

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

January 16, 2018

**PERMIT TO INSTALL
12-17A**

**ISSUED TO
HC Stark**

**LOCATED AT
460 Jay Street
Coldwater, Michigan**

**IN THE COUNTY OF
Branch**

**STATE REGISTRATION NUMBER
B1523**

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:

January 15, 2018

DATE PERMIT TO INSTALL APPROVED:

January 16, 2018

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
EU	Emission Unit	gr	Grains
FG	Flexible Group	HAP	Hazardous Air Pollutant
GACS	Gallons of Applied Coating Solids	Hg	Mercury
GC	General Condition	hr	Hour
GHGs	Greenhouse Gases	HP	Horsepower
HVLP	High Volume Low Pressure*	H ₂ S	Hydrogen Sulfide
ID	Identification	kW	Kilowatt
IRSL	Initial Risk Screening Level	lb	Pound
ITSL	Initial Threshold Screening Level	m	Meter
LAER	Lowest Achievable Emission Rate	mg	Milligram
MACT	Maximum Achievable Control Technology	mm	Millimeter
MAERS	Michigan Air Emissions Reporting System	MM	Million
MAP	Malfunction Abatement Plan	MW	Megawatts
MDEQ	Michigan Department of Environmental Quality	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO _x	Oxides of Nitrogen
NA	Not Applicable	ng	Nanogram
NAAQS	National Ambient Air Quality Standards	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM10	Particulate Matter equal to or less than 10 microns in diameter
NSPS	New Source Performance Standards	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSR	New Source Review	pph	Pounds per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO ₂	Sulfur Dioxide
SNCR	Selective Non-Catalytic Reduction	TAC	Toxic Air Contaminant
SRN	State Registration Number	Temp	Temperature
TEQ	Toxicity Equivalence Quotient	THC	Total Hydrocarbons
USEPA/EPA	United States Environmental Protection Agency	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		µm	Micrometer or Micron
		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
EU-ELINO	Elino rotary furnace, 1 MMBtu/hr, natural gas to process any grade of molybdenum trioxide including ammonium dimolybdate (ADM). FG-RDROTO – PM controlled by low flow integral DC-ELINO FG-ADM – A separate natural gas flare controls ammonia emissions from EU-ELINO.	Moved to Rotary furnace room 1/2004	FG-RDROTO FG-ADM FG-COMBUSTION
EU-EVAP1	Process water and molybdenum 60 gallon per hour maximum water evaporator. 0.95 MMBtu/hr, natural gas	7/1996	FG-COMBUSTION
EU-EVAP2	For grey water from sinks and showers and molybdenum 60 gallon per hour maximum water evaporator. Exempt 0.95 MMBtu/hr, natural gas	7/1996	FG-COMBUSTION
EU-EVAP3	Standby process water and molybdenum 60 gallon per hour maximum water evaporator. 1.4 MMBtu/hr, natural gas	10/2005	FG-COMBUSTION
EU-HARP	Harper rotary reduction furnace to process any grade of molybdenum trioxide including ammonium dimolybdate (ADM). 1.05 MMBtu/hr, natural gas FG-RDROTO – PM controlled by low flow integral DC-ELINO FG-ADM – Ammonia through vent tube controlled with 98% control efficiency flare	1/2003	FG-RDROTO FG-ADM FG-COMBUSTION
EU-2HIM	2 High rolling mill (controlled by integral DC-Wheelabrator	5/1974	FG-HOTWORK1-2-3
EU-HWRMFUR	2 High rolling mill (controlled by integral DC-2) 5 MMBtu/hr, natural gas	5/1974	FG-HOTWORK1-2-3 FG-COMBUSTION
EU-HWFUR1	Preheat furnace #1 (controlled by integral DC-2) 2.8 MMBtu/hr, natural gas	5/1975	FG-HOTWORK1-2-3 FG-COMBUSTION
EU-HWFUR2	#2 Heat treat furnace (controlled by integral DC-2) 5 MMBtu/hr, natural gas	5/1975	FG-HOTWORK1-2-3 FG-COMBUSTION
EU-HWFUR3	#3 Heat treat furnace (controlled by integral DC-2) 1.3 MMBtu/hr, natural gas	5/1975	FG-HOTWORK1-2-3 FG-COMBUSTION
EU-MOLYFILL	Moly boat fill stations. Some general ventilation is controlled by DC-1	1/1964	FG-MATHAND
EU-PELT1	Pellet press for ADM to be used in the EU-RDF-A or B for better H2 coverage. This unit has its own integral dust collector discharged to the indoor air.	6/1984	FG-MATHAND

