

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

Conditional Major, Operating
PERMIT ID: F-23-028
Lingo Manufacturing Company, Inc.
7400 Industrial Road
Florence, KY 41042
May 6, 2024
Ibrahim AL-Burai, Reviewer

Source ID: 21-015-00011
Agency Interest #: 209
Activity ID: APE20230001

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 9
SECTION 5 - PERMITTING HISTORY 11
SECTION 6 – PERMIT APPLICATION HISTORY..... 12
APPENDIX A – ABBREVIATIONS AND ACRONYMS 13

SECTION 1 - SOURCE DESCRIPTION

SIC Code and description: 2542, Metal Partitions.

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 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): Ethyl Benzene, Methyl Isobutyl Ketone and Xylenes (Total)

PTE* greater than 25 tpy for combined HAP Yes No

*PTE does not include self-imposed emission limitations.

Description of Facility:

Lingo manufactures metal showcase, partition, shelving, and locker .

SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM

Permit Number: F-23-028

Activity: APE20230001

Application Received: 7/27/2023

Application Complete: 9/20/2023

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

Description of Action:

Renewal permit with no new construction.

F-23-028 Emission Summary		
Pollutant	2022 Actual (tpy)	PTE F-23-028 (tpy)
CO	0.321	1.255
NOx	0.385	1.494
PT	0.09	37.69
PM ₁₀	0.09	37.69
PM _{2.5}	0.078	31.349
SO ₂	0.002	0.009
VOC	2.92	731.958*
Lead	0	0
Greenhouse Gases (GHGs)		
Carbon Dioxide	461.4	1789.502
Methane	0.009	0.034
Nitrous Oxide	0.007	0.003
CO ₂ Equivalent (CO ₂ e)	463.711	1791.350
Hazardous Air Pollutants (HAPs)		
Cumene	0.082	4.66
Ethyl Benzene	0.074	34.24*
Methyl Isobutyl Ketone	0.178	82.70*
Xylenes (Total)	0.393	148.95*
Combined HAPs:	0.727	270.58*

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

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

Emission Unit #1 Resistance Welding				
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)	SDS	Proper operation and maintenance
	20% opacity	401 KAR 59:010, Section 3(1)	N/A	Weekly Visual Observation
Initial Construction Date: 8/1980				
Process Description: The emission point consists of a resistance welding line where sheet metal is fabricated into metal display racks.				
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.				
Comments: N/A				

Emission Unit #02, 03, 04 &05 Automatic Paint Booths and Manual Paint Booths				
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
VOC	0.90 kilogram of VOC per liter of coating solids applied	40 CFR 60.312(a)	Material Balance & SDS	Composition of the coatings by formulation data supplied by the manufacturer of the coating
VOC	20 tpy Source wide	401 KAR 52:030	Material Balance & SDS	Recordkeeping, 12 month rolling total
PM	2.34 lbs/hr	401 KAR 59:010, Section 3(2)	Material Balance & SDS	Dry filters, 92% C.E., Manufacturer's guarantee; Pressure drop monitoring once per day
	20% opacity	401 KAR 59:010, Section 3(1)	N/A	Weekly Visual Observation

Emission Unit #02, 03, 04 &05 Automatic Paint Booths and Manual Paint Booths

HAP	Source wide 9/20 tpy single/combined	401 KAR 52:030	Material Balance & SDS	Recordkeeping, 12 month rolling total
-----	--	----------------	---------------------------	--

Initial Construction Date: see below

Process Description:

EP 02 (1) Automatic Paint Booth

The emission point consists of an automated paint spray booth. The spray booth consists of three AEROBELL Sprayers (RPM-5093-XSX). 3300 Series SPRA-GARD High Efficiency Paint Arrestors are utilized to control particulate emissions.

Control: filters (92% C.E)

Construction commenced: April 1, 1992.

EP 03 (2) Automatic Paint Booth

The emission point consists of an automated paint spray booth. The spray booth consists of three AEROBELL Sprayers (RPM-5093-XSX). 3300 Series SPRA-GARD High Efficiency Paint Arrestors are utilized to control particulate emissions.

Control : filters (92% C.E)

Construction commenced: April 1, 1992.

EP 04 (3) Manual Paint Booth

The emission point consists of a manual paint spray booth. The spray booth consists of a Mid-size Maximum Performance HVLP paint spray gun. 3300 Series SPRA-GARD High Efficiency Paint Arrestors are utilized to control particulate emissions. The estimated

Control: filters (92% C.E)

Construction commenced: April 1, 1992.

EP 05 (4) Manual Paint Booth

The emission point consists of a manual paint spray booth. The spray booth consists of an air-assisted manual paint spray gun. 3300 Series SPRAGARD High Efficiency Paint Arrestors are utilized to control particulate emissions.

