

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

March 12, 2020

**PERMIT TO INSTALL
70-10B**

**ISSUED TO
BASF Toda America, LLC**

**LOCATED AT
4750 West Dickman Road
Battle Creek, Michigan 49037**

**IN THE COUNTY OF
Calhoun**

**STATE REGISTRATION NUMBER
P0089**

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

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: October 22, 2019	
DATE PERMIT TO INSTALL APPROVED: March 12, 2020	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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COMMON ACRONYMS

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

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

POLLUTANT / MEASUREMENT ABBREVIATIONS

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

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.
11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater

than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**

- a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
- b) A visible emission limit specified by an applicable federal new source performance standard.
- c) A visible emission limit specified as a condition of this Permit to Install.

12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EULINE1	Raw material handling, weighing, mixing, filtering, calcination process, processing, and pack out room used in the manufacturing of lithium-ion battery cathode material for Line 1.	December 6, 2010	FGLINES
EULINE2	Raw material handling, weighing, mixing, filtering, calcination process, processing, and pack out room used in the manufacturing of lithium-ion battery cathode material for Line 2.	September 29, 2014	FGLINES

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

**EULINE1
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Raw material handling, weighing, mixing, filtering, calcination process, processing, and pack out room used in the manufacturing of lithium-ion battery cathode material for Line 1.

Flexible Group ID: FGLINES

POLLUTION CONTROL EQUIPMENT

Fabric filters (A1BF010, A1BF020, A1BF030, A1BF210, A1BF330, A1BF650, A1BF720), Wet scrubbers (A1SCR9601, A1SCR9602), HEPA filter

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by A1BF010	SC V.2, SC VI.1, SC VI.3	R 336.1331
2. PM10	0.0004 pph	Hourly	The portion of EULINE1 controlled by A1BF010	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
3. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by A1BF020	SC V.2, SC VI.1, SC VI.3	R 336.1331
4. PM10	0.0007 pph	Hourly	The portion of EULINE1 controlled by A1BF020	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
5. PM	0.002 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by A1BF210	SC V.2, SC VI.1, SC VI.3	R 336.1331
6. PM10	0.01 pph	Hourly	The portion of EULINE1 controlled by A1BF210	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
7. PM	0.01 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by A1BF330	SC V.2, SC VI.1, SC VI.3	R 336.1331
8. Lithium hydroxide	0.012 pph	Hourly	The portion of EULINE1 controlled by A1BF330	SC V.1	R 336.1225
9. PM	0.01 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by A1BF650	SC V.2, SC VI.1, SC VI.3	R 336.1331

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
10. PM10	0.002 pph	Hourly	The portion of EULINE1 controlled by A1BF650	SC V.2	R 336.1225, 40 CFR 52.21(c) & (d)
11. PM	0.02 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by A1BF720	SC V.2, SC VI.1, SC VI.3	R 336.1331
12. PM10	0.03 pph	Hourly	The portion of EULINE1 controlled by A1BF720	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
13. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by A1SCR9601	SC V.2, SC VI.2	R 336.1331
14. PM10	0.003 pph	Hourly	The portion of EULINE1 controlled by A1SCR9601	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
55. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE1 controlled by A1SCR9602	SC V.2, SC VI.2	R 336.1331
16. PM10	0.003 pph	Hourly	The portion of EULINE1 controlled by A1SCR9602	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
17. PM	0.01 lbs per 1000 lbs of gas ^a	Hourly	The portion of EULINE1 controlled by A1BF030 and associated HEPA filter	SC V.2, SC VI.1, SC VI.3	R 336.1331
^a Calculated on a wet gas basis * Calculated on a dry gas basis					

18. There shall be no visible emissions from any stack in EULINE1. (R 336.1225, R 336.1301, R 336.1303, 40 CFR 52.21(c) & (d))