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EU-PELT2	Greeves pellet press for sintering pure moly pellets. This unit is controlled by Hammond local collector integral dust collector. Material handling losses contribute to general ventilation losses and go to DC-01	6/1984	FG-MATHAND
EU-EXFUR1	#1 Extrusion preheat furnace controlled by integral DC-3. 5 MMBtu/hr, natural gas	10/1975	FG-EXTRUSION FG-COMBUSTION
EU-EXFUR2	#2 Extrusion preheat furnace. Furnace stack and general ventilation are controlled by DC-3	5/1974	FG-EXTRUSION FG-COMBUSTION
EU-EXFUR3	#3 Extrusion preheat furnace controlled by integral DC-3. 11.5 MMBtu/hr, natural gas	10/1975	FG-EXTRUSION FG-COMBUSTION
EU-EXFUR4	Extrusion block furnace for preheating pushing blocks. No PM emissions. 0.8 MMBtu/hr, natural gas	10/1975	FG-COMBUSTION
EU-EIF8	Moly Electric Induction Furnace. General ventilation is controlled by integral DC-3	10/1975	FG-EXTRUSION
EU-PRES	Extrusion Press. No controls on press hood but general ventilation is controlled by DC-3	1/1974	FG-EXTRUSION
EU-RDFA	Drever 3A three tube reduction furnace. PM controlled by integral DC-1. FG-ADM Ammonia through vent tube not controlled	1/1962	FG-REDUCTIONCONV FG-ADM, FG-COMBUSTION
EU-RDFB	Drever 3B three tube reduction furnace. PM controlled by integral DC-1. FG-ADM Ammonia through vent tube not controlled	1/1962	FG-REDUCTIONCONV FG-ADM FG-COMBUSTION
EU-RDF2-5	Drever second stage MoO ₂ reduction furnace PM controlled by integral DC-1. 1.35 MMBtu/hr, natural gas. . Reduction gases controlled by water trap.	1/1962	FG-REDUCTIONCONV FG-COMBUSTION
EU-RDF7-10	Drever second stage MoO ₂ reduction furnace 1.35 MMBtu/hr, natural gas. Controlled by integral DC-01. Reduction gases controlled by water trap	1/1962	FG-REDUCTIONCONV FG-COMBUSTION
EU-RDF11	Metech four tube reduction furnace 0.837 MMBtu/hr, natural gas. Controlled by integral DC-1. Flame curtain are included in the furnace MMBTU capacity	1/1994	FG-COMBUSTION FG-METEC
EU-RDF12	Metech four tube reduction furnace 0.837 MMBtu/hr, natural gas. Controlled by integral DC-1 Flame curtain are included in the furnace MMBTU capacity	1/1994	FG-METEC FG-COMBUSTION
EU-RDF13	Metech seven tube reduction furnace 1.4637 MMBtu/hr, natural gas. Controlled by integral DC-1 Flame curtain are included in the furnace MMBTU capacity	10/1994	FG-METEC FG-COMBUSTION
EU-RDF14	Elino 14 tube reduction furnace (2 nd stage) 2.86 MMBtu/hr, natural gas. Reduction gases controlled by water trap	6/2003	FG-REDUCTIONAUTO FG-COMBUSTION

