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

March 17, 2023

PERMIT TO INSTALL
42-23

ISSUED TO
Williams International Co., LLC

LOCATED AT
2000 Centerpoint Highway
Pontiac, Michigan 48341

IN THE COUNTY OF
Oakland

STATE REGISTRATION NUMBER
P0603

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: **January 19, 2023**	
DATE PERMIT TO INSTALL APPROVED: **March 17, 2023**	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Table of Contents

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_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 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 condition 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
EU-01	A nitric acid etching line with a wet scrubber for control.		FG-01
EU-01RSTPRVNTDIP	A 15.6-gallon tank used as a rust prevention dip. Emissions are exhausted into the in-plant environment.		FG-01
EU-02	A nickel electroplating line consisting of two cleaning, one pickling, one hydrochloric acid etch, one Woods nickel strike, one nickel sulfamate, one nickel strip, and multiple rinse tanks. Several tanks in the line, as specified in Appendix A, are controlled by a packed bed wet scrubber system with pH control.		
EU-03	A copper/silver plating line consisting of 36 total stations, including loading/loading. Several tanks in the line, as specified in Appendix A, are controlled by a packed bed wet scrubber with pH control.	TBD	
EU-04	Electric nitriding furnace using ammonia and equipped with a 17,000 Btu/hr afterburner to control ammonia. The furnace is a batch furnace with a 1,700-pound capacity.	TBD	FG-04
EU-04NH3	A 500-gallon anhydrous ammonia storage tank to provide ammonia to EU-04.	TBD	FG-04
EU-05	Electrically heated carburizing oven using acetylene.	TBD	
EU-06	An anodizing/Alodine plating line consisting of 43 stations, including loading/unloading stations. Several tanks in the line, as specified in Appendix A, are controlled by a packed bed wet scrubber with pH control.	TBD	

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.

EU-02
EMISSION UNIT CONDITIONS

DESCRIPTION

A nickel electroplating line consisting of two cleaning, one pickling, one hydrochloric acid etch, one Woods nickel strike, one nickel sulfamate, one nickel strip, and multiple rinse tanks. Several tanks in the line, as specified in Appendix A, are controlled by a packed bed wet scrubber system with pH control.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Packed bed wet scrubber with pH control (Scrubber 02)

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any tanks in EU-02 controlled by the packed bed scrubber system, as specified in Appendix A, unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the packed bed scrubber system, 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 336.1224, R 336.1225, R 336.1331, R 336.1910, R 336.1911)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate any tanks in EU-02 controlled by the packed bed scrubber system, as specified in Appendix A, unless the packed bed scrubber system is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, the following:
   a) Maintaining the pressure drop across the scrubber system according to the MAP required by SC III.1.
   b) Maintaining the scrubber water pH according to the MAP required by SC III.1.
   c) Maintaining the scrubber water flow rate according to the MAP required by SC III.1.

The MAP shall define the proper pressure drop, scrubber water pH level, and scrubber water flow rate to be maintained, as specified by the manufacturer. **(R 336.1224, R 336.1225, R 336.1910)**

2. The permittee shall equip and maintain the packed bed scrubber system with a device to monitor and record pressure drop on a continuous basis, a device to monitor and record scrubber water pH level on a continuous basis, and a device to continuously monitor and record scrubber water flow rate. **(R 336.1224, R 336.1225, 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 perform inspections of the packed bed scrubber system as follows: **(R 336.1224, R 336.1225, R 336.1910)**
   a) Visually inspect the packed bed scrubber, on a quarterly basis, to ensure there is proper drainage, no build up on the packed beds, and no evidence of chemical attack on the structural integrity of the control device.
   b) Visually inspect ductwork from tanks to the packed bed scrubber, on a quarterly basis, to ensure there are no leaks.
   c) Perform all maintenance on the packed bed scrubber system in accordance with the MAP.

