

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

Conditional Major, Construction/Operating
Permit: F-26-027

MELCO HVAC US, INC.
1705 Downing Drive
Maysville, KY 41056

June 5, 2026
Jonathon Hughes, Reviewer

SOURCE ID: 21-161-00038
AGENCY INTEREST: 35349
ACTIVITY: APE20260001

Table of Contents

SECTION 1 – SOURCE DESCRIPTION 2
SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM..... 3
SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS 4
SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS 10
SECTION 5 – PERMITTING HISTORY 12
SECTION 6 – PERMIT APPLICATION HISTORY..... 13
APPENDIX A – ABBREVIATIONS AND ACRONYMS 14

SECTION 1 – SOURCE DESCRIPTION

SIC Code and description: 3563, Air and Gas Compressors

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: Mason

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): 1,4 Dioxane

PTE* greater than 25 tpy for combined HAP Yes No

*PTE does not include self-imposed emission limitations.

Description of Facility:

MELCO HVAC US, INC. is a manufacturer of HVAC compressors. Facility operations involve machining, fabrication and surface coating of compressors.

SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM

Permit Number: F-26-027

Activity: APE20260001

Application Received: March 27, 2026 Application Complete Date: May 26, 2026

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:

Existing facility is being retooled to manufacture compressors for the HVAC industry. The site has previously been a registered source under the name Mitsubishi Electric Automotive America, Inc. (Mitsubishi) Most existing equipment under the registered source is being removed and new equipment is being constructed. With this new construction, potential to emit for the single HAP 1,4 Dioxane is greater than 10 tons per year. The facility has requested a limitation of 9 tons per year for single HAP emissions and 22.5 tons per year for combined HAP emissions to preclude major source status and as such has applied for their initial conditional major air permit.

F-26-027 Emission Summary		
Pollutant	2025 Actual (tpy)	PTE F-26-027 (tpy)
CO	NA	0.806
NOx	NA	4.52
PT	NA	7.81
PM ₁₀	NA	2.25
PM _{2.5}	NA	2.04
SO ₂	NA	0.217
VOC	NA	81.6
Lead	NA	0
Greenhouse Gases (GHGs)		
Carbon Dioxide	NA	156
Methane	NA	0.377
Nitrous Oxide	NA	0.001
CO ₂ Equivalent (CO ₂ e)	NA	166
Hazardous Air Pollutants (HAPs)		
1,4-Dioxane	NA	22.8*
Ethyl Benzene	NA	2.90
Hexane	NA	4.64
Manganese	NA	0.760
Xylenes (Total)	NA	3.18
Combined HAPs:	NA	34.3*

*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.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

Emission Unit #1 Mitsubishi Operations Equipment				
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
HAP	Source wide 9/22.5 tpy single/combined	To preclude 401 KAR 52:020	Material Balance & SDS	Monthly recordkeeping, 12-month rolling total
<p>Initial Construction Date: 2000</p> <p>Process Description: These processes associated with Mitsubishi remain at the facility after the retooling of overall facility operations. Numbering indicates identifiers used in KY EIS for the equipment.</p> <p>001- Solder Circuit Board 002- Poxxy Bond Circuit 003- Sensby Spot Solder 004- Silicone Application 007- Sensbey Solder Bath</p> <p>Applicable Regulation: 401 KAR 63:020, Potentially hazardous matter or toxic substances (applies to 004 only) [State-Origin Requirement]</p> <p>Comments: Facility identified these units in a review of the most recent KY EIS facility report that will temporarily continue operation after the construction of the new equipment associated with the initial Conditional Major permit.</p>				

Emission Unit #2 Anti-Rust Bath; Emission Unit #7 Wet Machining Emission Unit #15 Naital Etching				
<p>Initial Construction Date: Proposed 7/2026</p> <p>Process Description: The Anti-Rust bath uses chemical MG-RC74 / MB-802 at 2% concentration in a 93 gallon reservoir with an expected turnover of once weekly.</p> <p>The Wet Machining uses Castrol Syntilo 9930 cutting fluid which is changed every six months.</p> <p>The Naital Etching process uses a solution of 5% nitric acid, 95% ethyl alcohol applied to a test sample surface using a cotton swab at room temperature.</p> <p>Applicable Regulation: None</p> <p>Comments: Equipment in this grouping emit no HAPs, air toxics or particulate matter.</p>				