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EU-RDF15	Kleenair 18 tube reduction furnace 2.6 MMBtu/hr, natural gas. Reduction gases controlled by water trap	6/2004	FG-REDUCTIONAUTO FG-COMBUSTION
EU-WLDBOOTH	Weld Booth for repair of Moly boats	1/1984	NA
EU-SMKHOUS	Smokehouse for cooling blocks after straightening. Controlled by integral DC-Wheelabrator	6/1994	FG-HOTWORK1-2-3
EU-STPR1	Straightening press for blocks. Controlled by integral DC-Wheelabrator	6/1975	FG-HOTWORK1-2-3
EU-STPR2	Meeco straightener. Controlled by integral DC-Wheelabrator	6/1975	FG-HOTWORK1-2-3
EU-SWAG1	Swage ribbon burner 0.476 MMBtu/hr, natural gas Controlled by integral DC-2	1/1973	FG-HOTWORK1-2-3 FG-COMBUSTION
EU-SWAG2	Swage ribbon burner 0.893 MMBtu/hr, natural gas Controlled by integral DC-2	1/1973	FG-HOTWORK1-2-3 FG-COMBUSTION
EU-SWAG3	Swage ribbon burner 0.595 MMBtu/hr, natural gas Controlled by integral DC-2	1/1973	FG-HOTWORK1-2-3 FG-COMBUSTION
EU-SWAG4	Swage ribbon burner 0.971 MMBtu/hr, natural gas Controlled by integral DC-2	1/1973	FG-HOTWORK1-2-3 FG-COMBUSTION
EU-SPHERICAL	A spherical thermal spray process. A metal powder slurry is sprayed/blown into natural gas heated drying chamber and collected in a cyclone. Associated equipment includes flow bins, mix tank, feed tanks, spray drier, and blenders. Any particulate emissions from the exhaust of the cyclone spray dry collector are controlled by an integral dust collector, DC-Spherical. 2.5 MMBtu/hr, natural gas	2/2008	FG-COMBUSTION
EU-PD-1	Plasma densifier room equipped with a cyclone and an integral Torit DC-5. This room includes a small test unit for small batches with wet collector and HEPA filter discharging inside.	4/2008	NA
EU-BLDR1-5	All blenders in the Blending Room. Controlled by integral collectors during product transfers	6/1/1984	FG-MATHAND
EU-HEXBLDR	hexamine blender. Material handling losses controlled by local integral collector DC-HEXBLDR	6/2015	FG_MATHAND
EU-HWGFMFUR	GFM furnace. Controlled by integral collector DC-3	8/2005 moved from heat treat dept to GFM forge area	FG-HOTWORK1-2-3 FG-COMBUSTION
EU-GFM	GFM forge. Controlled by integral collector DC-4 added 10/2005. Includes flares to keep jaws hot.	8/2005	FG-HOTWORK1-2-3 FG-COMBUSTION
EU-SLDRYER	Evaporator sludge dryer	1/1996	FG-COMBUSTION

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EU-OVN1	Drying oven for pressing department molds	1/1996	FG-COMBUSTION
EU-MAU-1	Make-Up Air Unit 4.752 MMBtu/hr, natural gas	2004	FG-COMBUSTION
EU-MAU-2	Make-Up Air Unit 5.436 MMBtu/hr, natural gas	2004	FG-COMBUSTION
EU-MAU-3	Make-Up Air Unit 9.96 MMBtu/hr, natural gas	2004	FG-COMBUSTION
EU-SPACEHEAT	All other individually exempt combustion equipment for space heating, less than 10 MMBtu/hr each.	1954-2004	FG-COMBUSTION
EU-DUMP1-7	Molybdenum dump stations. Integral local Hammond collectors	1/1964	FG-MATHAND
EU-GRIT	Grit blaster for maintenance of extrusion dies	10/1975	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: EU-SPHERICAL

DESCRIPTION: A spherical thermal spray process. A metal powder slurry is sprayed/blown into natural gas heated drying chamber and collected in a cyclone. Associated equipment includes flow bins, mix tank, feed tanks, spray drier, collectors and blenders. 2.5 MMBtu/hr, natural gas

Flexible Group ID: FG-COMBUSTION

POLLUTION CONTROL EQUIPMENT: Process equipment used to recover product metal material also controls emissions. Any particulate emissions from the exhaust of the cyclone spray dry collector are controlled by a baghouse.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

1. The permittee shall not process more than 2.205 million pounds of spray dried material in the spray drier portion of EU-SPHERICAL per 12-month rolling time period. **(R 336.1205(3), R 336.2803, R 338.2804)**

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate the spray dryer portion of EU-SPHERICAL unless the baghouse is installed, maintained, and operated in a satisfactory manner. **(R 336.1205(3), R 336.1910)**

- The permittee shall equip and maintain the baghouse portion of EU-SPHERICAL with a gauge which measures the pressure drop across the bags. **(R 336.1205(3), R 336.1910)**

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))**

- While in operation, the permittee shall monitor, in a satisfactory manner, the pressure drop for the baghouse portion of EU-SPHERICAL on a continuous basis. **(R 336.1205(3), R 336.1910)**
- While in operation, the permittee shall record, in a satisfactory manner, at least once per calendar day the pressure drop for the baghouse portion of EU-SPHERICAL. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205(3), R 336.1910)**
- While in operation, the permittee shall record monthly, for the preceding 12-month rolling time period, the production amount in pounds for spray dried material produced in EU-SPHERICAL. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205(3), R 336.1910)**

VII. REPORTING

NA

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/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-DC-SPHERICAL	30	55	R 336.1225