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EULINE1 dry material operations unless the A1BF010, A1BF020, A1BF030 with associated HEPA filter in series, A1BF210, A1BF330, A1BF650, and A1BF720 fabric filters are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, maintaining a pressure drop range across each fabric filter according to manufacturer's specifications. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the pressure drop for each fabric filter for EULINE1 (A1BF010, A1BF020, A1BF030, A1BF210, A1BF330, A1BF650, and A1BF720) on a continuous basis. Monitoring of data "on a continuous basis" is defined as an instantaneous data point measured at least once every 15 minutes for at least 90 percent of the operating time during an operating calendar day. The permittee is not required to monitor operational parameter data during periods of non-operation of the device resulting in cessation of the emissions to which the monitoring applies. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**
3. The permittee shall not operate EULINE1 unless the A1SCR9601 and A1SCR9602 wet scrubbers are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, maintaining a minimum scrubber liquid flow rate of 0.22 gallon per minute. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910)**
4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the liquid flow rate of the A1SCR9601 and A1SCR9602 wet scrubbers on a continuous basis, while EULINE1 is in operation. Monitoring of data "on a continuous basis" is defined as an instantaneous data point measured at least once every 15 minutes for at least 90 percent of the operating time during an operating calendar day. The permittee is not required to monitor operational parameter data during periods of non-operation of the device resulting in cessation of the emissions to which the monitoring applies. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910)**

V. TESTING/SAMPLING

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

1. The permittee shall, upon request by the Department, verify lithium hydroxide emission rates from A1BF330 by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using NIOSH 7300. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1225, R 336.2001, R 336.2003, R 336.2004)**
2. The permittee shall, upon request by the Department, verify PM and PM10 emission rates from EULINE1 by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60 Appendix A and Part 10 of the Michigan Air Pollution Control Rules for PM and 40 CFR Part 51 Appendix M for PM10. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1331, R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall record the pressure drop for each fabric filter for EULINE1 (A1BF010, A1BF020, A1BF030, A1BF210, A1BF330, A1BF650, and A1BF720) in accordance with SC IV.2 on a calendar day basis, while

EULINE1 is in operation. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

2. The permittee shall record the liquid flow rate of each EULINE1 wet scrubber in accordance with SC IV.4 on a calendar day basis, while EULINE1 is in operation. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910)**
3. For any baghouse that is not using a bag leak detection system, the permittee shall monitor the fabric filter emission points to verify the filters are operating properly, by taking visible emission readings for EULINE1 a minimum of once per calendar month. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions. Such readings do not have to be conducted per the requirements of Method 9. Multiple stacks may be observed simultaneously. If any visible emissions (other than uncombined water vapor) are observed, the permittee shall immediately inspect the filters and perform any required maintenance. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**
4. The permittee shall keep, in a satisfactory manner, records of all visible emission readings for EULINE1. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1301, R 336.1303, R 336.1910)**

VII. REPORTING

1. Within 30 days after completion of the rerouting of emissions authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EULINE1. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVA1BF010*	10	34	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVA1BF020*	10	34	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVPACK1	6	10	R 336.1225, 40 CFR 52.21(c) and (d)
4. SVA1BF210*	10	34	R 336.1225, 40 CFR 52.21(c) & (d)
5. SVA1BF330*	4	48	R 336.1225, 40 CFR 52.21(c) & (d)
6. SVA1BF650*	6	38	R 336.1225, 40 CFR 52.21(c) & (d)
7. SVA1BF720*	6	38	R 336.1225, 40 CFR 52.21(c) & (d)

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
8. SVA1SCR9601*	16	18	R 336.1225, 40 CFR 52.21(c) & (d)
9. SVA1SCR9602*	16	18	R 336.1225, 40 CFR 52.21(c) & (d)
*These stacks are vented in a goose-neck down orientation.			

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart VVVVVV. **(40 CFR Part 63 Subpart VVVVVV)**

Footnotes:

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

**EULINE2
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Raw material handling, weighing, mixing, filtering, calcination process, processing, and pack out room used in the manufacturing of lithium-ion battery cathode material for Line 2.

