

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

Conditional Major, Operating  
PERMIT ID: F-23-024

Sweco, Division of M-I, LLC.  
8029 Dixie Highway, P.O. Box 1509  
Florence, KY 41042

July 15, 2024  
Ibrahim Al-Burai, Reviewer

Source ID: 21-015-00102  
Agency Interest #: 254  
Activity ID: APE20230001

**Table of Contents**

<b>SECTION 1 - SOURCE DESCRIPTION .....</b>	<b>2</b>
<b>SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM.....</b>	<b>3</b>
<b>SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS.....</b>	<b>4</b>
<b>SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS .....</b>	<b>8</b>
<b>SECTION 5 - PERMITTING HISTORY .....</b>	<b>10</b>
<b>SECTION 6 – PERMIT APPLICATION HISTORY.....</b>	<b>11</b>
<b>APPENDIX A – ABBREVIATIONS AND ACRONYMS .....</b>	<b>12</b>

## SECTION 1 - SOURCE DESCRIPTION

SIC Code and description: 3569, General Industrial Machinery and Equipment, NEC (except fire hoses and electric swimming pool heaters).

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: Boone

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): Toluene and Xylenes

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

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

### Description of Facility:

Sweco manufactures and repairs high quality filtration machinery and filtration screens for various industries including the food industry, the pharmaceutical industry, the oilfield drilling and production industry, and other manufacturing and production industries.

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

Permit Number: F-23-024

Activity: APE20230001

Application Received: 5/8/2023

Application Complete: 10/2/2023

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

- APE20190001: Renting/operate a temporary generator for construction activities.
- APE20200001: Addition of three (3) insignificant activities (IA-64, IA-65 and IA-66).

**Description of Action:**

- Renewal permit with updated insignificant activities.
- 18 tons per year VOC limit has been removed from source-wide limit to affected facilities (EP 01, 02, 06 & 07) of 401 KAR 59:225. Source precluded applicability of 401 KAR 59:225 by taking 18 tpy VOC limit on the affected facilities constructed while county was designated as nonattainment for ozone. Source is a minor source for VOC with PTE less than major source threshold, therefore source-wide emission limit is not required.

F-22-037 Emission Summary		
Pollutant	2022 Actual (tpy)	PTE F-22-037 (tpy)
CO	0.391	2.158
NOx	0.649	3.682
PT	0.476	4.627
PM <sub>10</sub>	0.476	4.627
PM <sub>2.5</sub>	0.280	2.638
SO <sub>2</sub>	0.006	0.108
VOC	3.885	39.970
Lead	0	0
Greenhouse Gases (GHGs)		
Carbon Dioxide	911.4	2718.710
Methane	0.018	0.051
Nitrous Oxide	0.017	0.005
CO <sub>2</sub> Equivalent (CO <sub>2</sub> e)	916.916	2721.529
Hazardous Air Pollutants (HAPs)		
Ethyl Benzene	0.034	2.9
Methyl Isobutyl Ketone	0.085	1.2
Toluene	1.011	11.05*
Xylenes	1.36	14.90*
Combined HAPs:	2.49	30.8*

\*Emissions limited by federally-enforceable emission limitations to ensure the source remains below major source thresholds

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

<b>Emission Units #1, 2, 6 &amp; 07 Paint Spray Booths</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	2.34 lbs/hr	401 KAR 59:010, Section 3(2)	Material Balance & SDS with 65% Transfer Efficiency	Mat or Panel Filters 90% Control efficiency
VOC	18 tpy	401 KAR 50:012 Section 1(5)	Material Balance & SDS	Recordkeeping and Reporting Requirements
HAPs	9 tpy single HAP and 22.5 tpy combined HAPs	To preclude 401 KAR 52:020	Material Balance & SDS	Recordkeeping and Reporting Requirements

**Initial Construction and Modification Date:** see below

**Process Description:**

EP 01 Finish Paint Spray Booth

Size: 22 ft x 12 ft

Rated Capacity: 3 gal/hr

Manufacturer: DeVilbiss

Spray Gun: Binks SV100 spray gun

Maximum coating application rate: 0.5 gallon per hour

Construction date: 9/1990

EP 02 Primer Paint Spray Booth

Size: 22 ft x 12 ft

Rated Capacity: 3 gal/hr

Manufacturer: DeVilbiss

Spray Gun: Binks SV100 spray gun

Maximum coating application rate: 0.5 gallon per hour

Construction date: 10/1991

EP 06 Oil Field Equipment Paint Spray Booth

Manufacturer: DeVilbiss

Spray Gun: Binks SV100 spray gun

Maximum coating application rate: 1.19 gallon per hour

Construction date: 7/2008

EP 07 Electric Cure Oven

DriQuik Thermal Oven (Electric) with 3 Air Blowers

Capacity: 1.19 gal/hr (usage of EP06)

Control Equipment: None

### Emission Units #1, 2, 6 & 07 Paint Spray Booths

**Applicable Regulation:**

401 KAR 59:010, 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 63:020, *Potentially hazardous matter or toxic substances.*

401 KAR 50:012, General application, Section 1(5). Except as provided by 401 KAR 50:055, nothing in these administrative regulations shall allow a source to remove control equipment or discontinue procedures previously required in a nonattainment area to achieve the national ambient air quality standards until a state implementation plan containing different requirements has been approved by the U.S. EPA. This regulation applies to the EP 01, 02, 06 & 07

**Precluded Regulations:**

40 CFR Part 63 Subpart M MMMM, National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products is precluded because the source takes single and combined HAP limits.

