

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

July 9, 2019

**PERMIT TO INSTALL**  
71-17E

**ISSUED TO**  
Haviland Enterprises, Inc.

**LOCATED AT**  
421 Ann Street, N.W.  
Grand Rapids, Michigan

**IN THE COUNTY OF**  
Kent

**STATE REGISTRATION NUMBER**  
N0878

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: <b>July 8, 2019</b>	
DATE PERMIT TO INSTALL APPROVED: <b>July 9, 2019</b>	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 <sub>2</sub> 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 <sub>2</sub> S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO <sub>x</sub>	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 <sub>2</sub>	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.

<b>Emission Unit ID</b>	<b>Emission Unit Description (Including Process Equipment &amp; Control Device(s))</b>	<b>Flexible Group ID</b>
EUCHROMEBLEND	Chrome blending process located in manufacturing, consisting of a blending tank, a blender, a reactor, a sparger, and treatment tanks. The emissions from the blending tank (25230), the blender (25242), the reactor (25244), small stainless steel portable blending tank (25216), and the sparger (25231) are controlled by the Chrome Area Wet Scrubber (26265) that exhausts through SV-2.	NA
EUCORNERSCRUB	Bagging and blending process located in the corner building that processes nickel containing compounds, consisting of 2 baggers, and a fill line. The emissions from the baggers (31001 and 31002), and the fill line (31069) are controlled by the Corner Building Wet Scrubber (31058) that exhausts through SV-6 or the internally vented portable dust collector, depending on the materials being processed.	NA
EUWESTPOTPERM	Powder blending process in manufacturing that processes potassium permanganate containing compounds, consisting of a blender and filling line. The emissions from the Pot Perm powder blender (20123) and the Pot Perm filling line (20323) are controlled by the Powder Blending Wet Scrubber (20007) that exhausts through SV-7. The emissions from the double planetary mixer can also exhaust through an internally vented portable dust collector, depending on the materials being processed.	FGWESTPOWDER
EUWESTPOW	Powder blending process in the powder room that processes nickel containing compounds, consisting of two blending tanks. The emissions from the ribbon Powder Blend Tank (20011) and the paddle Powder Blend Tank (20012) are controlled by the Powder Blending Wet Scrubber (20007) that exhausts through SV-7 or the West Powder Blending Dust Collector (20025) that exhaust through SV-8, depending on the type of materials being processed.	FGWESTPOWDER
EUWESTCEMMIX	Powder blending process in manufacturing that processes acidic and caustic containing compounds. The emissions from the cement mixer (20421) are controlled by the Powder Blending Wet Scrubber (20007) that exhausts through SV-7. The emissions from the cement mixer can also exhaust through an internally vented portable dust collector, depending on the materials being processed.	FGWESTPOWDER

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.

**EUCHROME BLEND  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

Chrome blending process located in manufacturing, consisting of two blending tanks, a blender, a reactor, a sparger, and treatment tanks.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT**

The emissions from the blending tank (25230), the small stainless steel portable blending tank (25216), the blender (25242), the reactor (25244), and the sparger (25231) are controlled by the Chrome Area Wet Scrubber (26265) that exhausts through SV-2.

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. Hexavalent chromium	6.07 x 10 <sup>-6</sup> lb/hr	Hourly	EUCHROME BLEND	SC V.1, VI.2, VI.4, VI.5	R 336.1205 R 336.1224 R 336.1225
2. PM	0.01 gr/dscf	Hourly	EUCHROME BLEND	SC V.1, VI.2, VI.4, VI.5	R 336.1331 40 CFR 52.21(c) and (d)
3. PM, PM10, and PM2.5	0.17 lb/hr	Hourly for each pollutant	EUCHROME BLEND	SC V.1, VI.2, VI.3, VI.4, VI.5	R 336.1225 40 CFR 52.21(c) and (d)
4. Total fluorides <sup>a</sup>	9.19 x 10 <sup>-5</sup> lb/hr <sup>1</sup>	Hourly	EUCHROME BLEND	SC V.1, VI.2, VI.4, VI.5	R 336.1225
5. PM2.5 TACs <sup>b</sup>	1.6 x 10 <sup>-2</sup> lb/hr <sup>1</sup>	Hourly	EUCHROME BLEND	SC V.1, VI.2, VI.3, VI.4, VI.5	R 336.1225
6. PM10 TACs <sup>c</sup>	0.17 lb/hr <sup>1</sup>	Hourly	EUCHROME BLEND	SC V.1, VI.2, VI.3, VI.4, VI.5	R 336.1225

a. This limit applies to the combined emissions of all fluoride compounds.  
 b. This limit applies to the combined emissions of all TACs evaluated as PM2.5, including CAS #s 57-13-6, 497-19-8, 527-07-1, 584-08-7, 2618-96-4, 6132-04-3, 6381-59-5, 7601-54-9, 7631-99-4, 7681-38-1, 7722-88-5, 7757-82-6, 7758-29-4, 7775-14-6, 533-96-0, 7759-02-6, 12125-02-9, 68081-81-2, 127-09-3, and 151-21-3.  
 c. This limit applies to the combined emissions of all TACs evaluated as PM10, including CAS #s 65-85-0 and 7447-40-7.

