

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

April 25, 2023

**PERMIT TO INSTALL
70-22A**

ISSUED TO
Hyrdo Aluminum Metals USA, LLC

LOCATED AT
1476 Follet Drive
Cassopolis, Michigan 49031

IN THE COUNTY OF
Cass

STATE REGISTRATION NUMBER
P1242

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: April 19, 2023	
DATE PERMIT TO INSTALL APPROVED: April 25, 2023	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 condition 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
EUPREHEAT1	Preheating oven used to dry and heat uncoated aluminum ingots. Oven is heated via natural gas. Maximum heat input: 2.0 MMBTU/hr	FGMELT1
EUMELTFURNACE1	Furnace used to melt preheated aluminum from EUPREHEAT1. Furnace can also be fed directly with unclean charge and is subject to NESHAP Subpart RRR. Furnace is controlled by a baghouse with a lime and carbon injection system and heated via natural gas. Maximum heat input: 38.2 MMBTU/hr	FGMELT1, FG-NESHAP-RRR
EUCASTFURNACE1	Holding and casting furnace used to cast molten aluminum from EUMELTFURNACE1 into billets. Furnace is controlled by a baghouse with a lime and carbon injection system and heated via natural gas. Maximum heat input: 21.7 MMBTU/hr	FGMELT1
EUDELACKILN	Delacquering kiln used to heat and clean coated scrap aluminum fed to EUMELTFURNACE2. The kiln is subject to NESHAP Subpart RRR, and it is controlled by a baghouse equipped with a lime and carbon injection system.	FGMELT2, FG-NESHAP-RRR
EUMELTFURNACE2	Furnace used to melt coated and uncoated scrap aluminum. Furnace can be fed directly with unclean charge and is subject to NESHAP Subpart RRR. The furnace is controlled by a baghouse equipped with a lime and carbon injection system and heated via natural gas. Maximum heat input: 23.9 MMBTU/hr	FGMELT2, FG-NESHAP-RRR
EUCASTFURNACE2	Holding and casting furnace used to cast molten aluminum from EUMELTFURNACE2 into billets. Furnace is controlled by a baghouse with a lime and carbon injection system and heated via natural gas. Maximum heat input: 21.7 MMBTU/hr	FGMELT2
EUHOMOG1	Batch homogenization chamber for cast aluminum billets. Chamber is heated via natural gas. Maximum heat input: 17.08 MMBTU/hr	FGHOMOG
EUHOMOG2	Batch homogenization chamber for cast aluminum billets. Chamber is heated via natural gas. Maximum heat input: 17.08 MMBTU/hr	FGHOMOG
EUHOMOG3	Batch homogenization chamber for cast aluminum billets. Chamber is heated via natural gas. Maximum heat input: 17.08 MMBTU/hr	FGHOMOG
EUSAWLOADING	Sawing and loading of cooled aluminum billets. A cyclone saw chip collection system is used to capture saw chips that are emitted from the cutting process. Emissions are then controlled by a sock filter.	NA

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Flexible Group ID
EUCOOLING	Wet cooling tower used to cool water collected after use in the casting process. Cooled water from EUCOOLING is re-introduced into the casting process. Maximum design capacity: 3500 gpm.	NA
EUDIESELTANK	Above ground diesel fuel storage tank. Maximum capacity: 2,000 gallons	NA
EUEMGEN	A 134 HP (100 kW), 2022 model year diesel-fueled emergency engine subject to NSPS Subpart IIII and NESHAP Subpart ZZZZ.	NA
EUHEATERS	Miscellaneous natural gas fired heaters with a combined maximum total heat input of 5 MMBTU/hr.	NA

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.

EUSAWLOADING EMISSION UNIT CONDITIONS

DESCRIPTION

Sawing and loading of cooled aluminum billets. A cyclone saw chip collection system is used to capture saw chips that are emitted from the cutting process. Emissions are then controlled by a sock filter.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

EUSAWLOADING is controlled by a cyclone and sock filter.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Metal throughput rate	190,583 tpy	12-month rolling period as determined at the end of each calendar month	EUSAWLOADING	SC VI.2	R 336.1205, R 336.1225, 40 CFR 52.21(c) & (d)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUSAWLOADING unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the sock filter, has been submitted within 90 days of initial startup, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
 - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
 - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

2. The permittee shall not operate EUSAWLOADING unless the pressure drop across the sock filter is maintained within the range specified in the MAP. **(R 336.1205, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EUSAWLOADING unless the cyclone and sock filter are installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor. **(R 336.1205, R 336.1225, R 336.1331, R 336.1901, R 336.1910, 40 CFR 52.21(c) & (d))**
2. The permittee shall equip and maintain a gauge to monitor pressure drop across the sock filter in EUSAWLOADING. **(R 336.1205, R 336.1225, R 336.1901, R 336.1910, 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