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to: EU-PD-1

DESCRIPTION: Plasma Densifier. Used to make refractory metal powders denser and compact. Uses a plasma arc tunnel and a cover gas. Densified powder is collected using a cyclone, and the cyclone exhaust passes through an integral 99.99% collection efficiency dust collector for additional material recovery. No waste material is generated by this process.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: Torit DC-5 cartridge collector, process equipment that also serves to limit emissions.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU-PD-1 unless the Torit DC-5 cartridge collector 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)**
2. The permittee shall not operate EU-PD-1 unless a gauge, which measures the pressure drop across the fabric filter collector is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**

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 calculate and record in a satisfactory manner, the annual material losses through the Torit DC-5 cartridge collector, using the current U. S. EPA Compilation of Air Pollutant Emission Factors (AP-42) or other emission factors approved by the Department such as those used in the MAERS. **(R 336.1371, R 336.1372)**

VII. REPORTING

NA

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-DC-5	12 X 19.6	19.5	R 336.1225

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to: EU-EXFUR3

DESCRIPTION: #3 Extrusion preheat furnace controlled by integral DC-3. 11.5 MMBtu/hr, natural gas

Flexible Group ID: FG-EXTRUSION FG-COMBUSTION

POLLUTION CONTROL EQUIPMENT: Torit DC-3 cartridge collector, process equipment that also serves to limit emissions.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1.CO	3.4 pph	Hourly when operating in rich burn mode	EU-EXFUR3	GC 13	R 336.1205(3)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EU-EXFUR3 in rich burn mode unless a minimum air-to-fuel ratio of 9:1 is maintained. **(R 336.1205, R 336.1910)**
2. The permittee shall not operate EU-EXFUR3 in rich burn mode unless a minimum exhaust temperature of 1300 °F just upstream of the air addition point and downstream of the air addition point is maintained. **(R 336.1205, R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU-EXFUR3 in rich burn mode when processing molybdenum products unless the material recovery Torit DC-3 cartridge collector is installed, maintained, and operated in a satisfactory manner. **(R 336.1301, R 336.1331, R 336.1910)**
2. The permittee shall equip and maintain the material recovery Torit DC-3 cartridge collector with a differential pressure monitoring device. **(R 336.1301, R 336.1331, R 336.1910)**
3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the exhaust gas temperature of EU-EXFUR3 while EU-EXFUR3 is operating in rich burn mode. **(R 336.1205, R 336.1910)**

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 monitor and record the exhaust gas temperature in EU-EXFUR3 just upstream of the air addition point and downstream of the air addition point on a continuous basis when EU-EXFUR3 is operated in rich burn mode using a method acceptable to the AQD District Supervisor. **(R 336.1205, R 336.1910)**
2. The permittee shall keep records of the hours of operation of EU-EXFUR3 in rich burn mode and exhaust temperature monthly, for the preceding 12-month time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to: EU-HEXBLDR

DESCRIPTION: Hexamine Blender, a closed process used to blend lower grade molybdenum trioxide with hexamine. This blended product is used for a single pass reduction of molybdenum trioxide to pure metal powder in a single step reaction with hexamine as the catalyst in the FG-METEC furnaces.

Flexible Group ID: FG-MATHAND

POLLUTION CONTROL EQUIPMENT: DC-HEXBLDR collector, process equipment that also serves to limit emissions from material handling losses while loading and unloading EU-HEXBLDR.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU- HEXBLDR unless the DC- HEXBLDR collector 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)**
2. The permittee shall not operate EU-HEXBLDR unless a gauge, which measures the pressure drop across the wet collector is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**

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 calculate and record in a satisfactory manner, the annual material losses through the HEXBLDR collector, using the current U. S. EPA Compilation of Air Pollutant Emission Factors (AP-42) or other emission factors approved by the Department such as those used in the MAERS. **(R 336.1371, R 336.1372)**

VII. REPORTING

NA

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. SV- DC-HEX	12	30	R 336.1225