**II. MATERIAL LIMIT(S)**

NA

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

- The permittee shall not operate EUCHROME BLEND unless the differential pressure of the Chrome Area Wet Scrubber (26265, SV-2) is maintained as specified in the MAP. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) and (d))**

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall not operate the blending tanks (25216 and 25230), the blender (25242), the reactor (25244), and the sparger (25231) in EUCHROME BLEND unless the Chrome Area Wet Scrubber (26265, SV-2) is installed, maintained, and operated in a satisfactory manner. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) and (d))**
2. The permittee shall equip and maintain the Chrome Area Wet Scrubber (26265, SV-2) with a differential pressure measuring device. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) and (d))**

#### **V. TESTING/SAMPLING**

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

1. Upon request from the AQD District Supervisor, the permittee may be required to verify the hexavalent chromium, total fluorides, PM, PM10, and/or PM2.5 emission rates from EUCHROME BLEND by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M
Metals	40 CFR Part 60, Appendix A; 40 CFR Part 61, Appendix B; 40 CFR Part 63, 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 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(C) & (d))**

#### **VI. MONITORING/RECORDKEEPING**

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1702, 40 CFR 52.21 (c) and (d))**
2. The permittee shall monitor, in a satisfactory manner, the Chrome Area Wet Scrubber (26265, SV-2) differential pressure on a continuous basis. 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 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) and (d))**
3. The permittee shall calculate and keep, in a satisfactory manner, production records and other records necessary to calculate the PM, PM10, and PM2.5 hourly emission rates from EUCHROME BLEND. The calculations shall be performed using a method acceptable to the 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, R 336.1225, 40 CFR 52.21 (c) and (d))**
4. The permittee shall keep, in a satisfactory manner, records of the Chrome Area Wet Scrubber (26265, SV-2) differential pressure every three hour block while EUCHROME BLEND is operating. The time between each recorded differential pressure rate shall be at least 1.5 hours. 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 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) and (d))**

5. The permittee shall keep, in a satisfactory manner, a baseline emission calculation for each toxic air contaminant used in EUCHROME BLEND. Each baseline emission calculation shall show expected pound per hour emission rate for each toxic air contaminant. 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(a))

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTION(S)**

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

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SV-2	16	32.2	R 336.1225 40 CFR 52.21 (c) and (d)

**IX. OTHER REQUIREMENT(S)**

NA

**Footnotes:**

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

**EUCORNERSCRUB  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

Bagging and blending process located in the corner building that processes nickel containing compounds, consisting of 2 baggers, and a fill line.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT**

The emissions from the baggers (31001 and 31002), and the fill line (31069) are controlled by the Corner Building Wet Scrubber (31058) that exhausts through SV-6 or the internally vented portable dust collector, depending on the materials being processed.

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. PM	0.01 gr/dscf	Hourly	EUCORNERSCRUB	SC V.1, VI.2, VI.10, VI.12	R 336.1331 40 CFR 52.21(c) and (d)
2. PM, PM10, and PM2.5	0.12 lb/hr	Hourly for each pollutant	EUCORNERSCRUB	SC V.1, VI.2, VI.3, VI.10, VI.12	R 336.1225 40 CFR 52.21(c) and (d)
3. Nickel <sup>a</sup>	1.78 x 10 <sup>-3</sup> lb/hr <sup>1</sup>	Hourly	EUCORNERSCRUB	SC V.1, VI.2, VI.10, VI.12	R 336.1225
4. Total nitrilotriacetic acids <sup>b</sup>	3.0 x 10 <sup>-5</sup> lb/hr <sup>1</sup>	Hourly	EUCORNERSCRUB	SC V.1, VI.2, VI.10, VI.12	R 336.1225
5. Total persulfates <sup>c</sup>	1.35 x 10 <sup>-2</sup> lb/hr <sup>1</sup>	Hourly	EUCORNERSCRUB	SC V.1, VI.2, VI.10, VI.12	R 336.1225
6. Total boric acids <sup>d</sup>	0.03 lb/hr <sup>1</sup>	Hourly	EUCORNERSCRUB	SC V.1, VI.2, VI.10, VI.12	R 336.1225
7. PM2.5 TACs <sup>e</sup>	0.03 lb/hr <sup>1</sup>	Hourly	EUCORNERSCRUB	SC V.1, VI.2, VI.3, VI.10, VI.12	R 336.1225
8. PM10 TACs <sup>f</sup>	0.12 lb/hr <sup>1</sup>	Hourly	EUCORNERSCRUB	SC V.1, VI.2, VI.3, VI.10, VI.12	R 336.1225

a. This limit applies to the nickel portion of the emissions of nickel and nickel containing compounds.  
 b. This limit applies to the combined emissions of all nitrilotriacetic acids.  
 c. This limit applies to the combined emissions of all persulfate compounds.  
 d. This limit applies to the combined emissions of all boric acid compounds.  
 e. This limit applies to the combined emissions of all TACs evaluated as PM2.5, including CAS #s 57-13-6, 497-19-8, 527-07-1, 584-08-7, 2618-96-4, 6132-04-3, 6381-59-5, 7601-54-9, 7631-99-4, 7681-38-1, 7722-88-5, 7757-82-6, 7758-29-4, 7775-14-6, 533-96-0, 7759-02-6, 12125-02-9, 68081-81-2, 127-09-3, and 151-21-3.  
 f. This limit applies to the combined emissions of all TACs evaluated as PM10, including CAS #s 65-85-0 and 7447-40-7.