2. The permittee shall keep weekly records of the pressure drop, scrubber water pH level, and scrubber water flow rate for the packed bed scrubber system. The permittee shall also keep records of all operating and maintenance information, as required in SC VI.1. The permittee shall keep all records on file at the facility and make available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1910)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EU-02. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-02	12	65	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants for Plating and Polishing Operations as specified in 40 CFR Part 63 Subparts A and WWWWWW, as they apply to EU-02. **(40 CFR Part 63 Subparts A & WWWWWW)**

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

EU-03
EMISSION UNIT CONDITIONS

DESCRIPTION

A copper/silver plating line consisting of 36 total stations, including loading/loading. Several tanks in the line, as specified in Appendix A, are controlled by a packed bed wet scrubber with pH control.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Packed bed wet scrubber with pH control (Scrubber 03)

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any tanks in EU-03 controlled by the packed bed scrubber system, as specified in Appendix A, unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the packed bed scrubber system, 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 336.1224, R 336.1225, R 336.1331, R 336.1910, R 336.1911)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate any tanks in EU-03 controlled by the packed bed scrubber system, as specified in Appendix A, unless the packed bed scrubber system is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, the following:
   a) Maintaining the pressure drop across the scrubber system according to the MAP required by SC III.1.
   b) Maintaining the scrubber water pH according to the MAP required by SC III.1.
   c) Maintaining the scrubber water flow rate according to the MAP required by SC III.1.

The MAP shall define the proper pressure drop, scrubber water pH level, and scrubber water flow rate to be maintained, as specified by the manufacturer. **(R 336.1224, R 336.1225, R 336.1910)**

2. The permittee shall equip and maintain the packed bed scrubber system with a device to continuously monitor and record pressure drop, a device to continuously monitor and record scrubber water pH level, and a device to continuously monitor and record scrubber water flow rate. **(R 336.1224, R 336.1225, 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 perform inspections of the packed bed scrubber system as follows: **(R 336.1224, R 336.1225, R 336.1910)**
   a) Visually inspect the packed bed scrubber, on a quarterly basis, to ensure there is proper drainage, no build up on the packed beds, and no evidence of chemical attack on the structural integrity of the control device.
   b) Visually inspect ductwork from tanks to the packed bed scrubber, on a quarterly basis, to ensure there are no leaks.
   c) Perform all maintenance on the packed bed scrubber system in accordance with the MAP.

2. The permittee shall keep weekly records of the pressure drop, scrubber water pH level, and scrubber water flow rate for the packed bed scrubber system. The permittee shall also keep records of all operating and maintenance information, as required in SC VI.1. The permittee shall keep all records on file at the facility and make available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1910)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EU-03. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-03	12	65	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).

EU-05
EMISSION UNIT CONDITIONS

DESCRIPTION

Electrically heated carburizing oven using acetylene.

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	11.0 tpy	12-month rolling time period as determined at the end of each calendar month	EU-05	SC VI.3	R 336.1225 R 336.1702(a)
2. Benzene[1]	234 lb/year	12-month rolling time period as determined at the end of each calendar month	EU-05	SC VI.4	R 336.1225

II. MATERIAL LIMIT(S)

1. The permittee shall not use more than 9,180 cubic meters of acetylene in EU-05 per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1225, R 336.1702(a)**

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 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))**

2. The permittee shall monitor, in a satisfactory manner acceptable to the AQD District Supervisor, the acetylene usage rate in EU-05 on a monthly and 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. **(R 336.1225, R 336.1702(a))**
3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period, as determined at the end of each calendar month, records of the VOC emission rate from EU-05. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1702(a))**

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, records of the benzene emission rate from EU-05. The permittee shall keep all records on file at the facility and make them available to the Department upon request.[1] **(R 336.1225)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EU-05. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-05-A	2	65	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-05-B	2	65	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).

EU-06
EMISSION UNIT CONDITIONS

DESCRIPTION

An anodizing/Alodine plating line consisting of 43 stations, including loading/unloading stations. Several tanks in the line, as specified in Appendix A, are controlled by a packed bed wet scrubber with pH control.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Packed bed wet scrubber with pH control (Scrubber 06)

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any tanks in EU-06 controlled by the packed bed scrubber system, as specified in Appendix A, unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the packed bed scrubber system, 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 336.1224, R 336.1225, R 336.1331, R 336.1910, R 336.1911)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate any tanks in EU-06 controlled by the packed bed scrubber system, as specified in Appendix A, unless the packed bed scrubber system is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, the following:
   a) Maintaining the pressure drop across the scrubber system according to the MAP required by SC III.1.
   b) Maintaining the scrubber water pH according to the MAP required by SC III.1.
   c) Maintaining the scrubber water flow rate according to the MAP required by SC III.1.

