit</b>	<b>Permit Type</b>	<b>Activity#</b>	<b>Complete Date</b>	<b>Issuance Date</b>	<b>Summary of Action</b>	<b>PSD/Syn Minor</b>
F-01-032	Initial	N/A	N/A	11/30/2001	Initial Construction Permit	N/A
F-01-032 R1	Sig Revision	APE20050001	3/3/2005	7/13/2005	Add 2 <sup>nd</sup> Paint Line	N/A
F-01-032 R2	Sig Revision	APE20060001	2/13/2006	5/15/2006	Changes in monitoring recordkeeping	N/A
F-06-063	Renewal	APE20060002	10/31/2006	12/29/2006	Renewal	N/A
F-06-063 R1	Minor Revision	APE20070002	12/8/2007	12/28/2007	Replacement of coating line 1 (PL1) with new coating line (PL3)	N/A
V-08-032	Initial Title V	APE20080001	8/28/2008	3/18/2009	Initial Title V/Syn Minor	Syn Minor
V-14-005	Renewal	APE20130002	11/7/2013	8/18/2014	Renewal	Syn Minor
V-19-006	Renewal	APE20190001	3/5/2019	10/18/2019	Renewal	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)
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 <sub>x</sub>	– Nitrogen Oxides
NSR	– New Source Review
PM	– Particulate Matter
PM <sub>10</sub>	– Particulate Matter equal to or smaller than 10 micrometers
PM <sub>2.5</sub>	– Particulate Matter equal to or smaller than 2.5 micrometers
PSD	– Prevention of Significant Deterioration
PTE	– Potential to Emit
SO <sub>2</sub>	– Sulfur Dioxide
TF	– Total Fluoride (Particulate & Gaseous)
VOC	– Volatile Organic Compounds