**II. MATERIAL LIMIT(S)**

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Ethylenediamine tetra-acetic acid, tetrasodium salt	5,310,153 pounds per year <sup>1</sup>	12-month rolling time period, as determined at the end of each calendar month when exhausting through SV-6	EUCORNERSCRUB	SC VI.4	R 336.1225
2. Aluminum sulfate	7,671,975 pounds per year <sup>1</sup>	12-month rolling time period, as determined at the end of each calendar month when exhausting through SV-6	EUCORNERSCRUB	SC VI.4	R 336.1225
3. Total nitrilotriacetic acids <sup>a</sup>	5,256 pounds per year <sup>1</sup>	12-month rolling time period, as determined at the end of each calendar month when exhausting through SV-6	EUCORNERSCRUB	SC VI.4	R 336.1225
4. Disodium tetraborate	48,000 pounds per 8 hour time period <sup>1</sup>	8 hour time period when exhausting through SV-6, not SV-7	EUCORNERSCRUB	SC VI.5, VI.6	R 336.1225
5. Disodium tetraborate <sup>b</sup>	21,664 pounds per 8 hour time period <sup>1</sup>	8 hour time period when exhausting through SV-6 and SV-7 simultaneously	EUCORNERSCRUB	SC VI.5, VI.6	R 336.1225
6. Total boric acids <sup>b,c</sup>	24,000 pounds per 8 hour time period <sup>1</sup>	8 hour time period when exhausting through SV-6 and SV-7 simultaneously	EUCORNERSCRUB	SC VI.5, VI.7	R 336.1225
7. Total persulfates <sup>d</sup>	8,007 pounds per 8 hour time period <sup>1</sup>	8 hour time period when exhausting through SV-6, not SV-7 or SV-8	EUCORNERSCRUB	SC VI.5, VI.8	R 336.1225
8. Total persulfates <sup>b,d</sup>	2,400 pounds per 8 hour time period <sup>1</sup>	8 hour time period when exhausting through SV-6, SV-7, and/or SV-8 simultaneously	EUCORNERSCRUB	SC VI.5, VI.8	R 336.1225
9. Cobalt <sup>e</sup>	1,601 pounds per 8 hour time period <sup>1</sup>	8 hour time period when exhausting through SV-6, not SV-8	EUCORNERSCRUB	SC VI.5, VI.9	R 336.1225
10. Cobalt <sup>b,e</sup>	1,367 pounds per 8 hour time period <sup>1</sup>	8 hour time period when exhausting through SV-6 and SV-8 simultaneously	EUCORNERSCRUB	SC VI.5, VI.9	R 336.1225

- a. This limit applies to the combined processing rate of all nitrilotriacetic acids.
- b. This limit applies to EUCORNERSCRUB and FGWESTPOWDER. SV-6 is associated with EUCORNERSCRUB. SV-7 and SV-8 are associated with FGWESTPOWDER.
- c. This limit applies to the combined processing rate of all boric acids.
- d. This limit applies to the combined processing rate of all persulfate compounds.
- e. This limit applies to the cobalt portion of cobalt containing compounds.

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall not operate EUCORNERSCRUB equipment while processing materials requiring use of the Corner Building Wet Scrubber (31058, SV-6) unless the pressure drop across the Corner Building Wet Scrubber (31058, SV-6) is maintained as specified in the MAP. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) and (d))**

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall not operate EUCORNERSCRUB equipment while processing materials requiring use of the Corner Building Wet Scrubber (31058, SV-6) unless the Corner Building Wet Scrubber (31058, SV-6) is installed, maintained, and operated in a satisfactory manner. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) and (d))**
2. The permittee shall equip and maintain the Corner Building Wet Scrubber (31058, SV-6) with a pressure drop measuring device. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) and (d))**
3. The permittee shall not operate EUCORNERSCRUB equipment while processing materials requiring use of the internally vented portable dust collector unless the internally vented portable dust collector is installed, maintained, and operated in a satisfactory manner. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) and (d))**

#### **V. TESTING/SAMPLING**

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

1. Upon request from the AQD District Supervisor, the permittee may be required to verify the nickel, total nitrilotriacetic acid, total persulfate, total boric acids, PM, PM10, and/or PM2.5 emission rates from EUCORNERSCRUB by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M
Toxic air contaminants	40 CFR Part 60, Appendix A; 40 CFR Part 61, Appendix B; 40 CFR Part 63, 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 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(C) & (d))**

#### **VI. MONITORING/RECORDKEEPING**

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1702, 40 CFR 52.21 (c) and (d))**
2. The permittee shall monitor, in a satisfactory manner, the Corner Building Wet Scrubber (31058, SV-6) pressure drop on a continuous basis. 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 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) and (d))**
3. The permittee shall calculate and keep, in a satisfactory manner, production records and other records necessary to calculate the PM, PM10, and PM2.5 hourly emission rates from EUCORNERSCRUB. The calculations shall be performed using a method acceptable to the 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, R 336.1225, 40 CFR 52.21 (c) and (d))**

4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period, as determined at the end of each calendar month, separate records of the amounts of ethylenediamine tetra-acetic acid tetrasodium salt, aluminum sulfate, and total nitrilotriacetic acids processed in EUCORNERSCRUB. These records shall consist of the cumulative amount of each compound processed during the first 12 months after permit issuance and the annual amount of each compound processed thereafter, in tons per 12-month rolling time period as determined at the end of each calendar month. The permittee shall keep all records on file at the facility and make them available to the Department upon request.<sup>1</sup> **(R 336.1225)**
5. The permittee shall keep, in a satisfactory manner, separate records of the amounts of disodium tetraborate, total boric acids, total persulfates, and cobalt processed in EUCORNERSCRUB for each 8 hour time period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.<sup>1</sup> **(R 336.1225)**
6. The permittee shall keep, in a satisfactory manner, records for each 8 hour time period of the stacks (SV-6 and SV-7) through which disodium tetraborate is being exhausted as well as records demonstrating compliance with the disodium tetraborate usage limits in SC II.4 and II.5. The permittee shall keep all records on file at the facility and make them available to the Department upon request.<sup>1</sup> **(R 336.1225)**
7. The permittee shall keep, in a satisfactory manner, records for each 8 hour time period of the stacks (SV-6, SV-7, and SV-8) through which any boric acid is being emitted as well as records demonstrating compliance with the total boric acids usage limits in SC II.6. The permittee shall keep all records on file at the facility and make them available to the Department upon request.<sup>1</sup> **(R 336.1225)**
8. The permittee shall keep, in a satisfactory manner, records for each 8 hour time period of the stacks (SV-6, SV-7, and SV-8) through which any persulfate is being emitted as well as records demonstrating compliance with the total persulfate usage limits in SC II.7 and II.8. The permittee shall keep all records on file at the facility and make them available to the Department upon request.<sup>1</sup> **(R 336.1225)**
9. The permittee shall keep, in a satisfactory manner, records for each 8 hour time period of the stacks (SV-6 and SV-8) through which any cobalt is being emitted as well as records demonstrating compliance with the cobalt usage limits in SC II.9 and II.10. The permittee shall keep all records on file at the facility and make them available to the Department upon request.<sup>1</sup> **(R 336.1225)**
10. The permittee shall keep, in a satisfactory manner, records of the Corner Building Wet Scrubber (31058, SV-6) pressure drop every three hour block while EUCORNERSCRUB is operating. The time between each recorded pressure drop shall be at least 1.5 hours. 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 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) and (d))**
11. The permittee shall keep, in a satisfactory manner, records for each product produced in EUCORNERSCRUB demonstrating which control device (the Corner Building Wet Scrubber (31058) exhausting through SV-6 or the portable dust collector exhausting inside the building) is required to be used when producing that product. The permittee shall keep all records on file at the facility and make them available to the Department upon request.<sup>1</sup> **(R 336.1225)**
12. The permittee shall keep, in a satisfactory manner, a baseline emission calculation for each toxic air contaminant used in EUCORNERSCRUB. Each baseline emission calculation shall show expected pound per hour emission rate for each toxic air contaminant. 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(a))**