Emission Unit #6 Assembly Line Paint Dipping; Emission Unit #17 Press Line Stamping				
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
HAP	Source wide 9/22.5 tpy single/combined	To preclude 401 KAR 52:020	Material Balance & SDS	Monthly recordkeeping, 12-month rolling total
Initial Construction Date: Proposed 07/2026				
Process Description: Paint dipping operations use 13 tons of paint annually. The process consists of a tunnel that encloses an overhead conveyor. The Press Line Stamping consists of four stamping presses using a lubricant.				
Applicable Regulation: 401 KAR 63:020, Potentially hazardous matter or toxic substances. [State-Origin Requirement]				
Comments: Equipment in this grouping emit no particulate matter.				

Emission Unit #12 Burnish Brushing; Emission Unit #14 Dismantling Room Emission Unit #16 Core Press Die Maintenance				
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	Assumed based on rates of emissions on an uncontrolled basis
	20% opacity	401 KAR 59:010, Section 3(1)	NA	Weekly visual observation
Initial Construction Date: Proposed 07/2026				
Process Description: Burnish Brushing occurs after painting in the Defric area, each weighing 420 grams. The Dismantling Room is used for period cutting and sanding of defective compressors to inspect internal components. Sharp edges are sanded for safe handling. Processes up to 1,000 units annually. The Core Press Die Maintenance area is capable of processing up to two 10,000 pound dies per week. The operation consists of two large surface grinders and one small surface grinder. A dust collector is used for particulate controls.				
Applicable Regulation: 401 KAR 59:010, New process operations				
Comments: Equipment in this grouping emit no volatiles, HAPs or air toxics.				

Emission Unit #4 Brazing; Emission Unit #5 Welding Emission Unit #8 C/S Mn Line; Emission Unit #10 Buffing After C/S				
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	Assumed based on rates of emissions on an uncontrolled basis
	20% opacity	401 KAR 59:010, Section 3(1)	NA	Weekly visual observation
HAP	Source wide 9/22.5 tpy single/combined	To preclude 401 KAR 52:020	Material Balance & SDS	Monthly recordkeeping, 12-month rolling total

Initial Construction Date: Proposed 07/2026

Process Description:

Brazing process located in the assembly area consists of a natural gas torch with a brazing steel usage of up to 13,229 pounds annually. Process does not utilize particulate controls.

The welding operation located in the assembly area uses up to 33,069 pounds of welding wire (Lincoln Electric SuperArc L-56) annually.

The C/S Mn line consists of degreasing, manganese phosphate treatment, chemical treatment and rust inhibitor dipping. The following equipment makes up the line:

Machine	Chemical	Amount
Degreaser 1	Henkel Bonderite C-AK 305 Alkaline	1,507 kg/yr
Degreaser 2		
Mn Phosphate Treatment	Bonderite M-ACM	403 kg/yr
Chemical Treatment		
Tank 1	Bonderite M-MN Lubrite 2	1,238 kg/yr
Tank 2	Bonderite M-AD 10	243 kg/yr
Tank 3	Bonderite M-AD 40	113 kg/yr
Tank 4	Detergent 1000	960 kg/yr
Rust Inhibitor	Ethyl Acetate	3,735 kg/yr
	Moly CS	258 kg/yr

The Buffing after C/S processes one million pieces annually.

Applicable Regulation:

401 KAR 59:010, New process operations

State-Origin Requirement:

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

Comments: Welding and Buffing use dust collectors, but these are not required to meet the standards in 401 KAR 59:010 or any other regulations.

40 CFR 63, Subpart XXXXXX does not apply since the source SIC code is not grouped under one of the nine metal fabrication and finishing area source categories.

