

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

June 30, 2020

PERMIT TO INSTALL
32-16B

ISSUED TO
Busche Aluminum Technologies

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: June 30, 2020	
DATE PERMIT TO INSTALL APPROVED: June 30, 2020	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 ₂ 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 ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	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 ₂	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.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Flexible Group ID
EUPILBRICOMM1	Plibrico Furnaces #1, A natural gas fired reverberatory furnace from PTI No. 107-95C	FGMELT
EUPLIBRICOMM2	Plibrico Furnace #2, A natural gas fired reverberatory furnace from PTI No. 419-96D	FGMELT
EUWESTCAST	West Cast Launder System, Six Electric Holding Furnaces, Eleven Electric Crucible Furnaces, Core Shakeout from PTI No. 33-02A	FGMELT
EUPILBRICOMM3	Plibrico Furnace # 3 (Natural gas fired reverberatory) from PTI No. 211-00A	FGMELT
EUPLIBRICOMM4	Plibrico Furnace #4, A natural gas fired reverberatory with side charging well/baghouse from PTI No. 69-02	FGMELT
EUEASTCAST	East Cast Launder System, Six Electric Holding Furnaces, Twelve Electric Crucible Furnaces from PTI No. 34-02	FGMELT
EUPLIBRICOMM6	Plibrico reverberatory melting furnace #6. 6,000 lb/hr maximum melt rate; 40,000 lb holding capacity. Natural gas fired, 12 MMBtu/hr heat input.	FGMELT
EUPLIBRICOMM7	Plibrico reverberatory melting furnace No. 7. 12,000 lb/hr maximum melt rate; 120,000 lb holding capacity. Natural gas fired, 24 MMBtu/hr heat input.	FGMELT
EUPLIB6CAST	Electrically heated casting line including launder system with associated holding and crucible furnaces and casters. All emissions from this emission unit are vented in-plant.	FGMELT

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.

**EUPLIBRICOMM6
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Plibrico reverberatory melting furnace #6. 6,000 lb/hr maximum melt rate; 40,000 lb holding capacity. Natural gas fired, 12 MMBtu/hr heat input.

Flexible Group ID: FG5AND6

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	0.188 lb / ton charge	Hourly	EUPLIBRICOMM6	SC V.1	R 336.1331, 40 CFR 52.21(c) and (d)
2. PM10	0.188 lb / ton charge	Hourly	EUPLIBRICOMM6	SC V.1	R 336.1331, 40 CFR 52.21(c) and (d)
3. PM2.5	0.188 lb / ton charge	Hourly	EUPLIBRICOMM6	SC V.1	R 336.1331, 40 CFR 52.21(c) and (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.1	R 336.1205 R 336.1331, 40 CFR 52.21 (c) and (d)
2. Total flux	68 lb/day	Calendar Day	EUPLIBRICOMM6	SC VI.1	R 336.1205 R 336.1225, R 336.1331 40 CFR 52.21 (c) and (d)
3. Fluorinated flux	8.5 lb/day (included in total flux)	Calendar Day	EUPLIBRICOMM6	SC VI.1	R 336.1205 R 336.1225, R 336.1331 40 CFR 52.21 (c) and (d)

4. The permittee shall not melt in EUPLIBRICOMM6 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)**
5. The permittee shall only burn pipeline quality natural gas in the burners of EUPLIBRICOMM6. **(R 336.1225, R 336.1301, R 336.1331, 40 CFR 52.21(c) and (d))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

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 District Supervisor, the permittee may be required to verify PM, PM10, and PM2.5 emission rates from EUPLIBRICOMM6 by testing at owner's expense, in accordance with Department requirements. 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. Verification of emission rates includes the submittal of 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) and (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep, in a satisfactory manner, records of the weight and description of all charge materials and fluxing materials or agents added to EUPLIBRICOMM6 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)**

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. SVPLIBRICOMM6	36	66	R 336.1225, 40 CFR 52.21(c) and (d))

IX. OTHER REQUIREMENT(S)

NA

**EUPLIBRICOMM7
EMISSION UNIT CONDITIONS**

DESCRIPTION

Plibrico reverberatory melting furnace No. 7. 12,000 lb/hr maximum melt rate; 120,000 lb holding capacity. Natural gas fired, 24 MMBtu/hr heat input.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	0.188 lb / ton charge	Hourly	EUPLIBRICOMM7	SC V.1	R 336.1331, 40 CFR 52.21 (c) and (d)
2. PM10	0.188 lb / ton charge	Hourly	EUPLIBRICOMM7	SC V.1	R 336.1331, 40 CFR 52.21 (c) and (d)
3. PM2.5	0.188 lb / ton charge	Hourly	EUPLIBRICOMM7	SC V.1	R 336.1331, 40 CFR 52.21 (c) and (d)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Aluminum	122.4 ton/day	Calendar Day	EUPLIBRICOMM7	SC VI.2	R 336.1205 R 336.1331, 40 CFR 52.21 (c) and (d)
2. 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) and (d)
3. 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) and (d)

