

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY  
AIR QUALITY DIVISION**

August 24, 2020

**PERMIT TO INSTALL**  
64-20

**ISSUED TO**  
Mobex Global, Inc.

**LOCATED AT**  
14638 Apple Drive  
Fruitport, Michigan 49415

**IN THE COUNTY OF**  
Ottawa

**STATE REGISTRATION NUMBER**  
B6261

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: <b>August 19, 2020</b>	
DATE PERMIT TO INSTALL APPROVED: <b>August 24, 2020</b>	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

## PERMIT TO INSTALL

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## COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

\*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig

### POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO <sub>2</sub> e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H <sub>2</sub> S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO <sub>x</sub>	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO <sub>2</sub>	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

## GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
  - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
  - b) A visible emission limit specified by an applicable federal new source performance standard.
  - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

**EMISSION UNIT SPECIAL CONDITIONS**

**EMISSION UNIT SUMMARY TABLE**

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

<b>Emission Unit ID</b>	<b>Emission Unit Description (Including Process Equipment &amp; Control Device(s))</b>	<b>Flexible Group ID</b>
EUPLIBRICOMM1	Plibrico Reverberatory Melting Furnace No. 1. 2.5 ton/hour maximum melt rate; 25,000 lb holding capacity. Natural gas-fired, 8.8 MMBtu/hr heat input.	FGLINEA
EUPLIBRICOMM2	Plibrico Reverberatory Melting Furnace No. 2. 2.5 ton/hour maximum melt rate; 25,000 lb holding capacity. Natural gas-fired, 8.8 MMBtu/hr heat input.	FGLINEA
EUWESTCAST	West Cast Launder System for EUPLIBCOMM1 and EUPLIBCOMM2, Six Electric Holding Furnaces, 11 Electric Crucible Furnaces, Core Shakeout	FGLINEA
EUPLIBRICOMM3	Plibrico Reverberatory Melting Furnace No. 3. 3 ton/hr maximum melt rate; 40,000 lb holding capacity. Natural gas-fired, 12 MMBtu/hr heat input.	FGLINEB
EUPLIBRICOMM4	Plibrico Reverberatory Melting Furnace No. 4. 3 ton/hr maximum melt rate; 40,000 lb holding capacity. Natural gas-fired, 12 MMBtu/hr heat input.	FGLINEB
EUEASTCAST	East Cast Launder System for EUPLIBCOMM3 and EUPLIBCOMM4, Six Electric Holding Furnaces, 12 Electric Crucible Furnaces	FGLINEB
EUPLIBRICOMM6	Plibrico Reverberatory Melting Furnace No. 6. 3 ton/hr maximum melt rate; 40,000 lb holding capacity. Natural gas-fired, 12 MMBtu/hr heat input.	FGLINEC
EUPLIBRICOMM7	Plibrico Reverberatory Melting Furnace No. 7. 12 ton/hr maximum melt rate; 120,000 lb holding capacity. Natural gas-fired, 24 MMBtu/hr heat input.	FGLINEC
EUPLIB6CAST	Casting Launder System for EUPLIBCOMM6 and EUPLIBCOMM7, Eight Electric Holding Furnaces, 12 Electric Crucible Furnaces, Core Shakeout	FGLINEC

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

## FLEXIBLE GROUP SPECIAL CONDITIONS

### FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

<b>Flexible Group ID</b>	<b>Flexible Group Description</b>	<b>Associated Emission Unit IDs</b>
FGLINEA	Includes two natural gas-fired reverberatory furnaces to melt aluminum, a casting line with holding furnaces and electric casters to use sand cores and a core shakeout room where a rattler (vibrating) device is utilized	EUPLIBRICOMM1, EUPLIBRICOMM2, EUWESTCAST
FGLINEB	Includes two natural gas-fired reverberatory furnaces to melt aluminum, a casting line with holding furnaces and electric casters	EUPLIBRICOMM3, EUPLIBRICOMM4, EUEASTCAST
FGLINEC	Includes two natural gas-fired reverberatory furnaces to melt aluminum, a casting line with holding furnaces and electric casters to use sand cores and a totally enclosed core knockout machine with an internal cartridge collected that vents into the general in-plant environment	EUPLIBRICOMM6, EUPLIBRICOMM7, EUPLIB6CAST

**FGLINEA  
 FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION**

Includes two natural gas-fired reverberatory furnaces to melt aluminum, a casting line with holding furnaces and electric casters to use sand cores and a core shakeout room where a rattler (vibrating) device is utilized.

