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

April 22, 2019

PERMIT TO INSTALL
4-14A

ISSUED TO
Johnson Controls APS Production, Inc.

LOCATED AT
70 West 48th Street
Holland, Michigan

IN THE COUNTY OF
Allegan

STATE REGISTRATION NUMBER
P0194

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

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: **April 9, 2019**	
DATE PERMIT TO INSTALL APPROVED: **April 22, 2019**	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	Michigan Department of Environmental Quality
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
MDEQ	Michigan Department of Environmental Quality
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_2e	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_2S	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 Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**

3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to 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 Environmental Quality. **(R 336.1219)**

6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**

7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**

8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of 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
EUANDRYMIX	Anode dry material handling and mixing controlled by a high efficiency particulate air (HEPA) filtration system and dust collector in series.	February 2011/ June 6, 2014	FGDRYMATERIAL
EUCATDRYMIX	Cathode dry material handling and mixing controlled by a high efficiency particulate air (HEPA) filtration system and dust collector in series.	February 2011/ June 6, 2014	FGDRYMATERIAL
EUCOATING	(2) 6.296 MMBtu/hr total heat input drying ovens, coating storage, preparation, application, drying, and solvent recovery operations that include a condenser. Emissions are controlled by a wet scrubber.	February 2011/ June 6, 2014	NA
EUCALENDARING	Slitting, calendaring, second vacuum drying, and winding of anode and cathode materials. Emissions are vented to the general in-plant environment.	February 2011/ June 6, 2014	NA
EUWELDING	Welding operations. Controlled by a dust collector and vented to the general in-plant environment.	February 2011/ June 6, 2014	NA
EUELECTROLYTE	Electrolyte addition and final cell assembly. No emissions due to closed electrolyte handling system except for during electrolyte cylinder disconnection.	February 2011/ June 6, 2014	NA
EUINK	Ink jet marking system used to identify off-specification or defective materials.	February 2011/ June 6, 2014	NA
EUCLEANUP	Cleaning of Dry Clean Room and other areas within the plant with solvent for particle count reduction.	February 2011/ June 6, 2014	NA
EUPILOT	Pilot operations. Controlled by a regenerative thermal oxidizer (RTO).	February 2011/ June 6, 2014	NA
EUFORMATION	Formation operations involving the placement of a temporary seal on the battery cells, followed by the heating and cooling, and replacement of temporary seal with a permanent seal.	February 2011/ June 6, 2014/ April 2019	NA
EUNMPSTORAGE	(4) 10,000 gallon n-methyl pyrrolidone (NMP) bulk storage tanks. These tanks store virgin, waste, and reclaimed NMP. Vents from the tanks are controlled by the EUCOATING wet scrubber.	February 2011/ June 6, 2014	NA

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

EUCOATING
EMISSION UNIT CONDITIONS

DESCRIPTION

(2) 6.296 MMBtu/hr total heat input drying ovens, coating storage, preparation, application, drying, and solvent recovery operations that include a condenser. Emissions are controlled by a wet scrubber.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Wet Scrubber

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	3.0 tpy	12-month rolling time period as determined at the end of each calendar month	EUCOATING	SC VI.3	R 336.1225, R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EUCOATING when applying VOC-containing coatings unless the wet scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, maintaining a total scrubber water flow rate (sum of make-up water flow rate and recirculation water flow rate) at or above 95% of the total flow rate determined during the most recent Department approved emission test and maintaining a pressure drop across the scrubber according to manufacturer's specifications. **(R 336.1225, R 336.1702(a), R 336.1910)**

2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, devices to monitor and record the scrubber make-up water flow rate and the scrubber recirculation water flow rate on a calendar day basis, when the scrubber is in operation. **(R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations/records 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 336.1225, R 336.1702(a), R 336.1910)**

2. The permittee shall record both the scrubber make-up water flow rate and recirculation water flow rate for the EUCOATING scrubber on a calendar day basis, when the scrubber is in operation. **(R 336.1225, R 336.1702(a), R 336.1910)**

3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period VOC emission calculation records for EUCOATING using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225, 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:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVSCRUBBER	16	50	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