## **VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTION(S)**

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

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SV-6	10.25	31.4	R 336.1225 40 CFR 52.21 (c) and (d)

**IX. OTHER REQUIREMENT(S)**

NA

**Footnotes:**

<sup>1</sup> 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.

<b>Flexible Group ID</b>	<b>Flexible Group Description</b>	<b>Associated Emission Unit IDs</b>
FGWESTPOWDER	Powder blending processes in manufacturing and the powder room that process nickel containing compounds. The emissions from the Pot Perm powder blender (20123) and the Pot Perm filling line (20323) are controlled by the Powder Blending Wet Scrubber (20007) that exhausts through SV-7. The emissions from the ribbon Powder Blend Tank (20011) and the paddle Powder Blend Tank (20012) are controlled by the Powder Blending Wet Scrubber (20007) that exhausts through SV-7 or the West Powder Blending Dust Collector (20025) that exhaust through SV-8, depending on the type of materials being processed. The double planetary mixer and cement mixer (20421) can exhaust through the Powder Blending Wet Scrubber (20007) that exhausts through SV-7 or through an internally vented portable dust collector, depending on the materials being processed.	EUWESTPOTPERM EUWESTPOW EUWESTCEMMIX

**FGWESTPOWDER  
 FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION**

Powder blending processes in manufacturing and the powder room that process nickel containing compounds.

**Emission Unit:** EUWESTPOTPERM, EUWESTPOW, EUWESTCEMMIX

**POLLUTION CONTROL EQUIPMENT**

The emissions from the Pot Perm powder blender (20123) and the Pot Perm filling line (20323) are controlled by the Powder Blending Wet Scrubber (20007) that exhausts through SV-7. The emissions from the ribbon Powder Blend Tank (20011) and the paddle Powder Blend Tank (20012) are controlled by the Powder Blending Wet Scrubber (20007) that exhausts through SV-7 or the West Powder Blending Dust Collector (20025) that exhaust through SV-8, depending on the type of materials being processed. The double planetary mixer and cement mixer (20421) can exhaust through the Powder Blending Wet Scrubber (20007) that exhausts through SV-7 or through an internally vented portable dust collector, depending on the materials being processed.

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. PM	0.04 gr/dscf	Hourly	FGWESTPOWDER equipment exhausting through SV-7	SC V.1, VI.2, VI.15	R 336.1331 40 CFR 52.21(c) and (d)
2. PM, PM10, and PM2.5	1.7 lb/hr	Hourly for each pollutant	FGWESTPOWDER equipment exhausting through SV-7	SC V.1, VI.2, VI.4, VI.15, VI.17	R 336.1225 40 CFR 52.21(c) and (d)
3. Total subtilisins <sup>a</sup>	2.92 x 10 <sup>-4</sup> lb/hr <sup>1</sup>	Hourly	FGWESTPOWDER equipment exhausting through SV-7	SC V.1, VI.2, VI.15, VI.17	R 336.1225
4. Total nitrilotriacetic acids <sup>b</sup>	1.04 x 10 <sup>-1</sup> lb/hr <sup>1</sup>	Hourly	FGWESTPOWDER equipment exhausting through SV-7	SC V.1, VI.2, VI.15, VI.17	R 336.1225
5. Total persulfates <sup>c</sup>	1.50 x 10 <sup>-1</sup> lb/hr <sup>1</sup>	Hourly	FGWESTPOWDER equipment exhausting through SV-7	SC V.1, VI.2, VI.15, VI.17	R 336.1225
6. PM	0.01 gr/dscf	Hourly	FGWESTPOWDER equipment exhausting through SV-8	SC V.1, VI.3, VI.16, VI.17	R 336.1331 40 CFR 52.21(c) and (d)
7. PM, PM10, and PM2.5	0.27 lb/hr	Hourly for each pollutant	FGWESTPOWDER equipment exhausting through SV-8	SC V.1, VI.3, VI.4, VI.16, VI.17	R 336.1225 40 CFR 52.21(c) and (d)
8. Nickel <sup>d</sup>	7.1 x 10 <sup>-4</sup> lb/hr <sup>1</sup>	Hourly	FGWESTPOWDER equipment exhausting through SV-8	SC V.1, VI.3, VI.16, VI.17	R 336.1225
9. Total persulfates <sup>c</sup>	3.33 x 10 <sup>-3</sup> lb/hr <sup>1</sup>	Hourly	FGWESTPOWDER equipment exhausting through SV-8	SC V.1, VI.3, VI.16, VI.17	R 336.1225
10. Total silica <sup>e</sup>	1.19 lb/hr <sup>1</sup>	Hourly	FGWESTPOWDER equipment exhausting through SV-7	SC V.1, VI.2, VI.15, VI.17	R 336.1225

