MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

May 11, 2016

PERMIT TO INSTALL
340-07E

ISSUED TO
Alloy Resources Corporation

LOCATED AT
2281 Port City Boulevard
Muskegon, Michigan

IN THE COUNTY OF
Muskegon

STATE REGISTRATION NUMBER
N7888

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. 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: **March 11, 2016**	
DATE PERMIT TO INSTALL APPROVED: **May 11, 2016**	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO_2e	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
		gr	Grains
EU	Emission Unit	HAP	Hazardous Air Pollutant
FG	Flexible Group	Hg	Mercury
GACS	Gallons of Applied Coating Solids	hr	Hour
GC	General Condition	HP	Horsepower
GHGs	Greenhouse Gases	H_2S	Hydrogen Sulfide
HVLP	High Volume Low Pressure*	kW	Kilowatt
ID	Identification	lb	Pound
IRSL	Initial Risk Screening Level	m	Meter
ITSL	Initial Threshold Screening Level	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	NMOC	Non-methane Organic Compounds
MDEQ	Michigan Department of Environmental Quality	NO_x	Oxides of Nitrogen
		ng	Nanogram
MSDS	Material Safety Data Sheet	PM	Particulate Matter
NA	Not Applicable	PM10	Particulate Matter equal to or less than 10 microns in diameter
NAAQS	National Ambient Air Quality Standards		
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonable Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO_2	Sulfur Dioxide
SCR	Selective Catalytic Reduction	TAC	Toxic Air Contaminant
SNCR	Selective Non-Catalytic Reduction	Temp	Temperature
SRN	State Registration Number	THC	Total Hydrocarbons
TEQ	Toxicity Equivalence Quotient	tpy	Tons per year
USEPA/EPA	United States Environmental Protection Agency	µg	Microgram
		µm	Micrometer or Micron
VE	Visible Emissions	VOC	Volatile Organic Compounds
		yr	Year

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

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 Environmental Quality, 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 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 R 336.1219 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 R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(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 R 336.1301, 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 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 R 336.1370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

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 (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EUALREVERB	A 80,000 lb capacity natural gas fired reverberatory furnace, with a design aluminum melt rate of 12,000 lbs per hour. The natural gas burners are rated at 20 MMBtu/hr. In the reverberatory furnace chlorine gas will be injected and alloys will be added to further refine the aluminum to specifications. A solid flux is also added to minimize oxidation of the aluminum. The emissions from the reverberatory furnace are controlled by the minimum 50,000 cfm lime injected baghouse which controls emissions from three furnaces. Aluminum scrap to include clean charge or material other than clean charge may be melted in the reverberatory furnace.	01-10-2013	FGFURNACES
EUREVERB50	An aluminum reverberatory furnace with 5,000 lbs/hr charge capability and 8.75 MMBtu/hr natural gas-fired burners. No reactive flux or chlorine gas will be used in the furnace. The furnace is exhausted through the minimum 50,000 cfm lime injected baghouse which controls emissions from three furnaces. Aluminum scrap to include clean charge or material other than clean charge may be melted in the reverberatory furnace.	01-30-2015	FGFURNACES
EUROTARY	A 20,000 lb capacity aluminum melt furnace with a design melt rate of 8,000 lbs/hr. The burners are oxygen and natural gas rated at 10 MMBTU/hr. Solid flux will be used. Emissions control through the minimum 50,000 cfm lime injected baghouse which controls emissions from three furnaces. Aluminum scrap to include clean charge or material other than clean charge may be melted in the rotary furnace.	To be determined	FGFURNACES
EUUTILITIES	Natural gas-fired space heaters with maximum heat input of 10 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 336.1290.			