**Emission Unit:** EUPLIBRICOMM1, EUPLIBRICOMM2, EUWESTCAST

**POLLUTION CONTROL EQUIPMENT**

NA

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. PM	0.188 lb/ton charge <sup>a</sup> for each EU	Hourly	EUPLIBRICOMM1, EUPLIBRICOMM2	SC II.1, SC II.2, SC II.3, SC V.1	R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
2. PM10	0.188 lb/ton charge <sup>a</sup> for each EU	Hourly	EUPLIBRICOMM1, EUPLIBRICOMM2	SC II.1, SC II.2, SC II.3, SC V.1	R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
3. PM2.5	0.188 lb/ton charge <sup>a</sup> for each EU	Hourly	EUPLIBRICOMM1, EUPLIBRICOMM2	SC II.1, SC II.2, SC II.3, SC V.1	R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
4. PM	0.0123 lb/lb flux <sup>b</sup>	Hourly	EUWESTCAST	SC II.4, SC II.5, SC V.1	R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
5. PM10	0.0123 lb/lb flux <sup>b</sup>	Hourly	EUWESTCAST	SC II.4, SC II.5, SC V.1	R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
6. PM2.5	0.0123 lb/lb flux <sup>b</sup>	Hourly	EUWESTCAST	SC II.4, SC II.5, SC V.1	R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
7. PM	1.10 lb/ton of metal	Hourly	EUWESTCAST	SC II.4, SC II.6, SC V.1	R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
8. PM10	0.77 lb/ton of metal	Hourly	EUWESTCAST	SC II.4, SC II.6, SC V.1	R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
9. PM2.5	0.77 lb/ton of metal	Hourly	EUWESTCAST	SC II.4, SC II.6, SC V.1	R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)

<sup>a</sup> Limit was established using the average of three 6-hour test runs.

<sup>b</sup> The emission limit represents the total combined emissions for the 19 stacks identified in SC VIII. 3-21 and was established using the average of three 4-hour test runs.

**II. MATERIAL LIMIT(S)**

<b>Material</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. Aluminum	51 ton/day for each EU	Calendar Day	EUPLIBRICOMM1, EUPLIBRICOMM2	SC VI.2	R 336.1205, R 336.1331, 40 CFR 52.21(c) & (d)
2. Total flux	61.2 lb/day for each EU	Calendar Day	EUPLIBRICOMM1, EUPLIBRICOMM2	SC VI.2	R 336.1205, R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
3. Fluorinated flux	10.2 lb/day (included in total flux) for each EU	Calendar Day	EUPLIBRICOMM1, EUPLIBRICOMM2	SC VI.2	R 336.1205, R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
4. Aluminum	71.4 ton/day	Calendar Day	EUWESTCAST	SC VI.2	R 336.1205, R 336.1331, 40 CFR 52.21(c) & (d)
5. Total flux	433.50 lb/day	Calendar Day	EUWESTCAST	SC VI.2	R 336.1205, R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
6. Fluorinated flux	55 lb/day (included in total flux)	Calendar Day	EUWESTCAST	SC VI.2	R 336.1205, R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
7. Core material	2,500 lb/hr	Calendar Day	EUWESTCAST	SC VI.3	R 336.1205, R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)

8. The permittee shall not melt in FGLINEA any material other than clean charge, or internal scrap, as defined by 40 CFR Part 63, Subpart RRR. This condition is necessary to avoid requirements of 40 CFR Part 63, Subpart RRR, National Emission Standards for Secondary Aluminum Production. **(R 336.1224, R 336.1225, 40 CFR Part 63, Subpart RRR)**
9. The permittee shall only burn pipeline quality natural gas in the burners within FGLINEA. **(R 336.1225, R 336.1301, R 336.1331, 40 CFR 52.21(c) & (d))**