4. The permittee shall not melt in EUPLIBRICOMM7 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)**
5. The permittee shall only burn pipeline quality natural gas in the burners of EUPLIBRICOMM7. **(R 336.1225, R 336.1301, R 336.1331, 40 CFR 52.21(c) and (d))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

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 permit issuance, 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:

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 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) and (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 and format acceptable to the AQD District Supervisor, records of the weight and description of all charge materials and fluxing materials or agents added to EUPLIBRICOMM7 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)**

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. SVPLIBRICOMM7	48	66	R 336.1225, 40 CFR 52.21(c) and (d)

IX. OTHER REQUIREMENT(S)

NA

**EUPLIB6CAST
EMISSION UNIT CONDITIONS**

DESCRIPTION

Electrically heated casting line including launder system with associated holding and crucible furnaces and casters including core shakeout. All emissions from this emission unit are vented in-plant.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	1.10 lb / ton charge	Hourly	EUPLIB6CAST	SC V.1	R 336.1331, 40 CFR 52.21 (c) and (d)
2. PM10	0.77 lb / ton charge	Hourly	EUPLIB6CAST	SC V.1	R 336.1331, 40 CFR 52.21 (c) and (d)
3. PM2.5	0.77 lb / ton charge	Hourly	EUPLIB6CAST	SC V.1	R 336.1331, 40 CFR 52.21 (c) and (d)
4. PM	0.0123 lb PM/ lb flux	Hourly	EUPLIB6CAST	SC V.1	R 336.1331, 40 CFR 52.21 (c) and (d)
5. PM10	0.0123 lb PM10/ lb flux	Hourly	EUPLIB6CAST	SC V.1	R 336.1331, 40 CFR 52.21 (c) and (d)
6. PM2.5	0.0123 lb PM2.5/ lb flux	Hourly	EUPLIB6CAST	SC V.1	R 336.1331, 40 CFR 52.21 (c) and (d)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Total flux	265.2 lb/day	Calendar Day	EUPLIB6CAST	SC VI.3	R 336.1225, R 336.1331 40 CFR 52.21 (c) and (d)
2. Fluorinated flux	69.7 lb/day (included in total flux)	Calendar Day	EUPLIB6CAST	SC VI.3	R 336.1225, R 336.1331 40 CFR 52.21 (c) and (d)
3. Core material	702.1 pph	Calendar Day	EUPLIB6CAST	SC VI.2	R 336.1225, R 336.1331 R 336.1702 40 CFR 52.21 (c) and (d)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
4. Aluminum	122.4 ton/day	Calendar Day	EUPLIB6CAST	SC VI.3	R 336.1205 R 336.1331, 40 CFR 52.21 (c) and (d)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall complete the core shakeout/knockout process in an enclosure with a bottom opening for gravity feed of remnant material to a hopper. **(R 336.1225, R 336.1331)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

1. Upon request from the AQD Supervisor, the permittee shall verify PM, PM10, and PM2.5 emission rates from EUPLIB6CAST 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, records of the weight of core material processed (based on the monial 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)**
3. The permittee shall keep, records of the weight and description of all charge materials and fluxing materials or agents added to 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)**

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. SVPLIB6CAST1	42	32.0	R 336.1225, 40 CFR 52.21 (c) and (d)
2. SVPLIB6CAST2	42	32.0	R 336.1225, 40 CFR 52.21 (c) and (d)
3. SVPLIB6CAST3	42	32.0	R 336.1225, 40 CFR 52.21 (c) and (d)
4. SVPLIB6CAST4	42	32.0	R 336.1225, 40 CFR 52.21 (c) and (d)
5. SVPLIB6CAST5	42	32.0	R 336.1225, 40 CFR 52.21 (c) and (d)
6. SVPLIB6CAST6	42	32.0	R 336.1225, 40 CFR 52.21 (c) and (d)
7. SVPLIB6CAST7	42	32.0	R 336.1225, 40 CFR 52.21 (c) and (d)
8. SVPLIB6CAST8	42	32.0	R 336.1225, 40 CFR 52.21 (c) and (d)
9. SVPLIB6CAST9	42	32.0	R 336.1225, 40 CFR 52.21 (c) and (d)

IX. OTHER REQUIREMENT(S)

NA

FLEXIBLE GROUP SPECIAL CONDITIONS

FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGMELT	6 Furnaces and 3 Casting Lines to limit material throughput	EUPILBRICOMM1, EUPLIBRICOMM2, EUWESTCAST, EUPILBRICOMM3, EUPLIBRICOMM4, EUEASTCAST, EUPLIBRICOMM6, EUPLIBRICOMM7, EUPLIB6CAST