Emission Unit #11 Defric Painting				
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; 65% Transfer Efficiency	Dry Filters, 98% control efficiency, daily visual filter inspection
	20% opacity	401 KAR 59:010, Section 3(1)	NA	Weekly visual observation
HAP	Source wide 9/22.5 tpy single/combined	To preclude 401 KAR 52:020	Material Balance & SDS	Monthly recordkeeping, 12-month rolling total
1,4-Dioxane	Source wide 4.67 tpy	401 KAR 63:020	Material Balance & SDS	Monthly recordkeeping, 12-month rolling total

Initial Construction Date: Proposed 07/2026

Process Description:

Operation consists of a paint preparation room and one coating booth for coating metal components. Coating booth uses an HVLP spray applicator with a maximum rated throughput of 1.05 gallons per hour.

Applicable Regulation:

401 KAR 59:010, New process operations

State-Origin Requirement:

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

Precluded Regulation:

401 KAR 63:002, Section 2(4)(rrr) 40 C.F.R. 63.3880 through 63.3981, Tables 1 through 5, and Appendix A (Subpart M MMM), National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products is precluded since the facility has requested a limit for HAP emissions below a major source threshold.

Comments:

401 KAR 59:225 does not apply since the facility is located in a county designated attainment for ozone and is not a major source of VOC emissions.

40 CFR 63, Subpart HHHHHH does not apply since the facility does not use coatings that contain the target HAPs.

Emission Unit #20 & #23 Diesel Fuel Fired Emergency Generators

Initial Construction Date: 2015

Process Description:

EU 20: Emergency Generator 30REOZJB, 64 BHP

EU 23: Emergency Generator 230REOZV, 415 BHP

Applicable Regulations:

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*.

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

Comments:

None

Emission Unit #19 Two Natural Gas Fired Emergency Generators

Initial Construction Date: Proposed 07/2026

Process Description:

Two 60 kW (each) emergency generators.

Applicable Regulations:

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*

401 KAR 60:005, Section 2(2)(pppp), 40 C.F.R. 60.4230 to 60.4248, Tables 1 to 4 (Subpart JJJJ), *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*

Comments:

Total Displacements: Less than 10 L / cylinder

Model year: 2026

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Testing Requirements/Results

N/A

Footnotes:

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS

Table A - Group Requirements:

Emission and Operating Limit	Regulation	Emission Unit
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
4.67 tpy of 1,4-Dioxane emissions	To comply with 401 KAR 63:020	Source-wide

Table B - Summary of Applicable Regulations:

Applicable Regulations	Emission Unit
401 KAR 59:010 , New process operations	4, 5, 8, 10, 11, 12, 14, 16, 18
401 KAR 60:005, Section 2(2)(oooo) , 40 C.F.R. 60.4200 through 60.4219, Tables 1 through 8 (Subpart IIII), Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	20, 23
401 KAR 60:005, Section 2(2)(pppp) , 40 C.F.R. 60.4230 to 60.4248, Tables 1 to 4 (Subpart JJJJ), Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	19
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.	19, 20, 23
401 KAR 63:020 , Potentially hazardous matter or toxic substances.	1, 4, 5, 6, 8, 10, 11, 17, 18

Table C - Summary of Precluded Regulations:

Precluded Regulations	Emission Unit
401 KAR 63:002, Section 2(4)(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	

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 SCREEN View on June 4, 2026 of potentially hazardous matter or toxic substances (1,4-Dioxane, Ethyl Benzene, Manganese compounds 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. Emissions of 1,4-Dioxane and Ethyl Benzene did not pass initial screening and were modeled using AERMOD as described below.

The Division for Air Quality (Division) also performed modeling using AERMOD on June 5, 2026 of potentially hazardous matter or toxic substances (1,4-Dioxane and Ethyl Benzene) 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 (4.67 tpy 1,4-Dioxane emission limit) 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
NA	Registration Revision	ARE20070002	2/10/2008	3/27/2008	Replacement of old equipment with new	N/A
NA	Registration Revision	ARE20140002	4/6/2015	4/7/2015	Addition of new EPS line	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