The following conditions apply to: EUUTILITIES

DESCRIPTION: Natural gas-fired space heaters with maximum heat input of 10 MMBtu/hr.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

1. NA

II. MATERIAL LIMITS

1. NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The heat input capacity of EUUTILITIES shall not exceed a maximum of 10 MMBtu per hour. **(R 336.1205)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. NA

V. TESTING/SAMPLING

1. NA

VI. MONITORING/RECORDKEEPING

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

1. NA

VII. REPORTING

1. NA

VIII. STACK/VENT RESTRICTIONS

1. NA

IX. OTHER REQUIREMENTS

1. NA

Footnotes:

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

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
FGFURNACES	Two aluminum reverberatory furnaces and one aluminum rotary furnace, all of which are natural gas fired and all of which are controlled by a common minimum 50,000 cfm lime injected baghouse. Reactive flux and chlorine gas will be used in the furnaces. Carbon injection is used in the system prior to the baghouse.	EUALREVERB EUREVERB50 EUROTARY
FG-MACTRRR	The affected source is a new or existing secondary aluminum processing facility, that is (or is part of) an area source of hazardous air pollutant (HAP) emissions.	EUALREVERB EUREVERB50 EUROTARY
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	

The following conditions apply to: FGFURNACES

DESCRIPTION: Two aluminum reverberatory furnaces and one aluminum rotary furnace, all of which are natural gas fired and all of which are controlled by a common lime injected baghouse. Reactive flux and chlorine gas will be used in the furnaces.

Emission Units: EUALREVERB, EUREVERB50, EUROTARY

POLLUTION CONTROL EQUIPMENT: Minimum 50,000 cfm lime injected baghouse which controls emissions from three furnaces, with a carbon injection system prior to the baghouse.

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VE	10% opacity	6-minute average	FGFURNACES	GC 13	R 336.1301
2. PM	0.010 gr/dscf	Test Protocol*	FGFURNACES	SC V.1	R 336.1331(c), R 336.1225
3. PM10	2.91 pph	Test Protocol*	FGFURNACES	SC V.1	R 336.1225, 40 CFR 52.21(c) & (d)
4. PM2.5	2.91 pph	Test Protocol*	FGFURNACES	SC V.1	R 336.1225, 40 CFR 52.21(c) & (d)
5. Hydrogen Chloride (HCl) (CAS 7647010)	0.34 lb/ton feed/charge[1]	Test Protocol*	FGFURNACES	SC V.1	R 336.1225
6. Hydrogen Fluoride (HF) (CAS 7664393)	0.34 lb/ton feed/charge[1]	Test Protocol*	FGFURNACES	SC V.1	R 336.1225
7. Chlorine (CAS 7782505)	0.26 pph[1]	Test Protocol*	FGFURNACES	SC V.1	R 336.1225
8. Dioxin/Furan** (D/F)	2.25 E-7 pph[a]	Test Protocol*	FGFURNACES	SC V.1	R 336.1225

* Test Protocol shall specify averaging time.

[a] A separate limit is included in FGMACTRRR. The limit in this condition is for total emissions from FGFURNACES controlled by the common baghouse exhausted through SVDUSTCOL. Per 40 CFR 63.1505(i)(6): *The owner or operator may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the basis of feed/charge. [SAPU is secondary aluminum processing unit]*

****** tetra-, penta-, hexa-, and octachlorinated dibenzo dioxins and furans expressed as 2,3,7,8-tetrachlorodibenzo(p)dioxin toxicity equivalent quotient per ton of feed or charge

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Total aluminum production	11,600 pph*	Operating cycle or time period used during performance testing	FGFURNACES	SC VI.3	R 336.1225, R 336.1331
2. Total aluminum production	55,800 tpy	12 month rolling total	FGFURNACES	SC VI.5	R 336.1225, R 336.1331
3. Total reactive flux injection rate	106.4 lb Chlorine/ton feed/charge*	Operating cycle or time period used during performance testing	FGFURNACES	SC VI.3	R 336.1225, 40 CFR 1506(m)(5)

* A new limit may be established based on future stack testing

4. The permittee shall comply with the flux injection rate limits and solid flux compound usage limits determined during previous emissions testing as required by 40 CFR Part 63 Subpart RRR and specified in SC V.1. After the stack tests required by 40 CFR Part 63 Subpart RRR have been completed the permittee shall comply with the flux usage that was established during the test. The new flux injection rate limits and flux compound usage limits shall be identified in the approved OM&M Plan required in FGMACT-RRR SC III.2. **(R 336.1225, R 336.1331, 40 CFR 63 Subpart RRR)**