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall complete the core shakeout/knockout process of EUWESTCAST in an enclosure with a bottom opening for gravity feed of remnant material to a hopper. **(R 336.1225, R 336.1331)**
2. The permittee shall not operate the core shakeout/knockout process of EUWESTCAST unless the baghouse is installed, maintained, and operated in a satisfactory manner. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331)**
3. The permittee shall not pour from EUPLIBRICOMM1 and EUPLIBRICOMM2 simultaneously. **(R 336.1331, 40 CFR 52.21(c) & (d))**

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

NA

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Upon request from the AQD Supervisor, the permittee shall verify PM, PM10, and/or PM2.5 emission rates from EUPLIBRICOMM1 and/or EUPLIBRICOMM2 and/or EUWESTCAST by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.1224, R 336.1225, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1702(a))**
2. The permittee shall keep, in a satisfactory manner, daily records of the weight and description of all charge materials and fluxing materials or agents added to each emission unit within FGLINEA. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225, R 336.1301, R 336.1331)**
3. The permittee shall keep, in a satisfactory manner, daily records of the weight of core material processed (based on the nominal weight per core used) in EUWESTCAST. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225, R 336.1301, R 336.1331, R 336.1702)**

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTION(S)**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVPLIB1	21	47	R 336.1225 40 CFR 52.21(c) & (d)
2. SVPLIB2	21	47	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVWCV8	45 <sup>a,b</sup>	27	R 336.1225, 40 CFR 52.21(c) & (d)

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
4. SVWCV9	45 <sup>a,b</sup>	27	R 336.1225, 40 CFR 52.21(c) & (d)
5. SVWCV10	45 <sup>a,b</sup>	27	R 336.1225, 40 CFR 52.21(c) & (d)
6. SVWCV12	45 <sup>a,b</sup>	27	R 336.1225, 40 CFR 52.21(c) & (d)
7. SVWCV13	45 <sup>a,b</sup>	27	R 336.1225, 40 CFR 52.21(c) & (d)
8. SVWCV14	45 <sup>a,b</sup>	27	R 336.1225, 40 CFR 52.21(c) & (d)
9. SVWCV15	45 <sup>a,b</sup>	27	R 336.1225, 40 CFR 52.21(c) & (d)
10. SVWCV16	45 <sup>a,b</sup>	27	R 336.1225, 40 CFR 52.21(c) & (d)
11. SVWCV17	45 <sup>a,b</sup>	27	R 336.1225, 40 CFR 52.21(c) & (d)
12. SVWCV18	45 <sup>a,b</sup>	27	R 336.1225, 40 CFR 52.21(c) & (d)
13. SVWCV19	45 <sup>a,b</sup>	27	R 336.1225, 40 CFR 52.21(c) & (d)
14. SVWCV21	45 <sup>a,b</sup>	27	R 336.1225, 40 CFR 52.21(c) & (d)
15. SVWCV22	45 <sup>a,b</sup>	27	R 336.1225, 40 CFR 52.21(c) & (d)
16. SVWCV23	45 <sup>a,b</sup>	27	R 336.1225, 40 CFR 52.21(c) & (d)
17. SVWCV6SQR	45 <sup>a,b</sup>	27	R 336.1225, 40 CFR 52.21(c) & (d)
18. SVWCV5RND	45 <sup>a,b</sup>	27	R 336.1225, 40 CFR 52.21(c) & (d)
19. SVWCV6RND	45 <sup>a,b</sup>	27	R 336.1225, 40 CFR 52.21(c) & (d)
20. SVWCV7RND	45 <sup>a,b</sup>	27	R 336.1225, 40 CFR 52.21(c) & (d)
21. SVWCV24RND	45 <sup>a,b</sup>	27	R 336.1225, 40 CFR 52.21(c) & (d)

<sup>a</sup> The exhaust gases shall be discharged to the ambient air from a minimum of ten of the stacks listed above.  
<sup>b</sup> Equivalent diameter for square vent (40 inches x 40 inches) with rain cap.