NA

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 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. Records shall be stored on file at the facility and made available to the Department upon request. **(R 336.1205, R 336.1225, R 336.1301, R 336.1331, 40 CFR 52.21(c) & (d))**
2. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the total weight of the metal throughput in EUSAWLOADING. **(R 336.1205, R 336.1225, 40 CFR 52.21(c) & (d))**
3. The permittee shall keep a record of all inspections and maintenance, and any corrective actions performed on the EUSAWLOADING sock filter, in accordance with the MAP. The permittee shall maintain this record on site and make it available to the Department upon request. **(R 336.1205, R 336.1225, R 336.1301, R 336.1331, 40 CFR 52.21(c) & (d))**
4. The permittee shall monitor and record, in a satisfactory manner acceptable to the AQD District Supervisor, the pressure drop from the sock filter in EUSAWLOADING on a daily basis. **(R 336.1205, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUSAWLOADING. **(R 336.1201(7)(a))**

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. SVEP-7*	16	50	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVEP-8*	10	51	R 336.1225, 40 CFR 52.21(c) & (d)

*Stack is equipped with a rain cap

IX. OTHER REQUIREMENT(S)

NA

**EUCOOLING
EMISSION UNIT CONDITIONS**

DESCRIPTION

Wet cooling tower for homogenized billets. Maximum design capacity: 3,500 gpm.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Total Dissolved Solids (TDS) Content of the Circulating Water	1,500 mg/l	Based on monthly sampling	EUCOOLING	SC VI.2	R 336.1205(1)(a) & (b), 40 CFR 52.21(c) & (d)

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain EUCOOLING with mist/drift eliminators with a vendor-certified maximum drift rate of 0.02 percent or less. **(R 336.1205, R 336.1910, 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall maintain a record of the vendor's certification required in SC IV.1, for the life of EUCOOLING. **(R 336.1205, R 336.1910, 40 CFR 52.21(c) & (d))**
2. On a monthly basis, using a method acceptable to the AQD District Supervisor, the permittee shall monitor and record the TDS content of the circulating water of EUCOOLING. **(R 336.1205(1)(a) & (b), 40 CFR 52.21(c) & (d))**

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. SVEP-9	144	20	40 CFR 52.21(c) & (d)
2. SVEP-10	144	20	40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

EUDIESELTANK EMISSION UNIT CONDITIONS
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DESCRIPTION

Above ground diesel fuel storage tank. Maximum capacity: 2,000 gallons.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The throughput for EUDIESELTANK shall not exceed 108,000 gallons per 12-month rolling period as determined at the end of each month. **(R 336.1225, R 336.1702(a))**
2. The permittee shall not store any liquid other than diesel fuel in EUDIESELTANK. **(R 336.1225, R 336.1702)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum design storage capacity for EUDIESELTANK shall not exceed 2,000 gallons.¹ **(R 336.1225)**

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

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

NA

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**EUEMGEN
 EMISSION UNIT CONDITIONS**

DESCRIPTION

A 134 HP (100 kW), 2022 model year diesel-fueled emergency engine subject to NSPS Subpart IIII and NESHAP Subpart ZZZZ.

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. NMHC + NOx	4.0 g/kW-hr	Hourly ^A	EUEMGEN	SC V.1 SC VI.2	40 CFR 60.4205, 40 CFR 1039 Appendix I Table 3
2. CO	5.0 g/kW-hr	Hourly ^A	EUEMGEN	SC V.1 SC VI.2	40 CFR 60.4205, 40 CFR 1039 Appendix I Table 3
3. PM	0.30 g/kW-hr	Hourly ^A	EUEMGEN	SC V.1 SC VI.2	40 CFR 60.4205, 40 CFR 1039 Appendix I Table 3

g/kW-hr = grams per kilowatt-hour

^AThese emission limits are for certified engines; if testing becomes required to demonstrate compliance, then the tested values must be compared to the Not to Exceed (NTE) requirements determined through 40 CFR 60.4212(c).

II. MATERIAL LIMIT(S)

1. The permittee shall burn only diesel fuel in EUEMGEN with a maximum sulfur content of 15 ppm (0.0015 percent) by weight and a minimum Cetane index of 40 or a maximum aromatic content of 35 volume percent. **(40 CFR 60.4207, 40 CFR 1090.305)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUEMGEN for more than 500 hours per year based on a 12-month rolling time period as determined at the end of each calendar month. The 500 hours includes the hours for the purpose of necessary maintenance checks and readiness testing as described in SC III.2. **(R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
2. The permittee may operate EUEMGEN for no more than 100 hours per calendar year for the purpose of necessary maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Department for approval of additional hours to be used for maintenance checks and readiness testing. A petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency internal combustion engines beyond 100 hours per calendar year. **(40 CFR 60.4211(f)(2))**