Flexible Group ID: FGLINES

POLLUTION CONTROL EQUIPMENT

Fabric filters (A2BF010, A2BF015, A2BF020, A2BF030, A2BF650, A2BF720), Wet scrubbers (A2SCR960A1, A2SCR960A2, A2SCR960B1, A2SCR960B2)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by A2BF010	SC V.2, SC VI.1, SC VI.3	R 336.1331
2. PM10	0.0004 pph	Hourly	The portion of EULINE2 controlled by A2BF010	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
3. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by A2BF020	SC V.2, SC VI.1, SC VI.3	R 336.1331
4. PM10	0.0006 pph	Hourly	The portion of EULINE2 controlled by A2BF020	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
5. PM	0.002 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by A2BF015	SC V.2, SC VI.1, SC VI.3	R 336.1331
6. PM10	0.01 pph	Hourly	The portion of EULINE2 controlled by A2BF015	SC V.2	R 336.1225, 40 CFR 52.21(c) & (d)
7. PM	0.01 lbs per 1,000 lbs of exhaust*	According to method	The portion of EULINE2 controlled by A2BF650)	SC V.2, SC VI.1, SC VI.3	R 336.1331
8. PM10	0.002 pph	Test Protocol	The portion of EULINE2 controlled by A2BF650	SC V.2	R 336.1225, 40 CFR 52.21(c) & (d)
9. Cobalt (weighted emissions from stack)	0.0028 pph	Hourly	The portion of EULINE2 controlled by A2BF720	SC V.1	R 336.1225
10. PM	0.02 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by A2BF720	SC V.2, SC VI.1, SC VI.3	R 336.1331
11. PM10	0.03 pph	Hourly	The portion of EULINE2 controlled by A2BF720	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
12. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by A2SCR960A1	SC V.2, SC VI.2	R 336.1331
13. PM10	0.003 pph	Hourly	The portion of EULINE2 controlled by A2SCR960A1	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
14. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by A2SCR960B1	SC V.2, SC VI.2	R 336.1331
15. PM10	0.003 pph	Hourly	The portion of EULINE2 controlled by A2SCR960B1	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
16. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by A2SCR960A2	SC V.2, SC VI.2	R 336.1331
17. PM10	0.003 pph	Hourly	The portion of EULINE2 controlled by A2SCR960A2	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
18. PM	0.001 lbs per 1,000 lbs of exhaust*	Hourly	The portion of EULINE2 controlled by A2SCR960B2	SC V.2, SC VI.2	R 336.1331
19. PM10	0.003 pph	Hourly	The portion of EULINE2 controlled by A2SCR960B2	SC V.2,	R 336.1225, 40 CFR 52.21(c) & (d)
20. PM	0.01 lbs per 1000 lbs of gas ^a	Hourly	The portion of EULINE2 controlled by A2BF030	SC V.2, SC VI.1, SC VI.3	R 336.1331
^a Calculated on a wet gas basis					
* Calculated on a dry gas basis					

21. There shall be no visible emissions from any stack in EULINE2. (R 336.1225, R 336.1301, R 336.1303, 40 CFR 52.21(c) & (d))

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

- The permittee shall not operate EULINE2 dry material operations unless the A2BF010, A2BF020, A2BF015, A2BF030, A2BF650, and A2BF720 fabric filters are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, maintaining a pressure drop range across each fabric filter according to manufacturer's specifications. (R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))
- The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the pressure drop for each fabric filter for EULINE2 (A2BF010, A2BF020, A2BF015, A2BF030, A2BF650, and A2BF720) on a continuous basis. Monitoring of data "on a continuous basis" is defined as an instantaneous data point measured at least once every 15 minutes for at least 90 percent of the operating time during an

operating calendar day. The permittee is not required to monitor operational parameter data during periods of non-operation of the device resulting in cessation of the emissions to which the monitoring applies. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

3. The permittee shall not operate EULINE2 unless the wet scrubbers (A2SCR960A1, A2SCR960A2, A2SCR960B1, A2SCR960B2) are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, maintaining a minimum scrubber liquid flow rate of 0.22 gallon per minute. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910)**
4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the liquid flow rate of the wet scrubbers (A2SCR960A1, A2SCR960A2, A2SCR960B1, A2SCR960B2) on a continuous basis, while EULINE2 is in operation. Monitoring of data "on a continuous basis" is defined as an instantaneous data point measured at least once every 15 minutes for at least 90 percent of the operating time during an operating calendar day. The permittee is not required to monitor operational parameter data during periods of non-operation of the device resulting in cessation of the emissions to which the monitoring applies. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910)**