**IX. OTHER REQUIREMENT(S)**

NA

**FGLINEB  
 FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION**

Includes two natural gas-fired reverberatory furnaces to melt aluminum, a casting line with holding furnaces and electric casters

**Emission Unit:** EUPLIBRICOMM3, EUPLIBRICOMM4, EUEASTCAST

**POLLUTION CONTROL EQUIPMENT**

NA

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. PM	0.124 lb/ton charge <sup>a</sup> for each EU	Hourly	EUPLIBRICOMM3, EUPLIBRICOMM4	SC II.1, SC II.2, SC II.3, SC V.1	R336.1331, 40 CFR 52.21(c) & (d)
2. PM10	0.124 lb/ton charge <sup>a</sup> for each EU	Hourly	EUPLIBRICOMM3, EUPLIBRICOMM4	SC II.1, SC II.2, SC II.3, SC V.1	R336.1331, 40 CFR 52.21(c) & (d)
3. PM2.5	0.124 lb/ton charge <sup>a</sup> for each EU	Hourly	EUPLIBRICOMM3, EUPLIBRICOMM4	SC II.1, SC II.2, SC II.3, SC V.1	R336.1331, 40 CFR 52.21(c) & (d)
4. PM	0.0123 lb PM/lb flux <sup>b</sup>	Hourly	EUEASTCAST	SC II.4, SC V.1	R 336.1205, R 336.1331, 40 CFR 52.21(c) & (d)
5. PM10	0.0123 lb PM10/ lb flux <sup>b</sup>	Hourly	EUEASTCAST	SC II.4, SC V.1	R 336.1205, R 336.1331, 40 CFR 52.21(c) & (d)
6. PM2.5	0.0123 lb PM2.5/ lb flux <sup>b</sup>	Hourly	EUEASTCAST	SC II.4, SC V.1	R 336.1205, R 336.1331, 40 CFR 52.21(c) & (d)

<sup>a</sup> Limit was established using the average of three 6-hour test runs.

<sup>b</sup> The emission limit represents the total combined emission limit for the six stacks identified in SC VIII. 3-8 and was established using the average of three 4-hour test runs.

**II. MATERIAL LIMIT(S)**

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Aluminum	64.8 ton/day for each EU	Calendar Day	EUPLIBRICOMM3, EUPLIBRICOMM4	SC VI.2	R 336.1205, R 336.1331, 40 CFR 52.21(c) & (d)
2. Total flux	72 lb/day for each EU	Calendar Day	EUPLIBRICOMM3, EUPLIBRICOMM4	SC VI.2	R 336.1205, R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
3. Fluorinated flux	18 lb/day (included in total flux) for each EU	Calendar Day	EUPLIBRICOMM3, EUPLIBRICOMM4	SC VI.2	R 336.1205, R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
4. Total flux	357 lb/day	Calendar Day	EUEASTCAST	SC VI.2	R 336.1205, R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
5. Fluorinated flux	70 lb/day (included in total flux)	Calendar Day	EUEASTCAST	SC VI.2	R 336.1205, R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)

- The permittee shall not melt in FGLINEB any material other than clean charge, or internal scrap, as defined by 40 CFR Part 63, Subpart RRR. This condition is necessary to avoid requirements of 40 CFR Part 63, Subpart RRR, National Emission Standards for Secondary Aluminum Production. **(R 336.1224, R 336.1225, 40 CFR Part 63, Subpart RRR)**
- The permittee shall only burn pipeline quality natural gas in the burners within FGLINEB. **(R 336.1225, R 336.1301, R 336.1331, 40 CFR 52.21(c) & (d))**

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

- The permittee shall not pour from EUPLIBRICOMM3 and EUPLIBRICOMM4 simultaneously. **(R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d))**

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

NA

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

- Upon request from the AQD Supervisor, the permittee shall verify PM, PM10, and/or PM2.5 emission rates from EUPLIBRICOMM3 and/or EUPLIBRICOMM4 and/or EUEASTCAST by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing,

including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. (R 336.1205, R 336.1224, R 336.1225, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1205, R 336.1702(a))
2. The permittee shall keep, in a satisfactory manner, daily records of the weight and description of all charge materials and fluxing materials or agents added to each emission unit within FGLINEB. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1225, R 336.1301, R 336.1331)