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
11. Total fluorides <sup>f</sup>	0.501 lb/hr <sup>1</sup>	Hourly	FGWESTPOWDER equipment exhausting through SV-7	SC V.1, VI.2, VI.15, VI.17	R 336.1225
12. Total fluorides <sup>f</sup>	3.33 x 10 <sup>-3</sup> lb/hr <sup>1</sup>	Hourly	FGWESTPOWDER equipment exhausting through SV-8	SC V.2, VI.3, VI.16, VI.17	R 336.1225
13. Total boric acids <sup>g</sup>	0.501 lb/hr <sup>1</sup>	Hourly	FGWESTPOWDER equipment exhausting through SV-7	SC V.1, VI.2, VI.15, VI.17	R 336.1225
14. Total boric acids <sup>g</sup>	3.33 x 10 <sup>-3</sup> lb/hr <sup>1</sup>	Hourly	FGWESTPOWDER equipment exhausting through SV-8	SC V.2, VI.3, VI.16, VI.17	R 336.1225
15. PM2.5 TACs <sup>h</sup>	1.03 lb/hr <sup>1</sup>	Hourly	FGWESTPOWDER equipment exhausting through SV-7	SC V.1, VI.2, VI.4, VI.15, VI.17	R 336.1225
16. PM2.5 TACs <sup>h</sup>	1.81 x 10 <sup>-2</sup> lb/hr <sup>1</sup>	Hourly	FGWESTPOWDER equipment exhausting through SV-8	SC V.1, VI.3, VI.4, VI.16, VI.17	R 336.1225
17. PM10 TACs <sup>i</sup>	1.7 lb/hr <sup>1</sup>	Hourly	FGWESTPOWDER equipment exhausting through SV-7	SC V.1, VI.2, VI.4, VI.15, VI.17	R 336.1225
18. PM10 TACs <sup>i</sup>	0.27 lb/hr <sup>1</sup>	Hourly	FGWESTPOWDER equipment exhausting through SV-8	SC V.1, VI.3, VI.4, VI.16, VI.17	R 336.1225

- a. This limit applies to the combined emissions of all subtilisins.
- b. This limit applies to the combined emissions of all nitrilotriacetic acids.
- c. This limit applies to the combined emissions of all persulfate compounds.
- d. This limit applies to the nickel portion of the emissions of nickel and nickel containing compounds.
- e. This limit applies to the combined emissions of all silica compounds, including CAS #s 1344-09-8, 7631-86-9, 112926-00-8, 10213-79-3, 112945-52-5, and 68855-54-9.
- f. This limit applies to the combined emissions of all fluoride compounds.
- g. This limit applies to the combined emissions of all boric acid compounds.
- h. This limit applies to the combined emissions of all TACs evaluated as PM2.5, including CAS #s 57-13-6, 497-19-8, 527-07-1, 584-08-7, 2618-96-4, 6132-04-3, 6381-59-5, 7601-54-9, 7631-99-4, 7681-38-1, 7722-88-5, 7757-82-6, 7758-29-4, 7775-14-6, 533-96-0, 7759-02-6, 12125-02-9, 68081-81-2, 127-09-3, and 151-21-3.
- i. This limit applies to the combined emissions of all TACs evaluated as PM10, including CAS #s 65-85-0, 7447-40-7, and 7558-80-7.

**II. MATERIAL LIMIT(S)**

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Ethylenediamine tetra-acetic acid, tetrasodium salt	973,528 pounds per year <sup>1</sup>	12-month rolling time period, as determined at the end of each calendar month	FGWESTPOWDER equipment exhausting through SV-7	SC VI.5	R 336.1225
2. Ammonium dihydrogen phosphate	3,162,340 pounds per year <sup>1</sup>	12-month rolling time period, as determined at the end of each calendar month	FGWESTPOWDER equipment exhausting through SV-7	SC VI.5	R 336.1225
3. Sodium sulfite	885,455 pounds per year <sup>1</sup>	12-month rolling time period, as determined at the end of each calendar month	FGWESTPOWDER equipment exhausting through SV-7	SC VI.5	R 336.1225