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This 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
FG-COMBUSTION	All natural gas fired furnaces, flares, make up air units and space heaters that are not vented to an emission control device. Total heat input capacity is 132.4147 MMBtu/hr.	EU-ELINO, EU-EVAP1, EU-EVAP2, EU-EVAP3, EU-HARP, EU-HWRMFUR, EU-HWFUR1, EU-HWFUR2, EU-HWFUR3, EU-EXFUR1, EU-EXFUR2, EU-EXFUR3, EU-EXFUR4, EU-RDFA, EU-RDFB, EU-RDF2-5, EU-RDF7-10, EU-RDF11, EU-RDF12, EU-RDF13, EU-RDF14, EU-RDF15, EU-SWAG1, EU-SWAG2, EU-SWAG3, EU-SWAG4, EU-SPHERICAL, EU-HWGFMFUR, EU-GFM, EU-SLDRYER, EU-OVN1, EU-MAU1, EU-MAU2, EU-MAU3, EU-SPACEHEAT
FG-EXTRUSION	Metal fume processes and furnace stacks that discharge to DC-3. The hotworks GFM furnace stack is vented to DC-3. DC-3 is integral to the process to collect valuable material and also controls emissions. The extrusion press discharges to a separate uncontrolled stack.	EU-EIF8, EU-PRES, EU-EXFUR1, EU-EXFUR2, EU-EXFUR3, EU-HWGFMFUR
FG-HOTWORK1-2-3	HOTWORK1 includes All furnaces with stacks that discharge to the integral DC-2 collector for material recovery	EU-HWRMFUR, EU-HWFUR1, EU-HWFUR2, EU-HWFUR3, EU-SWAG1, EU-SWAG2, EU-SWAG3, EU-SWAG4
	HOTWORK2 includes All processes that produce molybdenum fumes during cooling, rolling, or straightening. Fumes are collected for material recovery in DC-Wheelabrator.	EU-2HIM, EU-STPR1, EU-STPR2, EU-SMKHOUS
	HOTWORK3 includes GFM FORGE – Molybdenum fumes from the forging process are captured and collected for material recovery in the integral DC-4	EU-GFM
FG-METEC	All furnaces that run Molybdenum and hexamine mixture to reduce in a single step. Emissions to DC-1.	EU-RDF11, EU-RDF12, EU-RDF13
FG-REDUCTIONCONV	All conventional furnaces that process Molybdenum Trioxide in the first step or Molybdenum Dioxide in the second step. Furnace stacks and reduction hoods are vented to DC-1. Reduction water is processed in evaporators to recover valuable material.	EU-RDFA, EU-RDFB, EU-RDF2-5, EU-RDF7-10
FG-RDROTO	All rotary furnaces that process Molybdenum Trioxide in the first step to reduce to Molybdenum Dioxide. Each furnace's tube emissions (not stack emissions) are vented to a separate dust collector to recover valuable material. (DC-Elino and DC-Harper).	EU-ELINO, EU-HARP

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-ADM	All furnaces that may process high purity ADM and reduce it to high grade Molybdenum dioxide. No ammonia water vapor emissions control for EU-RDFA, EU-RDFB. Natural gas flare controls ammonia emissions from EU-HARP. A separate natural gas flare controls ammonia emissions from EU-ELINO.	EU-ELINO, EU-RDFA, EU-RDFB, EU-HARP
FG-REDUCTIONAUTO	All automatic furnaces have local dust collectors with nominal material handling losses. The reduction water goes to the evaporators. No control on furnace stacks.	EU-RDF14, EU-RDF15
FG-MATHAND	This group includes two process groups. One is the recovery of valuable material with process dust collectors that also control emissions and are vented in-plant. The second is the hexamine blender EU-HEXBLDR. Material handling losses are controlled by local integral collector DC_HEXBLDR with a discharge point above the roof.	EU-BLDR1-5, EU-DUMP1-7, EU-PELT1, EU-PELT2, EU-HEXBLDR, EU-MOLYFILL
FG-FACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	NA

The following conditions apply to: FG-EXTRUSION

DESCRIPTION: Metal fume processes and furnace stacks that discharge to DC-3. The hotworks GFM furnace stack is vented to DC-3. DC-3 is integral to the process to collect valuable material and also controls emissions. The extrusion press discharges to a separate uncontrolled stack.

Emission Units: EU-EIF8, EU-PRES, EU-EXFUR1, EU-EXFUR2, EU-EXFUR3, EU-HWGFMFUR

POLLUTION CONTROL EQUIPMENT: Dust Collector DC-3 is integral to the process to collect material for recycling and also controls emissions.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1.extrusion die lubricant	200 gallons per month	Monthly	EU-PRES of FG-EXTRUSION	GC 13	R 336.1290(a)

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate FG-EXTRUSION when processing Molybdenum materials unless the material recovery Dust Collector DC-3 is installed, maintained, and operated in a satisfactory manner. **(R 336.1301, R 336.1331, R 336.1910)**
2. The permittee shall equip and maintain the material recovery DC-3 dust collector with a differential pressure monitoring device. **(R 336.1301, R 336.1331, R 336.1910)**

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 keep the following information on a monthly and 12-month rolling time period basis for FG-EXTRUSION:
 - a) The Material Safety Data Sheets or other information used to identify graphite coatings or other volatile lubricants used in EU-PRES.
 - b) The amount (in pounds) of material processed in FG-EXTRUSION.
 - c) The amount in pounds of material removed from dust collector DC-3.
 - d) PM emission calculations based on stack testing for EU-PRES.
 - e) VOC emission calculations based on stack testing for EU-PRES.