The MAP shall define the proper pressure drop, scrubber water pH level, and scrubber water flow rate to be maintained, as specified by the manufacturer. **(R 336.1224, R 336.1225, R 336.1910)**

2. The permittee shall equip and maintain the packed bed scrubber system with a device to continuously monitor and record pressure drop, a device to continuously monitor and record scrubber water pH level, and a device to continuously monitor and record scrubber water flow rate. **(R 336.1224, R 336.1225, 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 perform inspections of the packed bed scrubber system as follows: **(R 336.1224, R 336.1225, R 336.1910)**
   a) Visually inspect the packed bed scrubber, on a quarterly basis, to ensure there is proper drainage, no build up on the packed beds, and no evidence of chemical attack on the structural integrity of the control device.
   b) Visually inspect ductwork from tanks to the packed bed scrubber, on a quarterly basis, to ensure there are no leaks.
   c) Perform all maintenance on the packed bed scrubber system in accordance with the MAP.

2. The permittee shall keep weekly records of the pressure drop, scrubber water pH level, and scrubber water flow rate for the packed bed scrubber system. The permittee shall also keep records of all operating and maintenance information, as required in SC VI.1. The permittee shall keep all records on file at the facility and make available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1910)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EU-06. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-06	12	65	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants for Plating and Polishing Operations as specified in 40 CFR Part 63 Subparts A and WWWWWW, as they apply to EU-06. **(40 CFR Part 63 Subparts A & WWWWWW)**

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
FG-01	A nitric acid etching line with a rust prevention dip tank. The nitric acid etching line is controlled by a wet scrubber and the rust prevention dip tank emissions are into the in-plant environment.	EU-01, EU-01RSTPRVNTDIP
FG-04	An electric nitriding furnace and associated anhydrous ammonia storage tank. The furnace has an afterburner to control ammonia emissions.	EU-04, EU-04NH3

FG-01
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

A nitric acid etching line with a rust prevention dip tank. The nitric acid etching line is controlled by a wet scrubber and the rust prevention dip tank emissions are into the in-plant environment.

Emission Unit: EU-01, EU-01RSTPRVNTDIP

POLLUTION CONTROL EQUIPMENT

Wet Scrubber (Scrubber 01)

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FG-01 unless a malfunction abatement plan (MAP) as described in Rule 911(2) 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 336.1224, R 336.1225, R 336.1331, R 336.1910, R 336.1911)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate any tanks in EU-01 unless the wet scrubber system is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, the following:
   a) Maintaining the pressure drop across the scrubber system according to the MAP required by SC III.1.
   b) Maintaining the scrubber water pH according to the MAP required by SC III.1.
   c) Maintaining the scrubber water flow rate according to the MAP required by SC III.1.

The MAP shall define the proper pressure drop, scrubber water pH level, and scrubber water flow rate to be maintained, as specified by the manufacturer. **(R 336.1224, R 336.1225, R 336.1910)**

2. The permittee shall equip and maintain each wet scrubber system with a device to continuously monitor and record pressure drop, a device to continuously monitor and record scrubber water pH level, and a device to continuously monitor and record scrubber water flow rate. **(R 336.1224, R 336.1225, 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 perform inspections of the wet scrubber system as follows: **(R 336.1224, R 336.1225, R 336.1910)**
   a) Visually inspect the wet scrubber, on a quarterly basis, to ensure there is proper drainage, no build up on the beds, and no evidence of chemical attack on the structural integrity of the control device.
   b) Visually inspect ductwork from tanks to the wet scrubber, on a quarterly basis, to ensure there are no leaks.
   c) Perform all maintenance on the wet scrubber system in accordance with the MAP.

2. The permittee shall keep weekly records of the pressure drop, scrubber water pH level, and scrubber water flow rate for the wet scrubber system. The permittee shall also keep records of all operating and maintenance information, as required in SC VI.1. The permittee shall keep all records on file at the facility and make available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1910)**

3. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each material, including the weight percent of each component used in FG-01. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.[1] **(R 336.1224, R 336.1225)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EU1. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-01	12	70	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).

FG-04
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

An electric nitriding furnace and associated anhydrous ammonia storage tank. The furnace has an afterburner to control ammonia emissions.