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTION(S)**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVPLIB3	36	53.5	R336.1225, 40 CFR 52.21(c) & (d)
2. SVPLIB4	36	52.7	R336.1225, 40 CFR 52.21(c) & (d)
3. SVECV33RND	42	51	R336.1225, 40 CFR 52.21(c) & (d)
4. SVECV34RND	42	51	R336.1225, 40 CFR 52.21(c) & (d)
5. SVECV36RND	42	51	R336.1225, 40 CFR 52.21(c) & (d)
6. SVECV37RND	42	51	R336.1225, 40 CFR 52.21(c) & (d)
7. SVECV38RND	42	51	R336.1225, 40 CFR 52.21(c) & (d)
8. SVECV39RND	42	51	R336.1225, 40 CFR 52.21(c) & (d)

**IX. OTHER REQUIREMENT(S)**

NA

**FGLINEC  
 FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION**

Includes two natural gas-fired reverberatory furnaces to melt aluminum, a casting line with holding furnaces and electric casters to use sand cores and a totally enclosed core knockout machine with an internal cartridge collected that vents into the general in-plant environment

**Emission Unit:** EUPLIBRICOMM6, EUPLIBRICOMM7, EUPLIB6CAST

**POLLUTION CONTROL EQUIPMENT**

NA

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. PM	0.188 lb / ton charge	Hourly	EUPLIBRICOMM6	SC II.1, SC II.2, SC II.3, SC V.2	R 336.1331, 40 CFR 52.21(c) & (d)
2. PM10	0.188 lb / ton charge	Hourly	EUPLIBRICOMM6	SC II.1, SC II.2, SC II.3, SC V.2	R 336.1331, 40 CFR 52.21(c) & (d)
3. PM2.5	0.188 lb / ton charge	Hourly	EUPLIBRICOMM6	SC II.1, SC II.2, SC II.3, SC V.2	R 336.1331, 40 CFR 52.21(c) & (d)
4. PM	0.188 lb / ton charge	Hourly	EUPLIBRICOMM7	SC II.4, SC II.5, SC II.6, SC V.1, SC V.2	R 336.1331, 40 CFR 52.21(c) & (d)
5. PM10	0.188 lb / ton charge	Hourly	EUPLIBRICOMM7	SC II.4, SC II.5, SC II.6, SC V.1, SC V.2	R 336.1331, 40 CFR 52.21(c) & (d)
6. PM2.5	0.188 lb / ton charge	Hourly	EUPLIBRICOMM7	SC II.4, SC II.5, SC II.6, SC V.1, SC V.2	R 336.1331, 40 CFR 52.21(c) & (d)
7. PM	0.0123 lb PM/ lb flux	Hourly	EUPLIB6CAST	SC II.7, SC II.8, SC II.9, SC V.2	R 336.1331, 40 CFR 52.21(c) & (d)
8. PM10	0.0123 lb PM10/ lb flux	Hourly	EUPLIB6CAST	SC II.7, SC II.8, SC II.9, SC V.2	R 336.1331, 40 CFR 52.21(c) & (d)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
9. PM2.5	0.0123 lb PM2.5/ lb flux	Hourly	EUPLIB6CAST	SC II.7, SC II.8, SC II.9, SC V.2	R 336.1331, 40 CFR 52.21(c) & (d)

**II. MATERIAL LIMIT(S)**

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Aluminum	61.2 tons/day	Calendar Day	EUPLIBRICOMM6	SC VI.2	R 336.1205, R 336.1331, 40 CFR 52.21(c) & (d)
2. Total flux	68 lb/day	Calendar Day	EUPLIBRICOMM6	SC VI.2	R 336.1205, R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
3. Fluorinated flux	8.5 lb/day (included in total flux)	Calendar Day	EUPLIBRICOMM6	SC VI.2	R 336.1205, R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
4. Aluminum	122.4 ton/day	Calendar Day	EUPLIBRICOMM7	SC VI.2	R 336.1205, R 336.1331, 40 CFR 52.21(c) & (d)
5. Total flux	119 lb/day	Calendar Day	EUPLIBRICOMM7	SC VI.2	R 336.1205, R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
6. Fluorinated flux	34 lb/day (included in total flux)	Calendar Day	EUPLIBRICOMM7	SC VI.2	R 336.1205, R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
7. Aluminum	122.4 ton/day	Calendar Day	EUPLIB6CAST	SC VI.2	R 336.1205, R 336.1331, 40 CFR 52.21(c) & (d)
8. Total flux	265.2 lb/day	Calendar Day	EUPLIB6CAST	SC VI.2	R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
9. Fluorinated flux	69.7 lb/day (included in total flux)	Calendar Day	EUPLIB6CAST	SC VI.2	R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d)
10. Core material	702.1 pph	Calendar Day	EUPLIB6CAST	SC VI.3	R 336.1225, R 336.1331, R 336.1702, 40 CFR 52.21(c) & (d)