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
4. Sodium ligno sulfonate	3,162,340 pounds per year <sup>1</sup>	12-month rolling time period, as determined at the end of each calendar month	FGWESTPOWDER equipment exhausting through SV-7	SC VI.5	R 336.1225
5. Sodium percarbonate	5,375,977 pounds per year <sup>1</sup>	12-month rolling time period, as determined at the end of each calendar month	FGWESTPOWDER equipment exhausting through SV-7	SC VI.5	R 336.1225
6. Oxirane, methyl-, polymer with oxirane, 8-methylnonyl ether	3,162,340 pounds per year <sup>1</sup>	12-month rolling time period, as determined at the end of each calendar month	FGWESTPOWDER equipment exhausting through SV-7	SC VI.5	R 336.1225
7. Benzenesulfonic acid, mono-C10-13-alkyl derivs., sodium salts	3,162,340 pounds per year <sup>1</sup>	12-month rolling time period, as determined at the end of each calendar month	FGWESTPOWDER equipment exhausting through SV-7	SC VI.5	R 336.1225
8. Total nitrilotriacetic acids <sup>a</sup>	858,480 pounds per year <sup>1</sup>	12-month rolling time period, as determined at the end of each calendar month	FGWESTPOWDER equipment exhausting through SV-7	SC VI.5	R 336.1225
9. Potassium iodide	3,301 pounds per 8 hour time period <sup>1</sup>	8 hour time period	FGWESTPOWDER equipment exhausting through SV-7	SC VI.6	R 336.1225
10. Potassium permanganate	2,257 pounds per 8 hour time period <sup>1</sup>	8 hour time period	FGWESTPOWDER equipment exhausting through SV-7	SC VI.6, VI.9	R 336.1225
11. Potassium permanganate	49,914 pounds per 8 hour time period <sup>1</sup>	8 hour time period	FGWESTPOWDER equipment exhausting through SV-8	SC VI.7, VI.9	R 336.1225
12. Disodium tetraborate	33,006 pounds per 8 hour time period <sup>1</sup>	8 hour time period when exhausting through SV-7, not SV-6	FGWESTPOWDER equipment exhausting through SV-7	SC VI.6, VI.10	R 336.1225
13. Disodium tetraborate <sup>b</sup>	24,076 pounds per 8 hour time period <sup>1</sup>	8 hour time period when exhausting through SV-6 and SV-7 simultaneously	FGWESTPOWDER equipment exhausting through SV-7	SC VI.6, VI.10	R 336.1225
14. Ferrous sulfate heptahydrate	33,006 pounds per 8 hour time period <sup>1</sup>	8 hour time period	FGWESTPOWDER equipment exhausting through SV-7	SC VI.6	R 336.1225
15. Total boric acids <sup>c</sup>	33,006 pounds per 8 hour time period <sup>1</sup>	8 hour time period when exhausting through SV-7, not SV-6	FGWESTPOWDER equipment exhausting through SV-7	SC VI.6, VI.11, VI.18	R 336.1225
16. Total boric acids <sup>b,c</sup>	23,113 pounds per 8 hour time period <sup>1</sup>	8 hour time period when exhausting through SV-6 and/or SV-7 simultaneously	FGWESTPOWDER equipment exhausting through SV-7	SC VI.6, VI.11, VI.18	R 336.1225
17. Total persulfates <sup>d</sup>	3,301 pounds per 8 hour time period <sup>1</sup>	8 hour time period when exhausting through SV-7, not SV-6 or SV-8	FGWESTPOWDER equipment exhausting through SV-7	SC VI.6, VI.8, VI.12	R 336.1225

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
18. Total persulfates <sup>b,d</sup>	2,316 pounds per 8 hour time period <sup>1</sup>	8 hour time period when exhausting through SV-6 and SV-7 simultaneously	FGWESTPOWDER equipment exhausting through SV-7	SC VI.6, VI.8, VI.12	R 336.1225
19. Total persulfates <sup>d</sup>	53,344 pounds per 8 hour time period <sup>1</sup>	8 hour time period when exhausting through SV-8, not SV-6 or SV-7	FGWESTPOWDER equipment exhausting through SV-8	SC VI.7, VI.8, VI.12	R 336.1225
20. Total persulfates <sup>b,d</sup>	51,317 pounds per 8 hour time period <sup>1</sup>	8 hour time period when exhausting through SV-6 and SV-8 simultaneously	FGWESTPOWDER equipment exhausting through SV-8	SC VI.7, VI.8, VI.12	R 336.1225
21. Cobalt <sup>e</sup>	5,176 pounds per 8 hour time period <sup>1</sup>	8 hour time period when exhausting through SV-8, not SV-6	FGWESTPOWDER equipment exhausting through SV-8	SC VI.7, VI.13	R 336.1225
22. Cobalt <sup>e</sup>	2,145 pounds per 8 hour time period <sup>1</sup>	8 hour time period when exhausting through SV-6 and SV-8 simultaneously	FGWESTPOWDER equipment exhausting through SV-8	SC VI.7, VI.13	R 336.1225
23. Alcohols, C12-16, ethoxylated	3,162,340 pounds per year <sup>1</sup>	12-month rolling time period, as determined at the end of each calendar month	FGWESTPOWDER equipment exhausting through SV-7	SC VI.5	R 226.1225
24. Dimethyl silicone polymer with silica	3,162,340 pounds per year <sup>1</sup>	12-month rolling time period, as determined at the end of each calendar month	FGWESTPOWDER equipment exhausting through SV-7	SC VI.5	R 226.1225
a. This limit applies to the combined processing rate of all nitrilotriacetic acids. b. This limit applies to FGWESTPOWDER and EUCORNERSCRUB. SV-7 and SV-8 are associated with FGWESTPOWDER. SV-6 is associated with EUCORNERSCRUB. c. This limit applies to the combined processing rate of all boric acids. d. This limit applies to the combined processing rate of all persulfate compounds. e. This limit applies to the cobalt portion of cobalt containing compounds					

25. The permittee shall not process any persulfate compound in FGWESTPOWDER equipment exhausting through SV-7 during any 8 hour period in which any persulfate compound is processed in FGWESTPOWDER equipment exhausting through SV-8.<sup>1</sup> **(R 336.1225)**
26. The permittee shall not process potassium permanganate in FGWESTPOWDER equipment exhausting through SV-7 during any 8 hour period in which potassium permanganate is processed in FGWESTPOWDER equipment exhausting through SV-8.<sup>1</sup> **(R 336.1225)**
27. The permittee shall not process any boric acid compound in FGWESTPOWDER equipment exhausting through SV-7 during any 8 hour period in which any boric acid compound is processed in FGWESTPOWDER equipment exhausting through SV-8.<sup>1</sup> **(R 336.1225)**

### III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FGWESTPOWDER equipment while processing materials requiring use of the Powder Blending Wet Scrubber (20007, SV-7) unless the pressure drop across the Powder Blending Wet Scrubber (20007, SV-7) is maintained as specified in the MAP. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) and (d))**
2. The permittee shall not operate FGWESTPOWDER equipment while processing materials requiring use of the West Powder Blending Dust Collector (20025, SV-8) unless the pressure drop across the West Powder Blending Dust Collector (20025, SV-8) is maintained as specified in the MAP. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