The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1205, R 336.1225, R 336.1702(a))**

VII. REPORTING

NA

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/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-DC-3	53 X 38.5	25	R 336.1225
2. SV-EXPRESS	27	40	R 336.1225

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to: FG-HOTWORK1-2-3

DESCRIPTION: HOTWORK1 includes All furnaces with stacks that discharge to the integral DC-2 collector for material recovery. HOTWORK2 includes All processes that produce molybdenum fumes during cooling, rolling, or straightening. Fumes are collected for material recovery in DC-Wheelabrator. HOTWORK3 includes GFM FORGE – Molybdenum fumes from the forging process are captured and collected for material recovery in the integral DC-4

Emission Units: HOTWORK1: EU-HWRMFUR, EU-HWFUR1 EU-HWFUR2 EU-HWFUR3. HOTWORK2: EU-2HIM, EU-STPR1, EU-STPR2, EU-SMKHOUS. HOTWORK3: EU-GFM

POLLUTION CONTROL EQUIPMENT: Process equipment used to recover product metal material also controls emissions. HOTWORK1: Dust Collector DC-2. HOTWORK2: DC-Wheelabrator. HOTWORK3: Dust Collector DC-4.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU-HWRMFUR, EU-HWFUR1, EU-HWFUR2, or EU-HWFUR3 unless the material recovery Dust Collector DC-2 is installed, maintained, and operated in a satisfactory manner. **(R 336.1301, R 336.1331, R 336.1910)**
2. The permittee shall equip and maintain the material recovery DC-2 dust collector with a differential pressure monitoring device. **(R 336.1301, R 336.1331, R 336.1910)**
3. The permittee shall not operate EU-2HIM, EU-STPR1, EU-STPR2, or EU-SMKHOUS unless the material recovery Dust Collector DC-Wheelabrator is installed, maintained, and operated in a satisfactory manner. **(R 336.1301, R 336.1331, R 336.1910)**
4. The permittee shall equip and maintain the material recovery DC-Wheelabrator dust collector with a differential pressure monitoring device. **(R 336.1301, R 336.1331, R 336.1910)**
5. The permittee shall not operate EU-GFM unless the material recovery Dust Collector DC-4 is installed, maintained, and operated in a satisfactory manner. **(R 336.1301, R 336.1331, R 336.1910)**
6. The permittee shall equip and maintain the material recovery DC-4 dust collector with a differential pressure monitoring device. **(R 336.1301, R 336.1331, R 336.1910)**

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 calculate and record in a satisfactory manner, the annual material losses through the DC-2, DC-Wheelabrator, and DC-4 dust collectors, using the current U. S. EPA Compilation of Air Pollutant Emission Factors (AP-42) or other emission factors approved by the Department such as those used in the MAERS. **(R 336.1371, R 336.1372)**

VII. REPORTING

NA

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/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-DC-2	53 X 38.4	23	R 336.1225
2. SV-DC-Wheelabrator	32	23	R 336.1225
3. SV-DC-4	6	42	R 336.1225

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to: FG-REDUCTIONCONV

DESCRIPTION: All conventional furnaces that process Molybdenum Trioxide in the first step or Molybdenum Dioxide in the second step. Furnace stacks and reduction hoods are vented to DC-1. Reduction water is processed in evaporators to recover valuable material.

Emission Units: EU-RDFA, EU-RDFB, EU-RDF2-5, EU-RDF7-10

POLLUTION CONTROL EQUIPMENT: Process equipment used to recover product metal material also controls emissions. Dust Collector DC-1

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU-RDFA, EU-RDFB, EU-RDF2-5, or EU-RDF7-10 unless the material recovery Dust Collector DC-1 is installed, maintained, and operated in a satisfactory manner. **(R 336.1301, R 336.1331, R 336.1910)**
2. The permittee shall equip and maintain the material recovery DC-1 dust collector with a differential pressure monitoring device. **(R 336.1301, R 336.1331, R 336.1910)**

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 calculate and record in a satisfactory manner, the annual material losses through the DC-1 dust collector, using the current U. S. EPA Compilation of Air Pollutant Emission Factors (AP-42) or other emission factors approved by the Department such as those used in the MAERS. **(R 336.1371, R 336.1372)**

VII. REPORTING

NA

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-DC-1	46.7 X 64	23	R 336.1225

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to: FG-ADM

DESCRIPTION: All furnaces that may process high purity ADM and reduce it to high grade Molybdenum dioxide. No ammonia water vapor emissions control for EU-ELINO, EU-RDFA, EU-RDFB. Natural gas flare controls ammonia emissions from EU-HARP.