5. The total reactive fluorine flux injection rate used in FGFURNACES shall not exceed that of the total reactive fluorine flux injection rate used during emissions testing. **(R336.1201)**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGFURNACES unless the System Startup, Shutdown, and Malfunction Plan, has been updated and submitted within 60 days of permit issuance, and is implemented and maintained. If at any time the plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the plan within 45 days after such an event occurs. The permittee shall also amend the plan within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the plan and any amendments to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the plan or amended plan 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 336.1911)**

2. The permittee shall not operate FGFURNACES unless the lime injected baghouse control system and carbon injection emission control system are installed and operating properly, in accordance with the approved OM&M plan. **(R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 63.1510)**

3. The permittee shall only burn pipeline quality natural gas in the burners of FGFURNACES. **(R 336.1225, R 336.1301, R 336.1331)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. Applicant shall not operate the FGFURNACES unless the baghouse associated with the flexible group is installed, operating, and maintained in accordance with manufacturers operation and maintenance manual and in accordance with the approved System Startup, Shutdown, and Malfunction Plan. **(R336.1910)**

2. The permittee shall not operate FGFURNACES unless the automatic lime injection system and carbon injection system associated with the baghouse are installed, operating and maintained in accordance with manufacturer's instructions and in accordance with the approved System Startup, Shutdown, and Malfunction Plan. Proper operation includes operation of the lime injection system such that the lime feed rate is equal to or greater than necessary to achieve the hydrogen chloride emission limit specified in SC I.5, hydrogen fluoride limit specified in SC I.6, and chlorine limit specified in SC I.7, as determined during stack testing and operation of the carbon injection system such that the carbon feed rate is equal to or greater than necessary to achieve the D/F emission limits specified in SC 1.8 and 40 CFR 63 Subpart RRR as determined during stack testing. **(R 336.1205(3), R 336.1224, R 336.1225, 40 CFR 1506(m)(4))**

3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the lime injection system feed rate for FGFURNACES on a continuous basis. **(R 336.1205(3), R 336.1225, R 336.1910, 40 CFR 52.21 (c) & (d), 40 CFR 1506(m)(4))**

4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the carbon injection system feed rate for FGFURNACES on a continuous basis. **(R 336.1205(3), R 336.1225, R 336.1910, 40 CFR 52.21 (c) & (d))**

5. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the pressure drop across the baghouse for FGFURNACES on a continuous basis. **(R 336.1205(3), R 336.1225, R 336.1910, 40 CFR 52.21 (c) & (d))**

V. TESTING/SAMPLING

1. Within 180 days after startup of EUROTARY verification and quantification of PM, PM10, PM2.5, HCl, HF, chlorine, and dioxin/furan emission rates from FGFURNACES with all furnaces operating simultaneously, by testing at owner's expense, in accordance with Department requirements will be required. Not less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205, R 336.1331, R 336.1225, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21 (c) & (d),** 40 CFR 63.1505(i)(4) 40 CFR 63.1511(b)**)**

2. Within 180 days after startup of EUROTARY verification of the required lime and carbon injection rates to meet the emission limits as specified in SC I.5-I.7 and D/F emission limits specified in SC 1.8 and 40 CFR 63 Subpart RRR from FGFURNACES with all furnaces operating simultaneously, by testing at owner's expense, in accordance with Department requirements will be required. Not less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205, R 336.1331, 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 and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205, R 336.1220, R 336.1225, R 336.1702)**

2. The permittee shall monitor the pressure drop across the baghouse. When the pressure drop across the baghouse exceeds its associated allowable maximum pressure differential, the permittee shall clean the baghouse immediately and shall implement procedures specified in the approved System Startup, Shutdown, and Malfunction Plan to minimize emissions from FGFURNACES until normal operating conditions are restored. The minimum and maximum pressure differential for the baghouse shall be recorded in the OM&M plan and clearly displayed on the baghouse or its control panel at all times. **(R 336.1910)**

3. The permittee shall keep on a daily basis, in a satisfactory manner, a log of the daily hours of operation, a log of the hourly melt/throughput rate, a log of the feed/charge rate, types of material charged, individual flux charge rates, and chlorine injection rate for each furnace in FGFURNACES. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205, R 336.1220, R 336.1225, R 336.1702)**