11. The permittee shall not melt in FGLINEC any material other than clean charge, or internal scrap, as defined by 40 CFR Part 63, Subpart RRR. This condition is necessary to avoid requirements of 40 CFR Part 63, Subpart RRR, National Emission Standards for Secondary Aluminum Production. **(R 336.1224, R 336.1225, 40 CFR Part 63, Subpart RRR)**

12. The permittee shall only burn pipeline quality natural gas in the burners within FGLINEC. **(R 336.1225, R 336.1301, R 336.1331, 40 CFR 52.21(c) & (d))**

### **III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall complete the core shakeout/knockout process of EUPLIB6CAST in an enclosure with a bottom opening for gravity feed of remnant material to a hopper. **(R 336.1225, R 336.1331)**
2. The permittee shall not operate the core shakeout/knockout process of EUPLIB6CAST unless the baghouse is installed, maintained, and operated in a satisfactory manner. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331)**
3. The permittee shall not pour from EUPLIBRICOMM6 and EUPLIBRICOMM7 simultaneously. **(R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d))**

### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

NA

### **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Within 180 days after commencement of initial startup, the permittee shall verify PM, PM10, and PM2.5 emission factors used to calculate emissions from EUPLIBRICOMM7, by testing at the owner's expense, in accordance with Department requirements. After a test has been conducted, any resulting increase in an emission factor shall be implemented to calculate PM, PM10, and PM2.5. Testing shall be performed using an approved EPA Method listed in:

<b>Pollutant</b>	<b>Test Method Reference</b>
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

2. Upon request from the AQD Supervisor, the permittee shall verify PM, PM10, and/or PM2.5 emission rates from EUPLIBRICOMM6 and/or EUPLIBRICOMM7 and/or EUPLIB6CAST by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

<b>Pollutant</b>	<b>Test Method Reference</b>
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.1224, R 336.1225, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1702(a))**
2. The permittee shall keep, in a satisfactory manner, daily records of the weight and description of all charge materials and fluxing materials or agents added to each emission unit within FGLINEC. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225, R 336.1301, R 336.1331)**
3. The permittee shall keep, in a satisfactory manner, records of the weight of core material processed (based on the nominal weight per core used) in EUPLIB6CAST on a daily basis. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225, R 336.1301, R 336.1331, R 336.1702)**

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTION(S)**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVPLIBRICOMM6	36	66	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVPLIBRICOMM7	48	66	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVPLIB6CAST1	42	32.0	R 336.1225, 40 CFR 52.21(c) & (d)
4. SVPLIB6CAST2	42	32.0	R 336.1225, 40 CFR 52.21(c) & (d)
5. SVPLIB6CAST3	42	32.0	R 336.1225, 40 CFR 52.21(c) & (d)
6. SVPLIB6CAST4	42	32.0	R 336.1225, 40 CFR 52.21(c) & (d)
7. SVPLIB6CAST5	42	32.0	R 336.1225, 40 CFR 52.21(c) & (d)
8. SVPLIB6CAST6	42	32.0	R 336.1225, 40 CFR 52.21(c) & (d)
9. SVPLIB6CAST7	42	32.0	R 336.1225, 40 CFR 52.21(c) & (d)
10. SVPLIB6CAST8	42	32.0	R 336.1225, 40 CFR 52.21(c) & (d)
11. SVPLIB6CAST9	42	32.0	R 336.1225, 40 CFR 52.21(c) & (d)

**IX. OTHER REQUIREMENT(S)**

NA