3. The permittee may operate EUEMGEN up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing as provided in 40 CFR 60.4211(f)(2). Except as provided in 40 CFR 60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for the permittee to supply non-emergency power as part of a financial arrangement with another entity. **(40 CFR 60.4211(f)(3))**
4. If the permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60, Subpart IIII, for the same model year, the permittee shall meet the following requirements for EUEMGEN:
 - a) Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions,
 - b) Change only those emission-related settings that are permitted by the manufacturer, andIf you do not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine. **(40 CFR 60.4211(a) & (c))**
5. If the permittee purchased a non-certified engine or a certified engine operating in a non-certified manner, the permittee shall keep a maintenance plan for EUEMGEN and shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4211(g)(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain EUEMGEN with non-resettable hours meter to track the operating hours. **(R 336.1225, 40 CFR 60.4209)**
2. The maximum rated power output of EUEMGEN shall not exceed 134 HP (100 kW), as certified by the equipment manufacturer. **(R 336.1225, R 336.1702(a), 40 CFR 60.4202, 40 CFR 60.4205, 40 CFR 1039, 40 CFR 1042)**

V. TESTING/SAMPLING

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

1. If EUEMGEN is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance as follows:
 - a) Conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.
 - b) If a performance test is required, the performance tests shall be conducted according to 40 CFR 60.4212.

No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD. 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. **(40 CFR 60.4211(g)(2), 40 CFR 60.4212)**

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 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1225, 40 CFR 52.21 (c) & (d), 40 CFR Part 60, Subpart IIII)**

2. The permittee shall keep, in a satisfactory manner, the following records for EUEMGEN:
 - a) For a certified engine: The permittee shall keep records of the manufacturer certification documentation.
 - b) For an uncertified engine: The permittee shall keep records of testing required in SC V.1.

The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4211)**

3. The permittee shall keep, in a satisfactory manner, the following records of maintenance activity for EUEMGEN:
 - a) For a certified engine: The permittee shall keep records of the manufacturer's emission-related written instructions, and records demonstrating that the engine has been maintained according to those instructions, as specified in SC III.4.
 - b) For an uncertified engine: The permittee shall keep records of a maintenance plan, as required by SC III.5, and maintenance activities.

The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4211)**

4. The permittee shall monitor and record, the total hours of operation for EUEMGEN on a monthly and 12-month rolling time period basis, and the hours of operation during emergency and non-emergency service that are recorded through the non-resettable hour meter for EUEMGEN, on a calendar year basis, in a manner acceptable to the AQD District Supervisor. The permittee shall document how many hours are spent for emergency operation of EUENGINE1, including what classified the operation as emergency and how many hours are spent for non-emergency operation. **(40 CFR 60.4211, 40 CFR 60.4214)**

5. The permittee shall keep, in a satisfactory manner, fuel supplier certification records or fuel sample test data, for each delivery of diesel fuel oil used in EUEMGEN, demonstrating that the fuel meets the requirement of 40 CFR 1090.305. The certification or test data shall include the name of the oil supplier or laboratory, the sulfur content, and cetane index or aromatic content of the fuel oil. **(40 CFR 60.4207(b), 40 CFR 1090.305)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUEMGEN. **(R 336.1201(7)(a))**
2. The permittee shall submit a notification specifying whether EUEMGEN will be operated in a certified or a non-certified manner to the AQD District Supervisor, in writing, within 30 days following the initial startup of the engine and within 30 days of switching the manner of operation. **(40 CFR Part 60, Subpart IIII)**

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. SVEP-12	3	12	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and IIII, as they apply to EUEMGEN. **(40 CFR Part 60, Subparts A & IIII, 40 CFR 63.6590(c))**

2. The permittee shall comply with the provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and ZZZZ, as they apply to EUEMGEN. **(40 CFR Part 63, Subparts A & ZZZZ, 40 CFR 63.6585)**

**EUHEATERS
EMISSION UNIT CONDITIONS**

DESCRIPTION

Miscellaneous natural gas fired heaters with a combined maximum total heat input of 5 MMBTU/hr.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall not burn fuel other than natural gas in EUHEATERS. (R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum design heat input capacity for EUHEATERS shall not exceed 5 MMBTU per hour on a fuel heat input basis. (R 336.1205, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep records of the maximum design heat input capacity (in MMBTU) of each heater in EUHEATERS. (R 336.1205, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))