V. TESTING/SAMPLING

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

1. The permittee shall, upon request by the Department, verify cobalt emission rates from A2BF720 by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Appendix A. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1225, R 336.2001, R 336.2003, R 336.2004)**
2. The permittee shall, upon request by the Department, verify PM and PM10 emission rates from EULINE2 by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60 Appendix A and Part 10 of the Michigan Air Pollution Control Rules for PM and 40 CFR Part 51 Appendix M for PM10. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1331, R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall record the pressure drop for each fabric filter for EULINE2 (A2BF010, A2BF020, A2BF015, A2BF030, A2BF650, and A2BF720) in accordance with SC IV.2 on a calendar day basis, while EULINE2 is in operation. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**
2. The permittee shall record the liquid flow rate of each EULINE2 wet scrubber in accordance with SC IV.4 on a calendar day basis, while EULINE2 is in operation. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910)**
3. For any baghouse that is not using a bag leak detection system, the permittee shall monitor the fabric filter emission points to verify the filters are operating properly, by taking visible emission readings for EULINE2 a minimum of once per calendar month. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions. Such readings do not have to be conducted per the requirements

of Method 9. Multiple stacks may be observed simultaneously. If any visible emissions (other than uncombined water vapor) are observed, the permittee shall immediately inspect the filters and perform any required maintenance. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

- The permittee shall keep, in a satisfactory manner, records of all visible emission readings for EULINE2. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1301, R 336.1303, R 336.1910)**

VII. REPORTING

- Within 30 days after completion of the rerouting of emissions authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EULINE2. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTION(S)

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

Stack ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVA2BF010*	10	34	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVA2BF020*	10	34	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVA2BF015*	10	34	R 336.1225, 40 CFR 52.21(c) & (d)
4. SVA2BF650*	6	38	R 336.1225, 40 CFR 52.21(c) & (d)
5. SVA2BF720*	6	38	R 336.1225, 40 CFR 52.21(c) & (d)
6. SVA2SCR960A1	17	25	R 336.1225, 40 CFR 52.21(c) & (d)
7. SVA2SCR960A2	17	25	R 336.1225, 40 CFR 52.21(c) & (d)
8. SVA2SCR960B1	17	25	R 336.1225, 40 CFR 52.21(c) & (d)
9. SVA2SCR960B2	17	25	R 336.1225, 40 CFR 52.21(c) & (d)

*These stacks are vented in a goose-neck down orientation.

- The exhaust gases from SVPACK2 shall be discharged unobstructed to the outside air. **(R 336.1225, 40 CFR 52.21(c) and (d))**

IX. OTHER REQUIREMENT(S)

- The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart VVVVVV. **(40 CFR Part 63 Subpart VVVVVV)**

Footnotes:

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

FLEXIBLE GROUP SPECIAL CONDITIONS

FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGLINES	All processing lines and associated equipment at the facility.	EULINE1 EULINE2

**FGLINES
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

All processing lines and associated equipment at the facility.

Emission Unit: EULINE1, EULINE2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Nickel (weighted emissions from various compounds)	145 lb/yr	12-month rolling time period as determined at the end of each calendar month	FGLINES	SC VI.1	R 336.1225

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. For new sources using a baghouse as a control device, the permittee must install, operate, and maintain a bag leak detection system on all baghouses used to comply with the HAP metal emissions limit in Table 4 of 40 CFR Part 63 Subpart VVVVVV. Bag leak detection systems must comply with requirements outlined in 40 CFR 63.11410(g)(1), including, but not limited to the following: **(40 CFR 63.11496(f)(4))**
 - a) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 0.00044 grains per actual cubic foot or less. **(40 CFR 63.11410(g)(1)(i))**
 - b) The bag leak detection system sensor must provide output of relative PM loadings. The permittee shall continuously record the output from the bag leak detection system using electronic or other means (e.g., using a strip chart recorder or a data logger). **(40 CFR 63.11410(g)(1)(ii))**
 - c) The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to 40 CFR 63.11410(g)(1)(iv), and the alarm must be located such that it can be heard by the appropriate plant personnel. **(40 CFR 63.11410(g)(1)(iii))**
 - d) In the initial adjustment of the bag leak detection system, the permittee must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time. **(40 CFR 63.11410(g)(1)(iv))**
 - e) Following initial adjustment, the permittee shall not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority except as provided in 40 CFR 63.11410(g)(1)(vi). **(40 CFR 63.11410(g)(1)(v))**

- f) Once per quarter, the permittee may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by 40 CFR 63.11410(g)(2). **(40 CFR 63.11410(g)(1)(vi))**
- g) The permittee must install the bag leak detection sensor downstream of the baghouse and upstream of any wet scrubber. **(40 CFR 63.11410(g)(1)(vii))**
- h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. **(40 CFR 63.11410(g)(1)(viii))**

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 in a satisfactory manner, monthly and 12-month rolling time period emission calculations for nickel. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart VVVVVV. **(40 CFR Part 63 Subpart VVVVVV)**

Footnotes:

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