4. The permittee shall calculate and record the total weight of material charged to each emission unit in the secondary aluminum processing unit for each 24-hour day of operation using the feed/charge weight information required in 40 CFR 15.10(e). If the permittee chooses to comply on the basis of weight of aluminum produced by the emission unit, rather than weight of material charged to the emission unit, all performance test emissions results and all calculations must be conducted on the aluminum production weight basis. **(40 CFR 63. 1510(t)(1))**

5. The permittee shall keep the following information on a monthly basis for FGFURNACES:
   a. Total aluminum production in tons per 12-month rolling time period as determined at the end of each calendar month. For the first month following permit issuance, the calculations shall include the summation of production from the 11-month period immediately preceding the issuance date. For each month thereafter, calculations shall include the summation of production for the appropriate number of months prior to permit issuance plus the months following permit issuance for a total of 12 consecutive months. **(R 336.1205(3))**

6. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each flux material used, including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3), R 336.1224, R 336.1225)**

7. The permittee shall monitor and record the lime feed rate of the lime injection system in accordance with the OM&M Plan. The carbon injection rate shall be monitored on a continuous basis in a manner and with instrumentation acceptable to Air Quality Division. The monitors and associated monitoring data shall be used for compliance demonstration purposes for the control efficiency of the lime injection system. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3), R 336.1224, R 336.1225)**

8. The permittee shall keep records of the maintenance of the lime injection system, carbon injection system and the baghouse and shall keep calibration records for all monitors associated with the lime injection system, carbon injection system and baghouse in a manner acceptable to the Air Quality Division. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3), R 336.1224, R 336.1225 R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**

VII. REPORTING

1. The permittee shall submit the following notifications for EUROTARY to the Department in accordance with 40 CFR 63.1501(e)
   a. A notification of the date when construction was commenced, submitted no later than 30 calendar day after such date.
   b. A notification of the actual date of startup of the source, submitted within 30 calendar days after such date. **(R 336.1941, 40 CFR Part 63 Subpart RRR)**

VIII. STACK/VENT RESTRICTIONS

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 (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVDUSTCOL	65	75	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENTS

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

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

The following conditions apply Source-Wide to: FGMACT-RRR

DESCRIPTION: The affected source is a new or existing secondary aluminum processing facility, that is (or is part of) an area source of hazardous air pollutant (HAP) emissions.

Emission Units: EUALREVERB, EUREVERB50, EUROTARY

POLLUTION CONTROL EQUIPMENT: 50,000 cfm lime injected baghouse which controls emissions from three furnaces.

I. EMISSION LIMITS

Pollutant	Limit[1]	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Dioxins and Furans (D/F)	0.00021 grain of D/F TEQ** per ton of feed/charge	Test Protocol* See Note 2	New or Existing Group 1 Furnace	SC V.1	**40 CFR 63.1505(a)(1)(3)**

*Test Protocol will specify averaging time.
****** Grains of tetra-, penta-, hexa-, and octachlorinated dibenzo dioxins and furans expressed as 2,3,7,8-tetrachlorodibenzo(p)dioxin toxicity equivalent quotient per ton of feed or charge.
[1] Limit in this condition is for total emissions from FGMACT-RRR controlled by the common baghouse exhausted through SVDUSTCOL. Per 40 CFR 63.1505(i)(6): *The owner or operator may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the basis of feed/charge. [SAPU is secondary aluminum processing unit]*
2 The daily D/F emission limit for the secondary aluminum processing unit which is used to calculate the 3-day, 24-hour D/F emission limit applicable to the SAPU. NOTE: Clean charge furnaces cannot be included in this calculation since they are not subject to the D/F limit.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate the new or existing group 1 furnace 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 FGFURNACES shall meet the engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice" (incorporated by reference in 40 CFR Part 63, Subpart RRR, §63.1502). **(R 336.1506(c)(1))**
   b. 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. **(R 336.1506(c)(2))**
   c. Operation of the capture/collection system shall be operated according to the procedures and requirements in the OM&M plan. **(R 336.1506(c)(3))**