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

EUCALENDARING
EMISSION UNIT CONDITIONS

DESCRIPTION

Slitting, calendaring, second vacuum drying, and winding of anode and cathode materials. Emissions are vented to the general in-plant environment.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Knockout trap (second vacuum drying operation)

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EUCALENDARING unless the knockout trap is installed, maintained, and operated in a satisfactory manner. **(R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

NA

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:

1. The exhaust gases from EUCALENDARING shall be vented to the general in-plant environment, and not directly discharged through a dedicated stack to the outside ambient air at any time. **(R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

IX. OTHER REQUIREMENT(S)

NA

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

EUWELDING
EMISSION UNIT CONDITIONS

DESCRIPTION

Welding operations. Controlled by a dust collector and vented to the general in-plant environment.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Dust filtration collection system

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	0.01 lbs per 1,000 lbs of exhaust gas, calculated on a dry basis	Test Protocol*	EUWELDING	GC 13	R 336.1331
* Test Protocol shall specify averaging time					

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EUWELDING unless the dust filtration collection system is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, maintaining the dust filtration collection system according to manufacturer's specifications. **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

NA

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

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

1. The exhaust gases from EUWELDING shall be vented to the general in-plant environment, and not directly discharged through a dedicated stack to the outside ambient air at any time. **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

IX. OTHER REQUIREMENT(S)

NA

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

EUCLEANUP
EMISSION UNIT CONDITIONS

DESCRIPTION

Cleaning of Dry Clean Room and other areas within the plant with solvent for particle count reduction.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	8.0 tpy	12-month rolling time period as determined at the end of each calendar month	EUCLEANUP	SC VI.2	R 336.1205(3), R 336.1225, R 336.1702(a)

II. MATERIAL LIMIT(S)

1. The permittee shall not use more than 24,600 pounds of VOC in the total clean-up solvent usage per year based on a 12-month rolling period as determined at the end of each calendar month. **(R 336.1205, R 336.1225, R 336.1702(a))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall capture all waste clean-up solvent and shall store it in closed containers. The permittee shall dispose of all waste clean-up solvent in an acceptable manner in compliance with all applicable state rules and federal regulations. **(R 336.1225, R 336.1702(a))**

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))**

1. The permittee shall determine the VOC content and density of any clean-up solvent, as received and as utilized, using manufacturer's formulation data and/or Safety Data Sheets. Upon request by the AQD District Supervisor, the permittee shall determine the VOC content of any clean-up solvent using federal Reference Test Method 24. If the Method 24 and the formulation values should differ, the permittee shall use the Method 24 results to determine compliance. **(R 336.1225, R 336.1702(a), 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 complete all required calculations/records 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 336.1225, R 336.1702(a), R 336.1910)**

2. The permittee shall keep the following information on a monthly basis for the use of clean-up materials associated with EUCLEANUP:
   a) Gallons of each material used and reclaimed.
   b) VOC content, in pounds per gallon, of each material used.
   c) VOC mass emission calculations determining the monthly emission rate in tons per calendar month.
   d) VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

   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(3), R 336.1225, R 336.1702(a))**

3. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each clean-up material, including the weight percent of each component. The data may consist of Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225, R 336.1702(a))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

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

EUPILOT
EMISSION UNIT CONDITIONS

DESCRIPTION

Pilot operations. Controlled by a regenerative thermal oxidizer (RTO).

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

RTO

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	5.0 tpy	12-month rolling time period as determined at the end of each calendar month	EUPILOT	SC VI.3	R 336.1225, R 336.1702(a)
2. PM	0.01 lbs per 1,000 lbs of exhaust gas, calculated on a dry basis	Test Protocol*	EUPILOT	GC 13	R 336.1331
* Test Protocol shall specify averaging time					

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EUPILOT coating operations when applying VOC-containing coatings unless the thermal oxidizer is installed, maintained and operated in a satisfactory manner. Satisfactory operation of the thermal oxidizer includes a minimum VOC destruction efficiency of 95 percent (by weight), and maintaining a minimum temperature of 1500 °F and a minimum retention time of 0.5 seconds. **(R 336.1225, R 336.1702(a), R 336.1910)**