**Comments:**

- When EP01, 02, 06 & 07 were constructed, Boone County was a moderate nonattainment area for ozone. These units would trigger the applicability of 401 KAR 59:225, New miscellaneous metal parts and products surface coating operations because of the moderate nonattainment status. Therefore, source took 18 tpy VOC limit on the affected facilities (EP01, 02, 06 & 07) to preclude the applicability of this regulation according to 401 KAR 59:225 Section 6(3). The current status pursuant to 401 KAR 51:010 (as of permit F-23-024), Boone County is attainment for the 2015 Ozone standard. The VOC emission limitation of 18 tons per year was established when the area was non-attainment and is carried forward pursuant to 401 KAR 50:012, Section 1(5) "Except as provided by 401 KAR 50:055, nothing in these administrative regulations shall allow a source to remove control equipment or discontinue procedures previously required in a nonattainment area to achieve the national ambient air quality standards until a state implementation plan containing different requirements has been approved by the U.S. EPA." This no backsliding provision from 401 KAR 50:012, Section 1(5) continues to apply the emission limit which previously required in a nonattainment area.
- Emission calculations for EP06 and EP07 were based on 75% volatile flash off in paint booth and 25% volatile flash off in the curing oven.
- 40 CFR Part 63, Subpart XXXXXX, National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories is not applicable. The SIC code (3569) for General Industrial Machinery and Equipments is not included in the list of source categories subject to this regulation.
- 40 CFR Part 63, Subpart HHHHHH, National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, does not apply because the coating in use do not contain the target HAP: chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd).

**Emission Unit #08 Emergency Generator**

**Initial Construction and/or Modification Date:** 1/2009

**Process Description:**

Back-up diesel generator

**Applicable Regulation:**

**401 KAR 60:005, Section 2(2)(dddd)** 40 C.F.R. 60.4200 to 60.4219, Tables 1 to 8 (Subpart IIII), Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

**401 KAR 63:002 Section 2(4)(eeee)**, 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. Pursuant to 40 CFR 63.6590 (c)(1), a new stationary RICE located at an area source must meet the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of CFR part 60 subpart IIII, for compression ignition engines. No further requirements apply for such engines under 4 CFR 63 Subpart ZZZZ.

**Comments:**

Rated Capacity: 125 kW, 197 HP back-up diesel generator

Displacement: 6.8L,

Fuel Consumption: 9.9 gallons per hour

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

**Testing Requirements/Results**

<b>Emission Unit(s)</b>	<b>Control Device</b>	<b>Parameter</b>	<b>Regulatory Basis</b>	<b>Frequency</b>	<b>Test Method</b>	<b>Permit Limit</b>	<b>Test Result</b>	<b>Thruput and Operating Parameter(s) Established During Test</b>	<b>Activity Graybar</b>	<b>Date of last Compliance Testing</b>
NA										

**Footnotes:**

**SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS**

**Table A - Group Requirements:**

<b>Emission and Operating Limit</b>	<b>Regulation</b>	<b>Emission Unit</b>
18 tpy VOC emissions	401 KAR 50:012 Section 1(5)	EU01, 02, 06 & 07
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

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

<b>Applicable Regulations</b>	<b>Emission Unit</b>
401 KAR 59:010, <i>New process operations</i>	EU01, 02, 06 & 07
401 KAR 63:020, <i>Potentially hazardous matter or toxic substances</i>	EU01, 02, 06 & 07
401 KAR 60:005, Section 2(2)(dddd) 40 C.F.R. 60.4200 to 60.4219, Tables 1 to 8 (Subpart III), <i>Standards of Performance for Stationary Compression Ignition Internal Combustion Engines</i>	EU 08
401 KAR 63:002 Section 2(4)(eeee), 40 C.F.R. 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ) <i>National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.</i>	EU 08
401 KAR 50:012 Section 1(5), <i>General application</i>	EU01, 02, 06 & 07

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

<b>Precluded Regulations</b>	<b>Emission Unit</b>
40 CFR Part 63 Subpart MMMM, National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products.	Source-wide

**Table D - Summary of Non Applicable Regulations:**

<b>Non Applicable Regulations</b>	<b>Emission Unit</b>
NA	

## **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 SCREEN View on March 8, 2024 of potentially hazardous matter or toxic substances (Xylene, Methyl Isobutyl Ketone, Toluene, Ethyl Benzene, Manganese, Phosphorus, Nickel and Cumene) that may be emitted by the facility based upon the process rates, material formulations, stack heights and other pertinent information provided by the applicant. Additional refined model AERMOD was performed on July 12, 2024 on Ethyl Benzene, Manganese (Diet) & Nickel Soluble Salts pollutants. 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>
S-04-047 R1	Mnr Source Rev.	APE20060001	4/10/2006	5/23/2006	Addition of welding machine	N/A
F-8-017	Cond Mjr-Initial	APE20080001	5/1/2008	6/13/2008	Initial/Construction Permit	N/A
F-8-017 R1	Cond Mjr-Mnr Rev.	APE20100001	5/25/2010	6/16/2010	Modification of Insignificant activities	N/A
F- 13-013	Cond Mjr-Renewal	APE20130001	4/4/2013	9/13/2013	Renewal	N/A
F-18-013	Cond Mjr-Renewal	APE20180002	4/13/2018	11/3/2018	Renewal Operating Permit	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 <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