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. SVEP-11	6	60	R 336.1225, 40 CFR 52.21(c) & (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
FGMELT1	Preheating, melting, and casting process for aluminum ingots and sows as well as coated and uncoated scrap aluminum. Furnace can be fed directly with unclean charge and is subject to NESHAP Subpart RRR.	EUPREHEAT1, EUMELTFURNACE1, EUCASTFURNACE1
FGMELT2	Preheating, delacquering, melting and casting process for coated scrap aluminum.	EUMELTFURNACE2, EUDELACKILN, EUCASTFURNACE2,
FGHOMOG	Three (3) batch homogenization chambers for cast aluminum billets. Chambers are heated via natural gas.	EUHOMOG1, EUHOMOG2, EUHOMOG3
FG-NESHAP-RRR	Emission units subject to 40 CFR Part 63 Subpart RRR National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production.	EUMELTFURNACE1, EUDELACKILN, EUMELTFURNACE2,

FGMELT1 FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Preheating, melting, and casting process for aluminum ingots and sows as well as coated and uncoated scrap aluminum. Furnace can be fed directly with unclean charge and is subject to NESHAP Subpart RRR.

Emission Unit: EUPREHEAT1, EUMELTFURNACE1, EUCASTFURNACE1

POLLUTION CONTROL EQUIPMENT

The melt and casting furnaces are controlled by a baghouse with a lime and carbon injection system.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	3.26 pph	Hourly	EUMELTFURNACE1 and EUCASTFURNACE1 (SVEP-2)	SC V.1	R 336.1205, R 336.1331
2. PM10	3.26 pph	Hourly	EUMELTFURNACE1 and EUCASTFURNACE1 (SVEP-2)	SC V.1	R 336.1205, 40 CFR 52.21(c) & (d)
3. PM2.5	3.26 pph	Hourly	EUMELTFURNACE1 and EUCASTFURNACE1 (SVEP-2)	SC V.1	R 336.1205, 40 CFR 52.21(c) & (d)
4. NOx	5.55 pph	Hourly	EUMELTFURNACE1 and EUCASTFURNACE1 (SVEP-2)	SC V.1	R 336.1205, 40 CFR 52.21(c) & (d)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Feed/charge rate of aluminum into melt furnace	154,499 tpy	12-month rolling period as determined at the end of each calendar month	EUMELTFURNACE1	SC VI.2	R 336.1205, R 336.1225, 40 CFR 52.21(c) & (d)
2. Feed/charge rate of additional clean charge aluminum	57,937 tpy	12-month rolling period as determined at the end of each calendar month	EUCASTFURNACE1	SC VI.3	R 336.1205, R 336.1225, 40 CFR 52.21(c) & (d)

3. The permittee shall not use any reactive flux in any emission unit in FGMELT1. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**
4. The permittee shall only burn pipeline quality natural gas in the burners of each emission unit in FGMELT1. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FGMELT1 unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the operation of the lime and carbon injected baghouse, has been submitted within 90 days of initial startup, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
 - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
 - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate FGMELT1 unless the capture system and lime and carbon injected baghouse are installed, maintained, and operated in accordance with the manufacturer's recommendations. **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**
2. The permittee shall not operate FGMELT1 unless a device to monitor and record the lime and carbon injection feed rates is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor. **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**
3. The permittee shall not operate FGMELT1 unless a device to measure the pressure drop across the baghouse is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor. **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**
4. The permittee shall not operate FGMELT1 unless a bag leak detection system for the baghouse is installed, maintained, and operated in a satisfactory manner. **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**
5. The maximum design heat input capacity for EUMELTFURNACE1 shall not exceed 38.2 MMBTU per hour on a fuel heat input basis. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**
6. The maximum design heat input capacity for EUCASTFURNACE1 shall not exceed 21.7 MMBTU per hour on a fuel heat input basis. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**
7. The maximum design heat input capacity for EUPREHEAT1 shall not exceed 2.0 MMBTU per hour on a fuel heat input basis. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**

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, PM2.5, and NO_x emission rates from the melting and casting furnace in FGMELT1 (SVEP-2) by testing at owner's expense, in accordance with Department requirements. The permittee shall perform additional testing upon request of the District Supervisor. 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
NO _x	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. 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 336.1225, 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 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. Records shall be stored on file at the facility and made available to the Department upon request. **(R 336.1205, R 336.1225, 40 CFR 52.21(c) & (d))**
2. The permittee shall keep, in a satisfactory manner, a log of the amount of charge added to EUMELTFURNACE1 on a monthly and 12-month rolling basis. **(R 336.1205, R 336.1225, 40 CFR 52.21(c) & (d))**
3. The permittee shall keep, in a satisfactory manner, a log of the amount of charge added to EUCASTFURNACE1 on a monthly and 12-month rolling basis. **(R 336.1205, R 336.1225, 40 CFR 52.21(c) & (d))**
4. The permittee shall keep continuous records of the lime injection rate, carbon injection rate, and pressure drop in the baghouse. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, 40 CFR 52.21(c) & (d))**
5. The permittee shall continuously monitor and record the relative change in PM loading using a bag leak detection system. **(R 336.1205, R 336.1331, 40 CFR 52.21 (c) & (d))**
6. The permittee shall keep a record of all inspections and maintenance, and any corrective actions performed on the baghouse, in accordance with the MAP. The permittee shall maintain this record on site and make it available to the Department upon request. **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, 40 CFR 52.21(c) & (d))**
7. The permittee shall keep records of the maximum design heat input capacity (in MMBTU) of EUPREHEAT1, EUMELTFURNACE1, and EUCASTFURNACE1, individually. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of FGMELT1. **(R 336.1201(7)(a))**