Emission Units: EU-ELINO, EU-RDFA, EU-RDFB, EU-HARP.

POLLUTION CONTROL EQUIPMENT: Process equipment used to recover product metal material also controls emissions. No ammonia water vapor emissions control for EU-RDFA, EU-RDFB. A natural gas flare controls ammonia emissions from EU-HARP. A separate natural gas flare controls ammonia emissions from EU-ELINO.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. ADM	516 pph	hourly	FG-ADM	SC VI.1	R 336.1205, R 336.1224, R 336.1225

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not process ADM in EU-ELINO, EU-RDFA, and EU-RDFB simultaneously unless a natural gas flare is installed and operating properly on the EU-ELINO furnace while running ADM. **(R 336.1205, R 336.1224, R 336.1225)**
2. The permittee shall not operate EUHARP unless all reduction gases are vented to a flare with a continuously burning flame. **(R 336.1224, R 336.1225, R 336.1910)**
3. On and after September 14, 2018, the permittee shall not process ADM in EU-ELINO unless a natural gas flare is installed and operating properly on the EU-ELINO furnace. **(R 336.1205, R 336.1224, R 336.1225)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU-RDFA or EU-RDFB, unless the material recovery Dust Collector DC-1 is installed, maintained, and operated in a satisfactory manner. **(R 336.1301, R 336.1331, R 336.1910)**
2. The permittee shall equip and maintain the material recovery DC-1 dust collector with a differential pressure monitoring device. **(R 336.1301, R 336.1331, R 336.1910)**
3. The permittee shall not operate EU-ELINO unless the low flow material recovery Dust Collector DC-ELINO is installed, maintained, and operated in a satisfactory manner. **(R 336.1301, R 336.1331, R 336.1910)**
4. The permittee shall equip and maintain the low flow material recovery DC-ELINO dust collector with a differential pressure monitoring device. **(R 336.1301, R 336.1331, R 336.1910)**
5. The permittee shall not operate EU-HARP unless the low flow material recovery Dust Collector DC-HARP is installed, maintained, and operated in a satisfactory manner. **(R 336.1301, R 336.1331, R 336.1910)**

6. The permittee shall equip and maintain the low flow material recovery DC-HARP dust collector with a differential pressure monitoring device. **(R 336.1301, R 336.1331, R 336.1910)**

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 keep a record of the following information for FG-ADM on the basis indicated:
- Pounds of ADM processed per calendar day.
 - Ammonia emission calculations determining an average hourly emission rate in pounds per hour for each calendar day for each emission unit in FG-ADM.
 - Ammonia emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
 - Daily hours of operation of EU-ELINO, EU-RDFA, and EU-RDFB.

The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1205, R 336.1224, R 336.1225)**

VII. REPORTING

NA

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. SV-RDFA (hood vent)	2	30	R 336.1225
2. SV-RDFB (hood vent)	2	30	R 336.1225
3. SV-DC-ELINO	5	30	R 336.1225
4. SV—DC-HARP	8	34	R 336.1225

Combustion gas stacks are listed in FG-COMBUSTION

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to: FG-COMBUSTION

DESCRIPTION: All natural gas fired furnaces, flares, make up air units and space heaters that are not vented to an emission control device. Total heat input capacity is 132.4147 MMBtu/hr.

Emission Units: EU-ELINO, EU-EVAP1, EU-EVAP2, EU-EVAP3, EU-HARP, EU-HWRMFUR, EU-HWFUR1, EU-HWFUR2, EU-HWFUR3, EU-EXFUR1, EU-EXFUR2, EU-EXFUR3, EU-EXFUR4, EU-RDFA, EU-RDFB, EU-RDF2-5, EU-RDF7-10, EU-RDF11, EU-RDF12, EU-RDF13, EU-RDF14, EU-RDF15, EU-SWAG1, EU-SWAG2, EU-SWAG3, EU-SWAG4, EU-SPHERICAL, EU-GFM, EU-SLDRYER, EU-MAU1, EU-MAU2, EU-MAU3, EU-SPACEHEAT