Control: filters (92% C.E)

Constructions commenced: January 31, 2009

Applicable Regulation:

401 KAR 59:010. New process operations is applicable to each affected facility (EP 02, EP 03, EP 04, and EP 05) which are not subject to another emission standard with respect to particulate, commenced on or after July 2, 1975.

401 KAR 60:005 Section 2(2)(oo), 40 CFR 60, Subpart EE, Standards of Performance for Surface Coating of Metal Furniture is applicable to each affected facility identified in 40 CFR 60.310(a) on which construction, modification, or reconstruction is commenced after November 28, 1980.

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.

Emission Unit #02, 03, 04 &05 Automatic Paint Booths and Manual Paint Booths

Non-applicable Regulation:

NA

Precluded Regulations:

- **401 KAR 52:020**, Title V permits.
- **401 KAR 59:225**, New miscellaneous metal parts and products surface coating operations is preclude because the source accepted a source wide emission cap for VOCs emission less than major source.
- **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 is precluded since the facility has accepted limits on HAP emissions below a major source threshold.

Comments:

401 KAR 63:002 Section 2(4)(iiii), 40 C.F.R. 63.11169 to 63.11180, Table 1 (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 #06 3 Stage Washer- Heat Exchangers

Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
PM	0.56 lb/MMBtu	401 KAR 59:015, Section 4(1)(a)	AP-42 Chapter 1.4.	Assumed based upon natural gas combustion
	20% opacity	401 KAR 59:015, Section 4(2)	N/A	Assumed based upon natural gas combustion
SO ₂	3.0 lbs/MMBtu	401 KAR 59:015, Section 5(1)(a)(1)	AP-42 Chapter 1.4.	Assumed based upon natural gas combustion

Initial Construction Date: 10/1992

Process Description:

3 Stage Washer- Heat Exchangers
 Rated capacity: 3.5MMBtu/hr.
 Fuel: Natural Gas

Applicable Regulation:

401 KAR 59:015, New Indirect Heat Exchangers, applicable to indirect heat exchangers having a heat input capacity greater than one (1) million BTU per hour (MMBtu/hr) commenced on or after April 9, 1972 (401 KAR 59:015, Section 2(1)).

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

Emission Unit #06 3 Stage Washer- Heat Exchangers

Comments:

Allowable limits have been recalculated and are based on total heat input capacity of 3.5 MMBtu/hr.

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
NA										

Footnotes:

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS

Table A - Group Requirements:

Emission and Operating Limit	Regulation	Emission Unit
20 tpy of VOC emissions	401 KAR 52:030, Federally-enforceable permits for nonmajor sources	Source-wide
9.0 tpy of individual HAP emissions	To preclude major source status for HAP	Source-wide
20 tpy of combined HAP emissions	To preclude major source status for HAP	Source-wide

Table B - Summary of Applicable Regulations:

Applicable Regulations	Emission Unit
401 KAR 59:010, New process operations	EU 01,02, 03, 04, & 05
401 KAR 59:015, New Indirect Heat Exchangers	EU 06
401 KAR 60:005 Section 2(2)(oo), 40 CFR 60, Subpart EE, Standards of Performance for Surface Coating of Metal Furniture	EU 02, 03, 04, & 05
401 KAR 63:020, Potentially hazardous matter or toxic substances	EU 02, 03, 04 & 06

Table C - Summary of Precluded Regulations:

Precluded Regulations	Emission Unit
401 KAR 52:020, Title V permits	Source-wide
401 KAR 59:225, New miscellaneous metal parts and products surface coating operations	EU02, 03, 04, & 05
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	EU02, 03, 04, & 05

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 November 27, 2023 of potentially hazardous matter or toxic substances (Ethyl benzene, Xylene, Cumene & Methyl Isobutyl Ketone) 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 January 4, 2024 on Ethyl Benzene pollutant. 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

Permit	Permit Type	Activity#	Complete Date	Issuance Date	Summary of Action	PSD/Syn Minor
F-97-014	Initial	E689	7/9/1997	12/9/1997	Initial Conditional Major permit	
F-03-005	Cond Mjr-Renewal	Log 55385	2/6/2003	5/23/2003	Cond Mjr-Operating Renewal	N/A
F-03-005 R1	Minor Revision	Log 55385	2/6/2003	10/5/2004	Minor Revision	N/A
F-08-001	Renewal	APE20070001	11/9/2011	5/1/2008	Permit Renewal	N/A
F-08-001 R1	Cond Mjr-Mnr Revision	APE20090001	2/9/2009	2/20/2009	Addition of a manual spray paint booth	N/A
F-12-066	Renewal	APE20120001	10/5/2012	1/2/2013	Permit Renewal	N/A
F-17-057	Renewal	APE20170001	7/21/2017	2/11/2018	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