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. SVEP-1	16	55	R 336.1225, 40 CFR 52.21 (c) and (d)
2. SVEP-2	82	60	R 336.1225, 40 CFR 52.21 (c) and (d)

IX. OTHER REQUIREMENT(S)

NA

**FGMELT2
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Preheating, delacquering, melting and casting process for coated scrap aluminum.

Emission Unit: EUMELTFURNACE2, EUDELACKILN, EUCASTFURNACE2

POLLUTION CONTROL EQUIPMENT

The delacquering kiln, melting furnace, and casting furnace are controlled by a baghouse with a lime and carbon injection system.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	1.32 pph	Hourly	FGMELT2 (SVEP-3)	SC V.1	R 336.1205, R 336.1331
2. PM10	1.32 pph	Hourly	FGMELT2 (SVEP-3)	SC V.1	R 336.1205, 40 CFR 52.21(c) & (d)
3. PM2.5	1.32 pph	Hourly	FGMELT2 (SVEP-3)	SC V.1	R 336.1205, 40 CFR 52.21(c) & (d)
4. NOx	5.37 pph	Hourly	FGMELT2 (SVEP-3)	SC V.1	R 336.1205, 40 CFR 52.21(c) & (d)
5. Hydrogen chloride (CAS No. 7647-01-0)	0.57 pph ¹	Hourly	FGMELT2 (SVEP-3)	SC V.1	R 336.1225
6. Hydrogen fluoride (CAS No. 7664-39-3)	0.05 pph ¹	Hourly	FGMELT2 (SVEP-3)	SC V.1	R 336.1225

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Feed/charge rate of aluminum into melt furnace	67,593 tpy	12-month rolling period as determined at the end of each calendar month	EUMELTFURNACE2 and EUDELACKILN combined	SC VI.2, SC VI.3, SC VI.4	R 336.1205, R 336.1225, 40 CFR 52.21(c) & (d)
2. Feed/charge rate of additional clean charge aluminum	57,937 tpy	12-month rolling period as determined at the end of each calendar month	EUCASTFURNACE2	SC VI.5	R 336.1205, R 336.1225, 40 CFR 52.21(c) & (d)

3. The permittee shall not use any reactive flux in any emission unit in FGMELT2. (R 336.1205, R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))

4. The permittee shall only burn pipeline quality natural gas in the burners of each emission unit in FGMELT2. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FGMELT2 unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the operation of the lime and carbon injected baghouse, has been submitted within 90 days of initial startup, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
 - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
 - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate FGMELT2 unless the capture system and lime and carbon injected baghouse are installed, maintained, and operated in accordance with the manufacturer's recommendations. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**
2. The permittee shall not operate FGMELT2 unless a device to monitor and record the lime and carbon injection feed rates is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor. **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**
3. The permittee shall not operate FGMELT2 unless a device to measure the pressure drop across the baghouse is installed, maintained, and operated in a satisfactory manner acceptable to the AQD District Supervisor. **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**
4. The permittee shall not operate FGMELT2 unless a bag leak detection system for the baghouse is installed, maintained, and operated in a satisfactory manner. **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**
5. The maximum design heat input capacity for EUMELTFURNACE2 shall not exceed 23.9 MMBTU per hour on a fuel heat input basis. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**
6. The maximum design heat input capacity for EUCASTFURNACE2 shall not exceed 21.7 MMBTU per hour on a fuel heat input basis. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**