3. The permittee shall not process hydroquinone in the Pot Perm powder blender (20123) or the Pot Perm filling line (20323). **(R 336.1225)**

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall not operate FGWESTPOWDER equipment while processing materials requiring use of the Powder Blending Wet Scrubber (20007, SV-7) unless the Powder Blending Wet Scrubber (20007, SV-7) is installed, maintained, and operated in a satisfactory manner. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) and (d))**
2. The permittee shall equip and maintain the Powder Blending Wet Scrubber (20007, SV-7) with a pressure drop measuring device. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) and (d))**
3. The permittee shall not operate FGWESTPOWDER equipment while processing materials requiring use of the West Powder Blending Dust Collector (20025, SV-8) unless the West Powder Blending Dust Collector (20025, SV-8) is installed, maintained, and operated in a satisfactory manner. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) and (d))**
4. The permittee shall equip and maintain the West Powder Blending Dust Collector (20025, SV-8) with a pressure drop measuring device. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**
5. The permittee shall not operate FGWESTPOWDER equipment while processing materials requiring use of the internally vented portable dust collector unless the internally vented portable dust collector is installed, maintained, and operated in a satisfactory manner. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) and (d))**

#### **V. TESTING/SAMPLING**

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

1. Upon request from the AQD District Supervisor, the permittee may be required to verify the total subtilisins, total nitrilotriacetic acid, total persulfate, total silica, total fluorides, total boric acids, PM, PM10, and/or PM2.5 emission rates from FGWESTPOWDER equipment exhausting through SV-7 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M
Toxic air contaminants	40 CFR Part 60, Appendix A; 40 CFR Part 61, Appendix B; 40 CFR Part 63, 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 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(C) & (d))**

2. Upon request from the AQD District Supervisor, the permittee may be required to verify the nickel, total persulfate, total fluorides, total boric acids, PM, PM10, and/or PM2.5 emission rates from FGWESTPOWDER equipment exhausting through SV-8 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M
Metals and other toxic air contaminants	40 CFR Part 60, Appendix A; 40 CFR Part 61, Appendix B; 40 CFR Part 63, 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 336.1205, R 336.1224, R 336.1225, R 336.1331, 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))**

- The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1702, 40 CFR 52.21 (c) and (d))**
- The permittee shall monitor, in a satisfactory manner, the Powder Blending Wet Scrubber (20007, SV-7) pressure drop on a continuous basis. 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 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) and (d))**
- The permittee shall monitor, in a satisfactory manner, the West Powder Blending Dust Collector (20025, SV-8) pressure drop on a continuous basis. 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 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**
- The permittee shall calculate and keep, in a satisfactory manner, production records and other records necessary to calculate the PM, PM10, and PM2.5 hourly emission rates from FGWESTPOWDER equipment exhausting through SV-7 and FGWESTPOWDER equipment exhausting through SV-8. The calculations shall be performed using a method acceptable to the 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, R 336.1225, 40 CFR 52.21 (c) and (d))**
- The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period, as determined at the end of each calendar month, separate records of the amounts of the following compounds processed in FGWESTPOWDER equipment exhausting through SV-7. These records shall consist of the cumulative amount of each compound processed during the first 12 months after permit issuance and the annual amount of each compound processed thereafter, in tons per 12-month rolling time period as determined at the end of each calendar month. The permittee shall keep all records on file at the facility and make them available to the Department upon request.<sup>1</sup> **(R 336.1225)**

ethylenediamine tetra-acetic acid, tetrasodium salt	ammonium dihydrogen phosphate
sodium sulfite	sodium ligno sulfonate
sodium percarbonate	oxirane, methyl-, polymer with oxirane, 8-methylnonyl ether
benzenesulfonic acid, mono-C10-13-alkyl derivs., sodium salts	total nitrilotriacetic acids
alcohols, C12-16, ethoxylated	dimethyl silicone polymer with silica

6. The permittee shall keep, in a satisfactory manner, separate records of the amounts of the following compounds processed in FGWESTPOWDER equipment exhausting through SV-7 for each 8 hour time period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.<sup>1</sup> **(R 336.1225)**

potassium iodide	potassium permanganate
disodium tetraborate	ferrous sulfate heptahydrate
total boric acids	total persulfates

7. The permittee shall keep, in a satisfactory manner, separate records of the amounts of the following compounds processed in FGWESTPOWDER equipment exhausting through SV-8 for each 8 hour time period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.<sup>1</sup> **(R 336.1225)**

potassium permanganate	cobalt
total persulfates	

8. The permittee shall keep, in a satisfactory manner, separate records of the amounts of total persulfates processed in FGWESTPOWDER equipment exhausting through SV-7 and FGWESTPOWDER equipment exhausting through SV-8 for each 8 hour time period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.<sup>1</sup> **(R 336.1225)**

9. The permittee shall keep, in a satisfactory manner, separate records of the amounts of potassium permanganate processed in FGWESTPOWDER equipment exhausting through SV-7 and FGWESTPOWDER equipment exhausting through SV-8 for each 8 hour time period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.<sup>1</sup> **(R 336.1225)**

10. The permittee shall keep, in a satisfactory manner, records for each 8 hour time period of the stacks (SV-6, SV7, and SV-8) through which disodium tetraborate is being exhausted as well as records demonstrating compliance with the disodium tetraborate usage limits in SC II.12 and II.13. The permittee shall keep all records on file at the facility and make them available to the Department upon request.<sup>1</sup> **(R 336.1225)**