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NOx	95 tpy	12-month rolling time period as determined at the end of each calendar month	FG-COMBUSTION	SC VI.2	40 CFR 52.21 (c) and (d)
2. CO	79.8 tpy	12-month rolling time period as determined at the end of each calendar month	FG-COMBUSTION	SC VI.2	40 CFR 52.21 (c) and (d)

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. natural gas	1,900 million cubic feet per year	Annual total	FG-COMBUSTION	SC VI.1	R 336.1205

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

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 keep records of monthly fuel consumption rates, natural gas fuel value, and calculations of the BTU/hr heat input rates to FG-COMBUSTION. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205)**
2. The permittee shall calculate the NOx and CO emission rates from FG-COMBUSTION for each calendar month and 12-month rolling time period using a method acceptable to the AQD District Supervisor. **(R 336.1205)**

VII. REPORTING

NA

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/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-ELINO	18	34	R 336.1225
2. SV-EVAP1	10	35	R 336.1225
3. SV-EVAP2	10	35	R 336.1225
4. SV-EVAP3	10	35	R 336.1225
5. SV-HARP	20	34	R 336.1225
6. SV-HWRMFUR	May exhaust through SV-DC-2 54 X 39 and 23 feet		R 336.1225
7. SV-HWFUR1			R 336.1225
8. SV-HWFUR2			R 336.1225
9. SV-HWFUR3			R 336.1225
10. SV-EXFUR1	May exhaust through SV-DC-3 54 X 39 and 25 feet		R 336.1225
11. SV-EXFUR2			R 336.1225
12. SV-EXFUR3			R 336.1225
13. SV-EXFUR4			R 336.1225
14. SV-RDFA	21	30	R 336.1225
15. SV-RDFB	21	30	R 336.1225
16. SV-RDF2-5	May exhaust through SV-DC-1 47 X 64 and 23 feet		R 336.1225
17. SV-RDF10			R 336.1225
18. SV-RDF11			R 336.1225
19. SV-RDF12			R 336.1225
20. SV-RDF13			R 336.1225
21. SV-RDF14	24	34	R 336.1225
22. SV-RDF15	16	34	R 336.1225
23. SV-SWAG1	May exhaust through SV-DC-2 54 X 39 and 23 feet		R 336.1225
24. SV-SWAG2			R 336.1225
25. SV-SWAG3			R 336.1225
26. SV-SWAG4			R 336.1225
27. SV-DC-SPHERICAL	30	55	R 336.1225
28. SV-DC-3 (SV-HWGFMFUR)	54 X 39	25	R 336.1225
29. SV-SLDRYER	9	35	R 336.1225
30. SV-OVN1	9	34	R 336.1225
31. SV-MAU1	Small exempt units		R 336.1225
32. SV-MAU2			R 336.1225
33. SV-MAU3			R 336.1225
34. SV-SPACEHEAT			R 336.1225

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to: FG-MATHAND

DESCRIPTION: This group includes two process groups. One is the recovery of valuable material with process dust collectors that also control emissions and are vented in-plant. The second is the hexamine blender EU-HEXBLDR. Material handling losses are controlled by local integral collector DC-HEXBLDR with a discharge point above the roof.

Emission Units: EU-BLDR1-5, EU-DUMP1-7, EU-PELT1, EU-PELT2, EU-HEXBLDR

POLLUTION CONTROL EQUIPMENT: Process equipment used to recover product metal material also controls emissions. process dust collectors that also control emissions and are vented in-plant and collector DC-HEXBLDR.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

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 calculate and record in a satisfactory manner, the annual material losses through the FG-MATHAND dust collectors, using the current U. S. EPA Compilation of Air Pollutant Emission Factors (AP-42) or other emission factors approved by the Department such as those used in the MAERS. **(R 336.1371, R 336.1372)**

VII. REPORTING

NA

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/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-DC-HEX	12	30	R 336.1225

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply Source-Wide to: FGFACILITY

POLLUTION CONTROL EQUIPMENT: Process equipment used to recover product metal material also controls emissions

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	43 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	VI.1	R 336.1371, R 336.1372
2. PM	0.01 lb/1,000 lb exhaust gases, calculated on a dry gas basis	Hourly	FGFACILITY	GC-13	R 336.1331

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

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 calculate and record in a satisfactory manner, the annual material losses through the FGFACILITY dust collectors, using the current U. S. EPA Compilation of Air Pollutant Emission Factors (AP-42) or other emission factors approved by the Department such as those used in the MAERS. **(R 336.1371, R 336.1372)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

Footnotes:

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