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, PM2.5, NOx, HCl, and HF emission rates from the melting and casting furnace in FGMELT2 (SVEP-3) by testing at owner's expense, in accordance with Department requirements. The permittee shall perform additional testing upon request of the District Supervisor. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A
PM10 / PM2.5	40 CFR Part 51, Appendix M
NO _x	40 CFR Part 60, Appendix A
HCl	40 CFR Part 60, Appendix A
HF	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. 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 336.1225, 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 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. Records shall be stored on file at the facility and made available to the Department upon request. **(R 336.1205, R 336.1225, 40 CFR 52.21(c) & (d))**
2. The permittee shall keep, in a satisfactory manner, a log of the amount of charge added to EUMELTFURNACE2 on a monthly basis. **(R 336.1205, R 336.1225, 40 CFR 52.21(c) & (d))**
3. The permittee shall keep, in a satisfactory manner, a log of the amount of charge added to EUDELACKILN on a monthly basis. **(R 336.1205, R 336.1225, 40 CFR 52.21(c) & (d))**
4. The permittee shall keep, in a satisfactory manner, a log of the amount of charge added to EUMELTFURNACE2 and EUDELACKILN, combined, on a monthly and 12-month rolling basis. **(R 336.1205, R 336.1225, 40 CFR 52.21(c) & (d))**
5. The permittee shall keep, in a satisfactory manner, a log of the amount of charge added to EUCASTFURNACE2 on a monthly and 12-month rolling basis. **(R 336.1205, R 336.1225, 40 CFR 52.21(c) & (d))**
6. The permittee shall keep continuous records of the lime injection rate, carbon injection rate, and pressure in the baghouse. **(R 336.1205, R 336.1224, R 336.1331, 40 CFR 52.21(c) & (d))**
7. The permittee shall continuously monitor and record the relative change in PM loading using a bag leak detection system. **(R 336.1205, R 336.1331, 40 CFR 52.21 (c) & (d))**
8. The permittee shall keep a record of all inspections and maintenance, and any corrective actions performed on the baghouse, in accordance with the MAP. The permittee shall maintain this record on site and make it available to the Department upon request. **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, 40 CFR 52.21(c) & (d))**
9. The permittee shall keep records of the maximum design heat input capacity (in MMBTU) of each emission unit in FGMELT2. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of FGMELT2. **(R 336.1201(7)(a))**

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. SVEP-3	82	60	R 336.1225, 40 CFR 52.21 (c) and (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

FGHOMOG FLEXIBLE GROUP CONDITIONS
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DESCRIPTION

Three (3) batch homogenization chambers for cast aluminum billets. Chambers are heated via natural gas.

Emission Units: EUHOMOG1, EUHOMOG2, EUHOMOG3

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall only burn pipeline quality natural gas in the burners of each emission unit in FGHOMOG. **(R 336.1225)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum design heat input capacity for each emission unit in FGHOMOG, individually, shall not exceed 17.08 MMBTU per hour on a fuel heat input basis. **(R 336.1225, R 336.1702)**

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep records of the maximum design heat input capacity (in MMBTU) of each emission unit in FGHOMOG. **(R 336.1225)**

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. SVEP-4	22	50	R 336.1225, 40 CFR 52.21 (c) and (d)
2. SVEP-5	22	50	R 336.1225, 40 CFR 52.21 (c) and (d)
3. SVEP-6	22	50	R 336.1225, 40 CFR 52.21 (c) and (d)

IX. OTHER REQUIREMENT(S)

NA

**FG-NESHAP-RRR
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Emission units subject to 40 CFR Part 63 Subpart RRR National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production.

Emission Unit: EUMELTFURNACE1, EUDELACKILN, EUMELTFURNACE2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Dioxins and Furans (D/F)	3.5 × 10 ⁻⁶ gr of D/F TEQ* per ton of feed/charge (0.25 µg per Mg of feed/charge)	Hourly	EUDELACKILN	SC V.1	40 CFR 63.1505(d)(1)(iii)
2. Dioxins and Furans (D/F)	2.1 × 10 ⁻⁴ gr of D/F TEQ* per ton of feed/charge (15 µg per Mg of feed/charge)	Hourly	EUMELTFURNACE1, EUMELTFURNACE2	SC V.1	40 CFR 63.1505(i)(3)

* TEQ means the international method of expressing toxicity equivalents for D/F as defined in "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA-625/3-89-016).

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee must provide and maintain easily visible labels posted at each group 1 furnace, group 2 furnace, and delacquering kiln that identifies the applicable emission limits and means of compliance including: **(40 CFR 63.1506(b))**
 - a) The type of affected source or emission unit.
 - b) The applicable operational standard(s) and control method(s) that includes the type of charge to be used for a furnace, flux materials and addition practices, and the applicable operating parameter rangers and requirements as incorporated in the OM&M plan.
2. The permittee shall maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime flow rate at, or above, the same level established during the performance test. **(40 CFR 63.1506(m)(4))**
3. The permittee shall not operate any emission unit in FG-NESHAP-RRR unless the baghouse is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the baghouse requires the following:
 - a) Design and install a system for the capture and collection of emissions from each emission unit in FG-NESHAP-RRR to meet the engineering standards for minimum exhaust rates and facial inlet velocities