2. Within 90 days of the initial performance test, 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. **(40 CFR 63.1510(b)(1))**
   b. A monitoring schedule for each affected source and emission unit. **(40 CFR 63.1510(b)(2))**
   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. **(40 CFR 63.1510(b)(3))**
   d. Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance. **(40 CFR 63.1510(b)(4))**
   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. **(40 CFR 63.1510(b)(5))**
   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. **(40 CFR 63.1510(b)(6))**
   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. **(40 CFR 63.1510(b)(7))**
   h. All information required for secondary aluminum processing units as specified in 40 CFR 63.1510(s)(i)-(v). **(40 CFR 63.1510(s))**

   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)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. For each affected source or emission unit subject to an emission limit in kg/Mg (lb/ton) or µg/Mg (gr/ton) of feed/charge the permittee shall install and operate in accordance with the OM&M plan a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test. The owner or operator may choose to measure and record aluminum production weight from an affected source or emission unit rather than feed/charge weight to an affected source or emission unit, provided that the aluminum production weight, rather than feed/charge weight is measured and recorded for all emission units within a SAPU and all calculations to demonstrate compliance with the emission limits for SAPUs are based on aluminum production weight rather than feed/charge weight. **(40 CFR 63.1506(d), 40 CFR 63.1510(e))**

2. The permittee shall install, operate, and maintain a capture/collection system for each affected source and emission unit equipped with an add-on air pollution control device. **(40 CFR 63.1510(d))**

3. The permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system for the lime-injected baghouse as specified in 40 CFR 63.1510(f). **(40 CFR 63.1510(f))**

4. The permittee shall install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the fabric filter inlet gases consistent with the requirements for continuous monitoring systems in Subpart A of Part 63. The temperature monitoring device shall meet the performance standards as specified in 40 CFR 63.1510(h)(2). **(40 CFR 63.1510(h))**

5. The permittee shall Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or liquid reactive flux injected to each affected source or emission unit. The flux monitoring device shall meet the performance standards as specified in 40 CFR 63.1510(j)(1)(i)-(iii). **(40 CFR 63.1510(j))**

V. TESTING/SAMPLING

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

1. No later than 180 days after startup, the permittee shall conduct performance testing to demonstrate compliance with applicable D/F emission rates from FGMACT-RRR according to the requirements in 40 CFR 63.7(c), following the test methods and procedures in 40 CFR 63.1511(b)(1) through (5). No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. 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 within 60 days following the last date of the test. **(40 CFR 63.1511(b))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3), 40 CFR 63.1517)**

1. The permittee shall monitor and record all emissions and operating information required to comply with the Federal National Emission Standards for Hazardous Air Pollutants (NESHAP) specified in 40 CFR Part 63, Subpart RRR. **(40 CFR Part 63, Subpart RRR)**

2. For each group 1 furnace with a bag leak detection system installed on the baghouse, the permittee shall:
   a. Initiate corrective action within 1 hour of a bag leak detection system alarm. **(40 CFR 63.1506(m)(1)(i))**
   b. Complete the corrective action procedures in accordance with the OM&M plan. **(40 CFR 63.1506(m)(1)(ii))**
   c. Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-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 1 hour. If the owner or operator takes longer than 1 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. **(40 CFR 63.1506(m)(1)(iii))**

3. 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))**

4. 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))**

5. 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))**

6. 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))**

7. For each lime injection system the permittee shall verify that lime is always free-flowing by either:
   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. **(40 CFR 63.1510(i)(1)(i))**
   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. **(40 CFR 63.1510(i)(1)(ii))**
   c. Subject to the approval of the permitting agency, installing, operating and maintaining a device to monitor the concentration of HCl at the outlet of the fabric filter. If an increase in the concentration of HCl indicates that the lime is not free-flowing, the owner or operator must promptly initiate and complete corrective action. **(40 CFR 63.1510(i)(1)(iii))**

8. The permittee shall record the lime feeder setting once each day of operation. **(40 CFR 63.1510(i)(2))**

9. The permittee may petition the AQD District Supervisor for approval of an alternative method for monitoring and recording the total reactive flux addition rate based on monitoring the weight or quantity of reactive flux per ton of feed/charge for each operating cycle or time period used in the performance test. An alternative monitoring method will not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standards on a continuous basis. **(40 CFR 63.1510(i)(5))**

10. 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))**

11. The permittee may, as an alternative to the requirements of SC VI.10, demonstrate through performance tests, that each individual emission unit within the secondary aluminum production unit is in compliance with the applicable emission limits for the emission unit. **(40 CFR 63.1510(u))**