Emission Unit: EU-04, EU-04NH3

POLLUTION CONTROL EQUIPMENT

EU-04 has an afterburner to control ammonia emissions.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU-04 unless the natural gas-fired afterburner is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes operating the afterburner in accordance with the manufacturer's recommendations. **(R 336.1224, R 336.1225, R 336.1910)**

2. Except where specific requirements of these special conditions are applicable and more stringent, EU-04H3 shall comply with the Department of Labor and Economic Growth General Industry Safety Standards, Part 78. Storage and Handling of Anhydrous Ammonia – (1910.111) hereinafter Rule 7801. A copy of this document, which may be obtained by contacting the Michigan Occupational Safety and Health Administration, MIOSHA Standards Section, 7150 Harris Drive, P.O. Box 30643, Lansing, MI 48909-8143, shall be maintained for inspection at the facility.[1] **(R 336.1901)**

3. The permittee shall not operate EU-04H3 unless an emergency response plan, to be followed in the event of an emergency, has been approved by the local fire department or county emergency response agency and is implemented and maintained. Prior to each spring season, the permittee shall review this plan with the local fire department or emergency response agency and make any necessary updates.[1] **(R 336.1901)**

4. The permittee shall not operate EU-04NH3 unless all transfer operations including transport deliveries are performed by a reliable person properly trained and made responsible for proper compliance with all applicable procedures.[1] **(R 336.1901)**

5. Vapor return lines shall be employed with EU-04NH3 whenever necessary to ensure an accidental release from pressure relief valves will not occur during ammonia transfer operations.[1] **(R 336.1901)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU-04NH3 unless a remotely operated internal or external positive shut-off valve is installed to allow access for emergency shut-off of all flow from stationary storage containers.[1] **(R 336.1225, R 336.1901)**

2. Any vapor or liquid line equipped with a mechanical connector, exclusive of couplings, requiring venting after ammonia transfer to the ammonia storage tank shall be purged into the storage tank or returned to the

supplying vessel, or vented through a control device to minimize the release of ammonia emissions to the atmosphere.[1] **(R 336.1225, R 336.1901)**

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

2. The permittee shall keep, in a satisfactory manner, records of the date, duration, and description of any malfunction or leak occurring from any emission unit in FG-04, including the estimated amount of ammonia released into the atmosphere. The records shall also include the date and description of the corrective action performed to address the malfunction/leak. Do not include trace amounts from normal hose coupling bleed downs. The permittee shall keep all records on file at the facility and make them available to the Department upon request.[1] **(R 336.1224, R 336.1225)**

3. The permittee shall keep, in a satisfactory manner, records of the date of annual review and approval of the emergency response plan with the local fire department. The permittee shall keep all records on file at the facility and make them available to the Department upon request.[1] **(R 336.1901)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EU-04. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-04	8	65	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).

APPENDIX A

List of Controlled and Uncontrolled Tanks in EU-02

Controlled by Scrubber System	Not Controlled by Scrubber System
Ultrasonic Clean	Ultrasonic Counter Flow
Electro Clean	Ultrasonic Rinse
Tri-Acid Pickle	(6) Counterflow Rinse stations
50%HCl	
Woods Nickel Strike	
Sulfamate Nickel (2 tanks)	
Nickel Strip	
Hot DI Rinse	

List of Controlled and Uncontrolled Tanks in EU-03

Controlled by Scrubber System	Not Controlled by Scrubber System
Soak Clean	Rinse (15 tanks)
Electro Clean	
Hydrochloric Acid Pickle	
Woods Nickel Strike	
Copper Plate (2 tanks)	
Copper Strike/Flash	
Silver Strike	
Silver Strip (2 tanks)	
Copper Strip	
Hot DI Rinse	

List of Controlled and Uncontrolled Tanks in EU-06

Controlled by Scrubber System	Not Controlled by Scrubber System
Alkaline Clean	Rinse (10 tanks)
Etch	Hot Seal Soak
Casting Etch	
Deoxidizer	
Tri-Chrome	
Anodize	
Sulfuric Acid Anodize (2 tanks)	
Sulfuric Acid Hard Coat Anodize	
Nitric Acid Dip	
Blue Dye	
Black Dye	
Clear/Blue Seal	
Black Seal	
Alodine Seal	