2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a temperature monitoring device in the combustion chamber of the thermal oxidizer to monitor and record the temperature, on a continuous basis, when the RTO is in operation. **(R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations/records 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 336.1225, R 336.1702(a), R 336.1910)**

2. The permittee shall record the thermal oxidizer combustion chamber temperature continuously for the EUPILOT RTO, when the RTO is in operation. **(R 336.1225, R 336.1702(a), R 336.1910)**

3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period VOC emission calculation records for EUPILOT using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225, 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:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVRTO	27	35	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

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

EUFORMATION
EMISSION UNIT CONDITIONS

DESCRIPTION

Formation operations involving the placement of a temporary seal on the battery cells, followed by the heating and cooling, and replacement of temporary seal with a permanent seal.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.06 tpy	12-month rolling time period as determined at the end of each calendar month	EUFORMATION	SC VI.2	R 336.1225, R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

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/records 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 336.1225, R 336.1702(a), R 336.1910)**

2. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period VOC emission calculation records for EUFORMATION using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225, 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:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVFORMATION[A]	6	30	R 336.1225, 40 CFR 52.21(c) & (d)
[A]This stack is discharged horizontally to the ambient air.			

IX. OTHER REQUIREMENT(S)

NA

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
FGDRYMATERIAL	Dry material handling and mixing prior to solvent addition. Emissions are controlled by a high efficiency particulate air (HEPA) filtration system and dust collector in series.	EUANDRYMIX, EUCATDRYMIX

FGDRYMATERIAL
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Dry material handling and mixing prior to solvent addition. Emissions are controlled by a high efficiency particulate air (HEPA) filtration system and dust collector in series.

Emission Unit: EUANDRYMIX, EUCATDRYMIX

POLLUTION CONTROL EQUIPMENT

HEPA filtration system and dust collector in series

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	0.01 lbs per 1,000 lbs of exhaust gas, calculated on a dry basis	Test Protocol*	FGDRYMATERIAL (Each SVANDRYMIX and SVCATDRYMIX)	GC 13	R 336.1331
2. PM10	0.01 pph	Test Protocol*	FGDRYMATERIAL (Each SVANDRYMIX and SVCATDRYMIX)	GC 13	R 336.1225, 40 CFR 52.21 Subparts (c) & (d)
3. PM2.5	0.01 pph	Test Protocol*	FGDRYMATERIAL (Each SVANDRYMIX and SVCATDRYMIX)	GC 13	R 336.1225, 40 CFR 52.21 Subparts (c) & (d)
* Test Protocol shall specify averaging time					

4. Visible emissions from FGDRYMATERIAL (Each SVANDRYMIX and SVCATDRYMIX) shall not exceed a six-minute average of 10 percent opacity. **(R 336.1225, R 336.1301, R 336.1331, 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 FGDRYMATERIAL dry material operations unless the HEPA filtration system and dust collector control devices are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, maintaining a pressure drop range across each dust collector according to manufacturer's specifications. **(R 336.1224, R 336.1225, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the pressure drop for each dust collector for FGDRYMATERIAL on a calendar day basis. 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) & (d))**

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 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

2. The permittee shall record the pressure drop for each dust collector for FGDRYMATERIAL on a calendar day basis. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

3. The permittee shall monitor the dust collector emission points to verify the filters are operating properly, by taking visible emission readings for FGDRYMATERIAL 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) & (d))**

4. The permittee shall keep, in a satisfactory manner, records of all visible emission readings for FGDRYMATERIAL. 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

NA

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVANDRYMIX[A]	18	41	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVCATDRYMIX[A]	18	41	R 336.1225, 40 CFR 52.21(c) & (d)
[A]These stacks are discharged horizontally to the ambient air.			

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] 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

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	25 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(3)
2. Each Individual HAP	5 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(3)
3. Aggregate HAPs	12.5 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(3)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

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 records/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(3))**

2. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period VOC, Individual HAP, and Aggregate HAPs emission calculation records for FGFACILITY using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(3))**

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:

NA

IX. OTHER REQUIREMENT(S)

NA

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