12. The permittee may propose an alternative monitoring method to demonstrate compliance with any emission standard in this subpart, other than those alternative monitoring methods which may be authorized pursuant to 40 CFR 63.1510(j)(5) and 40 CFR 63.1510(v), the owner or operator may submit an application to the AQD District Supervisor. Any such application will be processed according to the criteria and procedures specified in 40 CFR 63.1510(w)(1) through (6). **(40 CFR 63.1510(w))**

13. 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))**

14. 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))**

15. 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))**

16. For each group 1 furnace the permittee shall keep, records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken. Table 3 of 40 CFR Part 63 Subpart RRR defines reactive flux injection rate to include this alternative: *Alternative flux injection rate determination procedure per §63.1510(j)(5). For solid flux added intermittently, record the amount added for each operating cycle or time period used in the performance test.* **(40 CFR 63.1517(b)(5))**

17. For each affected source and emission unit subject to an emission standard in kg/Mg (lb/ton) of feed/charge, the permittee shall keep records of feed/charge (or throughput) weights for each operating cycle or time period used in the performance test. **(40 CFR 63.1517(b)(7))**

18. 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))**

19. 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))**

20. For each secondary aluminum processing unit the permittee shall keep, of total charge weight, or if the permittee chooses to comply on the basis of aluminum production, total aluminum produced for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions. **(40 CFR 63.1517(b)(17))**

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 a notification of compliance status report within 90 days after conducting the initial performance test required by 40 CFR 63.1511(b), or within 90 days after the compliance date established by 40 CFR 63.1501(b) if no initial performance test is required. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the information specified in paragraphs 40 CFR 63.1515(a)(1) through (10) of this section. The required information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination. A complete notification of compliance status must include the information specified in 40 CFR 63.1515(b)(1) through (10). **(40 CFR 63.1515(b))**

3. The permittee shall develop a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the standard. The owner or operator shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3). In addition to the information required in 40 CFR 63.6(e)(3), the plan must include all information specified in 40 CFR 63.1516(a)(1) and (2). **(40 CFR 63.1516(a))**

4. The permittee shall submit semiannual reports according to the requirements in 40 CFR 63.10(e)(3). Except, the owner or operator must submit the semiannual reports within 60 days after the end of each 6-month period instead of within 30 days after the calendar half as specified in 40CFR 63.10(e)(3)(v). When no deviations of parameters have occurred, the owner or operator must submit a report stating that no excess emissions occurred during the reporting period. A report must be submitted in the conditions specified in 40 CFR 63.1516(b)(1)(i) through (vii) occur. Each report must include the certifications as specified in 40 CFR 63.1516(b)(2)(i) through (iv). The permittee shall also include 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 or values for each test method used for a particular type of emission point tested. **(40 CFR 63.1516(b))**

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

1. The permittee shall provide and maintain easily visible labels posted at each group 1 furnace that identifies the applicable emission limits and means of compliance, including:
   a. The type of affected source or emission unit (*e.g.,* scrap dryer/delacquering kiln/decoating kiln, group 1 furnace, group 2 furnace, in-line fluxer). **(40 CFR 63.1506(b)(1))**
   b. The applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (*e.g* ., clean scrap only, all scrap, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan. **(40 CFR 63.1506(b)(2))**

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

The following conditions apply Source-Wide to: FGFACILITY

DESCRIPTION: All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.

I. EMISSION LIMITS

Pollutant	Limit*	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Each Individual HAP	Less than 9.0 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	**R 336.1205(3)**
2. Aggregate HAP	Less than 22.5 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	**R 336.1205(3)**

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. NA

V. TESTING/SAMPLING

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

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 and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205(3))**

2. The permittee shall keep the following information on a monthly basis for FGFACILITY:
   a. Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month.
   b. Individual and aggregate HAP emission calculations determining the annual emission rate of each in tons per 12-month rolling time period as determined at the end of each calendar month. For the first month following permit issuance, the calculations shall include the summation of emissions from the 11-month period immediately preceding the issuance date. For each month thereafter, calculations shall include the summation of emissions for the appropriate number of months prior to permit issuance plus the months following permit issuance for a total of 12 consecutive months.

   The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

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