11. The permittee shall keep, in a satisfactory manner, records for each 8 hour time period of the stacks (SV-6, SV7, and SV-8) through which any boric acid is being exhausted as well as records demonstrating compliance with the total boric acids usage limits in SC II.15, II.16, II.17, and II.18. The permittee shall keep all records on file at the facility and make them available to the Department upon request.<sup>1</sup> **(R 336.1225)**

12. The permittee shall keep, in a satisfactory manner, records for each 8 hour time period of the stacks (SV-6, SV7, and SV-8) through which any persulfate compound is being exhausted as well as records demonstrating compliance with the total persulfates usage limits in SC II.17, II.18, II.19 II.20, and II.29. The permittee shall keep all records on file at the facility and make them available to the Department upon request.<sup>1</sup> **(R 336.1225)**

13. The permittee shall keep, in a satisfactory manner, records for each 8 hour time period of the stacks (SV-6 and SV-8) through which cobalt is being exhausted as well as records demonstrating compliance with the cobalt usage limits in SC II.21 and II.22. The permittee shall keep all records on file at the facility and make them available to the Department upon request.<sup>1</sup> **(R 336.1225)**

14. The permittee shall keep, in a satisfactory manner, records for each product produced in FGWESTPOWDER demonstrating which control device (the Powder Blending Wet Scrubber (20007) exhausting through SV-7 or the West Powder Blending Dust Collector (20025) exhausting through SV-8) is required to be used when producing that product. The permittee shall keep all records on file at the facility and make them available to the Department upon request.<sup>1</sup> **(R 336.1225)**

15. The permittee shall keep, in a satisfactory manner, records of the Powder Blending Wet Scrubber (20007, SV-7) pressure drop every three hour block while FGWESTPOWDER equipment is exhausting through SV-7. The time between each recorded pressure drop shall be at least 1.5 hours. 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 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) and (d))**

16. The permittee shall keep, in a satisfactory manner, records of the West Powder Blending Dust Collector (20025, SV-8) pressure drop every three hour block while FGWESTPOWDER equipment is exhausting through SV-8. The time between each recorded pressure drop shall be at least 1.5 hours. 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 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) and (d))**
17. The permittee shall keep, in a satisfactory manner, a baseline emission calculation for each toxic air contaminant used in FGWESTPOWDER. Each baseline emission calculation shall show expected pound per hour emission rate for each toxic air contaminant. 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(a))**
18. The permittee shall keep, in a satisfactory manner, separate records of the amounts of total boric acids processed in FGWESTPOWDER equipment exhausting through SV-7 and FGWESTPOWDER equipment exhausting through SV-8 for each 8 hour time period. The permittee shall keep all records on file at the facility and make them available to the Department upon request.<sup>1</sup> **(R 336.1225)**

## **VII. REPORTING**

NA

## **VIII. STACK/VENT RESTRICTION(S)**

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

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SV-7	20	44.4	R 336.1225 40 CFR 52.21(c) and (d)
2. SV-8 <sup>a</sup>	9.25 x 9.875	39.7	R 336.1225 40 CFR 52.21(c) and (d)
a. This stack is not required to be discharged unobstructed vertically upwards to the ambient air.			

## **IX. OTHER REQUIREMENT(S)**

NA

### **Footnotes:**

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

## FGFACILITY CONDITIONS

**DESCRIPTION:** The following conditions apply source-wide to all process equipment including equipment covered by other permits, grand-fathered equipment and exempt equipment.

### POLLUTION CONTROL EQUIPMENT

The facility has various pieces of air pollution control equipment, including the following: the emissions from the blending tank (25230), the blender (25242), the reactor (25244), and the sparger (25231) are controlled by the Chrome Area Wet Scrubber (26265, SV-2); the emissions from the baggers (31001 and 31002), and the fill line (31069) are controlled by the Corner Building Wet Scrubber (31058, SV-6); the emissions from the Pot Perm powder blender (20123) and the Pot Perm filling line (20323) are controlled by the Powder Blending Wet Scrubber (20007, SV-7); and the emissions from the ribbon Powder Blend Tank (20011) and the paddle Powder Blend Tank (20012) are controlled by the Powder Blending Wet Scrubber (20007, SV-7) or the West Powder Blending Dust Collector (20025, SV-8), depending on the type of materials being processed. The double planetary mixer and cement mixer (20421) can exhaust through the Powder Blending Wet Scrubber (20007) that exhausts through SV-7 or through an internally vented portable dust collector, depending on the materials being processed.

### I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Each Individual HAP	8.9 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205
2. Total HAPs	22.4 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205
3. VOC	45 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205

### II. MATERIAL LIMIT(S)

NA

### III. PROCESS/OPERATIONAL RESTRICTION(S)

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

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the

MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. (R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

NA

#### **V. TESTING/SAMPLING**

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

NA

#### **VI. MONITORING/RECORDKEEPING**

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1205)
2. The permittee shall keep the following information on a monthly basis for FGFACILITY:
  - a) Gallons or pounds of each HAP and VOC containing material used.
  - b) Where applicable, gallons or pounds of each HAP and VOC containing material reclaimed.
  - c) HAP and VOC content, in pounds per gallon or pounds per pound, of each HAP and VOC containing material used.
  - d) Individual and aggregate HAP emission calculations and VOC emission calculations determining the monthly emission rate of each in tons per calendar month.
  - e) Individual and aggregate HAP emission calculations and VOC 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 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)

#### **VII. REPORTING**

NA

#### **VIII. STACK/VENT RESTRICTION(S)**

NA

#### **IX. OTHER REQUIREMENT(S)**

1. The permittee shall maintain all process equipment at the facility with labels, and shall label all new process equipment at the facility upon change or installation, according to a method acceptable to the AQD District Supervisor. Within seven days of completing the labeling, the permittee shall notify the AQD District Supervisor, in writing, as to the date the labeling was completed. (R 336.1201)

#### **Footnotes:**

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