- as contained in the ACGIH Guidelines (incorporated by reference, see 40 CFR 63.14).
(40 CFR 63.1506(c)(1))
- b) Vent captured emissions shall be vented through a closed system, except that dilution air may be added to emission streams for the sole purpose of controlling temperature at the inlet to a fabric filter.
(40 CFR 63.1506(c)(2))
 - c) Operate each capture/collection system according to the procedures and requirements in the OM&M plan.
(40 CFR 63.1506(c)(3))
4. The permittee shall operate a bag leak detection system on any group 1 furnace according to the following:
(40 CFR 63.1506(m)(1))
- a) Install, calibrate, monitor, continuously operate a bag leak detection system alarm, and complete the corresponding corrective action procedure in accordance with the submitted OM & M plan in compliance with 40 CFR 63.1510(b).
 - b) Initiate corrective action on any affected aluminum scrap shredder and/or group 1 furnace within one hour of a bag leak detection system alarm.
 - c) Operate each fabric filter system, such that the bag leak detection system alarm does not sound more than five percent of the operating time during a six-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of one hour. If the owner or operator takes longer than one hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.
5. After the initial performance test, the permittee shall maintain the three-hour block average inlet temperature for each fabric filter at or below the average temperature established during the performance test, plus 14°C (plus 25°F). **(40 CFR 63.1506(g)(4), 40 CFR 63.1506(m)(3))**
6. Within 90 days of testing required in SC V.1, the permittee shall submit to the AQD District Supervisor, for review and approval, an operation, maintenance and monitoring (OM&M) plan for each emission unit. The plan shall include, but is not limited to, the following:
- a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.
 - b) A monitoring schedule for each affected source and emission unit.
 - c) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in 40 CFR 63.1505.
 - d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance.
 - e) Procedures for monitoring process and control device parameters, including procedures for annual inspections of afterburners, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.
 - f) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in SC III.1.a.
 - g) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.
 - h) All information required for secondary aluminum processing units as specified in 40 CFR 63.1510(s)(i)-(v).

The permittee shall maintain and implement the approved OM&M plans at all times. If the permitting authority determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of this section or this subpart, the owner or operator must promptly make all necessary revisions and resubmit the revised plan. If the owner or operator determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the owner or operator submits a description of the changes and a revised plan incorporating them to the permitting authority.
(40 CFR 63.1510(b))

7. The permittee shall initiate corrective action if a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the performance test and incorporated in the OM&M plan. **(40 CFR 63.1506(p))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate any emission unit in FG-NESHAP-RRR unless the associated baghouse is installed and operating in accordance with the submitted OM&M plan in compliance with 40 CFR 63.1510(b). **(40 CFR Part 63.1510(b))**
2. The permittee shall install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to each emission unit in FG-NESHAP-RRR over the same operating cycle or time period used in SC V.1. **(40 CFR 63.1510(e))**
3. The permittee shall install, calibrate, operate, and maintain a bag leak detection system for each baghouse as required in 40 CFR 63.1510(f)(1). **(40 CFR 63.1510(f))**
4. The permittee shall install, calibrate, operate, and maintain a device to continuously monitor and record the temperature of the fabric filter inlet gases consistent with the requirements for continuous monitoring systems in 40 CFR 63 Subpart A. **(40 CFR 63.1510(h))**
5. The permittee may operate either EUMELTFURNACE1 or EUMELTFURNACE2 for a period of up to 60 days per calendar year, individually, under an alternative operating scenario in accordance with 40 CFR 63.1514(d), according to the following:
 - a) To change modes of operation from a group 1 furnace to a group 2 furnace, the permittee shall perform the following before turning off or bypassing the control device: **(40 CFR 63.1514(d)(3))**
 - (i) Completely remove all aluminum from the furnace;
 - (ii) Change the label on the furnace to reflect group 2 operation;
 - (iii) Use only clean charge, and;
 - (iv) Use no reactive flux.
 - b) To change modes of operation from a group 2 furnace to a group 1 furnace, the permittee shall perform the following before adding other than clean charge to the furnace **(40 CFR 63.1514(d)(4))**:
 - (i) Change the label on the furnace to reflect group 1 operation;
 - (ii) Direct the furnace emissions to the control device;
 - (iii) turn on the control device and begin lime addition to the control device at the rate established for group 1 mode; and
 - (iv) Ensure the control device is operating properly.
 - c) In addition to the recordkeeping requirements of 40 CFR 63.1517, the permittee shall maintain records of the nature of each mode change (group 1 to group 2, or group 2 to group 1), the time the furnace operating mode change is initiated, and, if the furnace is equipped with a control device, the time the exhaust gas is diverted from control device to bypass or from bypass to control device. **(40 CFR 63.1514(d)(5))**
 - d) The permittee shall limit the frequency of changing the furnace operating mode **(40 CFR 63.1514(e))**:
 - (i) A change in furnace operating mode, which consists of changing from one furnace operating mode to another and subsequently back to the initial operating mode, as provided in 40 CFR 63.1514(a) through (d), may not be done more frequently than 4 times in any 6-month period unless the permittee receives approval from the Department pursuant to 40 CFR 63.1514(e)(2).
 - (ii) If additional changes are needed, the permittee shall apply in advance to the Division for approval of the additional changes in operating mode.