**FGMELT
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

6 Furnaces and 3 Casting Lines to limit material throughput

Emission Unit: EUPILBRICOMM1, EUPLIBRICOMM2, EUWESTCAST, EUPILBRICOMM3, EUPLIBRICOMM4, EUEASTCAST, EUPLIBRICOMM6, EUPLIBRICOMM7, EUPLIB6CAST

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	0.0123 lb PM/lb flux for each EU	Hourly	EUWESTCAST, EUEASTCAST	SC V.1	R 336.1205 R 336.1331, 40 CFR 52.21 (c) and (d)
2. PM10	0.0123 lb PM10/ lb flux for each EU	Hourly	EUWESTCAST, EUEASTCAST	SC V.1	R 336.1205 R 336.1331, 40 CFR 52.21 (c) and (d)
3. PM2.5	0.0123 lb PM2.5/ lb flux for each EU	Hourly	EUWESTCAST, EUEASTCAST	SC V.1	R 336.1205 R 336.1331, 40 CFR 52.21 (c) and (d)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Aluminum	51 ton/day	Calendar Day	EUPILBRICOMM1	SC VI.2	R 336.1205 R 336.1331, 40 CFR 52.21 (c) and (d)
2. Total flux	61.2 lb/day	Calendar Day	EUPILBRICOMM1	SC VI.2	R 336.1205 R 336.1225, R 336.1331, 40 CFR 52.21 (c) and (d)
3. Fluorinated flux	10.2 lb/day (included in total flux)	Calendar Day	EUPILBRICOMM1	SC VI.2	R 336.1205 R 336.1225, R 336.1331, 40 CFR 52.21 (c) and (d)
4. Aluminum	51 ton/day	Calendar Day	EUPLIBRICOMM2	SC VI.2	R 336.1205 R 336.1331, 40 CFR 52.21 (c) and (d)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
5. Total flux	61.2 lb/day	Calendar Day	EUPLIBRICOMM2	SC VI.2	R 336.1205 R 336.1225, R 336.1331, 40 CFR 52.21 (c) and (d)
6. Fluorinated flux	10.2 lb/day (included in total flux)	Calendar Day	EUPLIBRICOMM2	SC VI.2	R 336.1205 R 336.1225, R 336.1331, 40 CFR 52.21 (c) and (d)
7. Non-fluorinated 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) and (d)
8. Core material	5,610 lb/hr	Calendar Day	EUWESTCAST	SC VI.3	R 336.1205 R 336.1225, R 336.1331, 40 CFR 52.21 (c) and (d)
9. Aluminum	71.4 ton/day	Calendar Day	EUWESTCAST	SC VI.2	R 336.1205 R 336.1331, 40 CFR 52.21 (c) and (d)
10. Aluminum	64.8 ton/day	Calendar Day	EUPILBRICOMM3	SC VI.2	R 336.1205 R 336.1331, 40 CFR 52.21 (c) and (d)
11. Total flux	72 lb/day	Calendar Day	EUPILBRICOMM3	SC VI.2	R 336.1205 R 336.1225, R 336.1331, 40 CFR 52.21 (c) and (d)
12. Fluorinated flux	18 lb/day (included in total flux)	Calendar Day	EUPILBRICOMM3	SC VI.2	R 336.1205 R 336.1225, R 336.1331, 40 CFR 52.21 (c) and (d)
13. Aluminum	64.8 ton/day	Calendar Day	EUPLIBRICOMM4	SC VI.2	R 336.1205 R 336.1331, 40 CFR 52.21 (c) and (d)
14. Total flux	72 lb/day	Calendar Day	EUPLIBRICOMM4	SC VI.2	R 336.1205 R 336.1225, R 336.1331, 40 CFR 52.21 (c) and (d)
15. Fluorinated flux	18 lb/day (included in total flux)	Calendar Day	EUPLIBRICOMM4	SC VI.2	R 336.1205 R 336.1225, R 336.1331, 40 CFR 52.21 (c) and (d)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
16. Non-fluorinated flux	357 lb/day	Calendar Day	EUEASTCAST	SC VI.2	R 336.1205 R 336.1225, R 336.1331, 40 CFR 52.21 (c) and (d)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the side charging well in EUPLBRICOMM4. **(R 336.1205, R 336.1331, 40 CFR 52.21(c) and (d))**
2. The permittee shall not pour from EUPLBRICOMM6 and EUPLBRICOMM7 simultaneously. **(R 336.1331, 40 CFR 52.21(c) and (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 PM2.5 emission rates from EUEASTCAST and 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 and format acceptable to the AQD District Supervisor, records of the weight and description of all charge materials and fluxing materials or agents added to each emission unit in FGMELT 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)**
3. The permittee shall keep, in a satisfactory manner, records of the weight of core material processed (based on the monial weight per core used) in EUWESTCAST 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:

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 ^{a,b}	27	R 336.1225, 40 CFR 52.21 (c) and (d)
4. SVWCV9	45 ^{a,b}	27	R 336.1225, 40 CFR 52.21 (c) and (d)
5. SVWCV10	45 ^{a,b}	27	R 336.1225, 40 CFR 52.21 (c) and (d)
6. SVWCV12	45 ^{a,b}	27	R 336.1225, 40 CFR 52.21 (c) and (d)
7. SVWCV13	45 ^{a,b}	27	R 336.1225, 40 CFR 52.21 (c) and (d)
8. SVWCV14	45 ^{a,b}	27	R 336.1225, 40 CFR 52.21 (c) and (d)
9. SVWCV15	45 ^{a,b}	27	R 336.1225, 40 CFR 52.21 (c) and (d)
10. SVWCV16	45 ^{a,b}	27	R 336.1225, 40 CFR 52.21 (c) and (d)
11. SVWCV17	45 ^{a,b}	27	R 336.1225, 40 CFR 52.21 (c) and (d)
12. SVWCV18	45 ^{a,b}	27	R 336.1225, 40 CFR 52.21 (c) and (d)
13. SVWCV19	45 ^{a,b}	27	R 336.1225, 40 CFR 52.21 (c) and (d)
14. SVWCV21	45 ^{a,b}	27	R 336.1225, 40 CFR 52.21 (c) and (d)
15. SVWCV22	45 ^{a,b}	27	R 336.1225, 40 CFR 52.21 (c) and (d)
16. SVWCV23	45 ^{a,b}	27	R 336.1225, 40 CFR 52.21 (c) and (d)
17. SVWCV6SQR	45 ^{a,b}	27	R 336.1225, 40 CFR 52.21 (c) and (d)
18. SVWCV5RND	45 ^{a,b}	27	R 336.1225, 40 CFR 52.21 (c) and (d)
19. SVWCV6RND	45 ^{a,b}	27	R 336.1225, 40 CFR 52.21 (c) and (d)
20. SVWCV7RND	45 ^{a,b}	27	R 336.1225, 40 CFR 52.21 (c) and (d)
21. SVWCV24RND	45 ^{a,b}	27	R 336.1225, 40 CFR 52.21 (c) and (d)
22. SVPLIB3	36	53.5	R336.1225 40 CFR 52.21(c) and (d)

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
23. SVPLIB4	36	52.7	R336.1225 40 CFR 52.21 (c) and (d)
24. SVECV33RND	42	51	R336.1225, 40 CFR 52.21(c) and (d)
25. SVECV34RND	42	51	R336.1225, 40 CFR 52.21(c) and (d)
26. SVECV36RND	42	51	R336.1225, 40 CFR 52.21(c) and (d)
27. SVECV37RND	42	51	R336.1225, 40 CFR 52.21(c) and (d)
28. SVECV38RND	42	51	R336.1225, 40 CFR 52.21(c) and (d)
29. SVECV39RND	42	51	R336.1225, 40 CFR 52.21(c) and (d)
30. SVPLIBRICOMM6	36	66	R 336.1225, 40 CFR 52.21(c) and (d)
31. SVPLIBRICOMM7	48	66	R 336.1225, 40 CFR 52.21(c) and (d)
32. SVPLIB6CAST1	42	32.0	R 336.1225, 40 CFR 52.21(c) and (d)
33. SVPLIB6CAST2	42	32.0	R 336.1225, 40 CFR 52.21(c) and (d)
34. SVPLIB6CAST3	42	32.0	R 336.1225, 40 CFR 52.21(c) and (d)
35. SVPLIB6CAST4	42	32.0	R 336.1225, 40 CFR 52.21(c) and (d)
36. SVPLIB6CAST5	42	32.0	R 336.1225, 40 CFR 52.21(c) and (d)
37. SVPLIB6CAST6	42	32.0	R 336.1225, 40 CFR 52.21(c) and (d)
38. SVPLIB6CAST7	42	32.0	R 336.1225, 40 CFR 52.21(c) and (d)
39. SVPLIB6CAST8	42	32.0	R 336.1225, 40 CFR 52.21(c) and (d)
40. SVPLIB6CAST9	42	32.0	R 336.1225, 40 CFR 52.21(c) and (d)
^a The exhaust gases shall be discharged to the ambient air from a minimum of ten of the stacks listed above. ^b Equivalent diameter for square vent (40 inches x 40 inches) with rain cap			

IX. OTHER REQUIREMENT(S)

1. This permit will become null and void on January 1, 2021.