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 D/F emissions by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Appendix A. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and the 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 336.2001, R 336.2003, R 336.2004, 40 CFR 63.1511)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall inspect the labels for each group 1 furnace at least once per calendar month to confirm that posted labels as required by the operational standard in 40 CFR 63.1506(b) are intact and legible. **(40 CFR 63.1510(c))**
2. The permittee shall inspect each capture/collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in 40 CFR 63.1506(c) and record the results of each inspection. **(40 CFR 63.1510(d)(2))**
3. The permittee shall keep, in a satisfactory manner for each bag leak detection system, a written record system which describes values for the baseline (sensitivity) setting, response time setting, and alarm level(s) and a description of how each was established from the required stack test under 40 CFR Subpart RRR. **(40 CFR 63.1510(f))**
4. For each lime injection system, the permittee shall verify that lime is always free-flowing by either: **(40 CFR 63.1510(i))**
 - a) Inspecting each feed hopper or silo at least once each 8-hour period and recording the results of each inspection. If lime is found not to be free-flowing during any of the 8-hour periods, the owner or operator must increase the frequency of inspections to at least once every 4-hour period for the next 3 days. The owner or operator may return to inspections at least once every 8-hour period if corrective action results in no further blockages of lime during the 3-day period.
 - b) As approved by the AQD District Supervisor, installing, operating and maintaining a load cell, carrier gas/lime flow indicator, carrier gas pressure drop measurement system or other system to confirm that lime is free-flowing. If lime is found not to be free-flowing, the owner or operator must promptly initiate and complete corrective action.
5. The permittee shall record the lime feeder setting once for each day of operation. **(40 CFR 63.1510(i)(2))**
6. The permittee shall calculate and record the 3-day, 24-hour rolling average emissions of D/F emissions for each secondary aluminum processing unit on a daily basis. The permittee shall calculate the emissions as specified in 40 CFR 63.1510(t)(1)-(4). **(40 CFR 63.1510(t))**
7. The permittee shall monitor and record all other applicable emissions and operating information as required by the NESHAP regulations specified in 40 CFR 63.1510. **(40 CFR 63.1510)**
8. The permittee shall comply with all applicable provisions in 40 CFR 63.1514(c) when changing from a Group 1 controlled furnace to a Group 2 furnace. **(40 CFR 63.1514(c))**
9. For each affected source and emission unit with emissions controlled by a lime-injected fabric filter, the permittee shall keep records as specified in 40 CFR 63.1517(b)(4). **(40 CFR 63.1517(b))**
10. For each new or existing affected source with emissions controlled by a lime-injected fabric filter, the permittee shall keep records of the number of total operating hours for the affected source or emission unit during each 6-month reporting period, records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken. **(40 CFR 63.1517(b)(1)(i))**
11. For each new or existing group 1 furnace subject to D/F emission standards with emissions controlled by a lime-injected fabric filter, the permittee shall keep records of 15-minute block average inlet temperatures for each lime-injected fabric filter, including any period when the 3-hour block average temperature exceeds the compliant operating parameter value +14 °C (+25 °F), with a brief explanation of the cause of the excursion and the corrective action taken. **(40 CFR 63.1517(b)(3))**

12. The permittee shall keep records of monthly inspections for proper unit labeling for each affected source and emission unit subject to labeling requirements on file at the facility. **(40 CFR 63.1517(b)(13))**
13. For each affected source and emission unit the permittee shall keep all inspection reports, alternative monitoring or testing procedures, and current copies of all plans with compliance documentation on file at the facility. **(40 CFR 63.1517(b)(14), 40 CFR 63.1517(b)(15), 40 CFR 63.1517(b)(16))**

VII. REPORTING

1. The permittee shall submit all initial notifications as specified in 40 CFR 63.1515(a)(1) through (7). **(40 CFR 63.1515(a))**
2. The permittee shall submit semi-annual excess emission/summary reports within 60 days after the end of each six-month period. A report must be submitted if any of the conditions specified in 40 CFR 63.1516(b)(1) occur during the reporting period. When no deviations of parameters have occurred, the permittee must submit a report stating that no excess emissions occurred during the reporting period. **(40 CFR 63.1516(b))**
3. The permittee must submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges within 60 days of completing each performance test. The permittee must submit the reports according to the procedures listed below:
 - a) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (https://www3.epa.gov/ttn/chief/ert/ert_info.html), you must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>.) **(40 CFR 63.1516(b)(3)(i)(A))**
 - b) For data collected using test methods that are not supported by the EPAs ERT as listed on the EPAs ERT website, you must submit the results of the performance test to the administrator at the appropriate address listed in §63.13. **(40 CFR 63.1516(b)(3)(i)(B))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart RRR for Secondary Aluminum Production upon startup. **(40 CFR Part 63 Subparts A and RRR)**