

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

February 28, 2019

PERMIT TO INSTALL
113-07B

ISSUED TO
BASF Corporation – Chemical Plants

LOCATED AT
1609 Biddle Avenue
Wyandotte, Michigan

IN THE COUNTY OF
Wayne

STATE REGISTRATION NUMBER
B4359

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

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: January 29, 2019	
DATE PERMIT TO INSTALL APPROVED: February 28, 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 ₂ e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO ₂	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of 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
EUJONTK-0001	210,000 gallon styrene monomer storage tank; controlled by the RTO system.		FG-RAWMATLS FG-JONFACILITY
EUJONTK-0002	80,000 gallon acrylic acid monomer storage tank; controlled by the RTO system.		FG-RAWMATLS FG-JONFACILITY
EUJONTK-0003	80,000 gallon alpha methyl styrene monomer storage tank; controlled by the RTO system.		FG-RAWMATLS FG-JONFACILITY
EUJONTK-0004	80,000 gallon methyl methacrylate monomer storage tank; controlled by the RTO system as required by NSPS Kb.		FG-RAWMATLS FG-JONFACILITY
EUJONTK-0005	52,000 gallon butyl acrylate monomer storage tank; controlled by the RTO system.		FG-RAWMATLS FG-JONFACILITY
EUJONTK-0006	52,000 gallon 2-ethyl hexyl acrylate monomer storage tank; controlled by the RTO system.		FG-RAWMATLS FG-JONFACILITY
EUJONTK-0007	52,000 gallon methacrylic acid monomer storage tank; controlled by the RTO system.		FG-RAWMATLS FG-JONFACILITY
EUJONTK-0008	52,000 gallon diethylene glycol monoethyl ether monomer storage tank; controlled by the RTO system.		FG-RAWMATLS FG-JONFACILITY
EUJONTK-0009	16,000 gallon ethyl acrylate monomer storage tank; controlled by the RTO system.		FG-RAWMATLS FG-JONFACILITY
EUJONTK-0010	16,000 gallon isobutyl methacrylate monomer storage tank; controlled by the RTO system.		FG-RAWMATLS FG-JONFACILITY
EUJONTK-0011	16,000 gallon n-butyl acetate monomer storage tank; controlled by the RTO system.		FG-RAWMATLS FG-JONFACILITY
EUJONTK-0012	16,000 gallon methyl n-amyl ketone monomer storage tank; controlled by the RTO system.		FG-RAWMATLS FG-JONFACILITY
EUJONTK-0014	10,000 gallon hydroxyethyl methacrylate monomer storage tank; controlled by the RTO system.		FG-RAWMATLS FG-JONFACILITY
EUJONTK-0015	10,000 gallon isopropyl alcohol monomer storage tank; controlled by the RTO system.		FG-RAWMATLS FG-JONFACILITY
EUJONTK-0016	10,000 gallon iso octynol monomer storage tank; controlled by the RTO system.		FG-RAWMATLS FG-JONFACILITY

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUJONEMULTRAIN1	Emulsion reactor train #1 including a reactor, a monomer scale tank, a co-feed tank, and a hold tank; controlled by the RTO system.		FG-EMULSIONS FG-JONFACILITY
EUJONEMULTRAIN2	Emulsion reactor train #2 including a reactor, a monomer scale tank, a co-feed tank, and a hold tank; controlled by the RTO system.		FG-EMULSIONS FG-JONFACILITY
EUJONEMULTRAIN3	Emulsion reactor train #3 including a reactor, a monomer scale tank, a co-feed tank, and a hold tank; controlled by the RTO system.		FG-EMULSIONS FG-JONFACILITY
EUJONEMULTRAIN4	Emulsion reactor train #4 including a reactor, a monomer scale tank, a co-feed tank, and a hold tank; controlled by the RTO system.		FG-EMULSIONS FG-JONFACILITY
EUJONEMULTANKS	One reactor vent knockout tank D-0881; one monomer powerfeed tank D-0800; raw material tanks D-0801, 0841, 0842, 0843, 0861, 0862; and cleaner tank D-0884; controlled by the RTO system.		FG-EMULSIONS FG-JONFACILITY
EUJONSGOTRAIN1	Solid/liquid resin reactor train #1 including a reactor, a monomer batching scale tank, a monomer feeding scale tank, a continuous recycle tank, a purge tank, an evaporator, and a process condenser; controlled by the RTO system.		FG-SGO FG-JONFACILITY
EUJONSGOTRAIN2	Solid/liquid resin reactor train #2 including a reactor, a monomer batching scale tank, a monomer feeding scale tank, a continuous recycle tank, a purge tank, an evaporator, and a process condenser; controlled by the RTO system.		FG-SGO FG-JONFACILITY
EUJONSGOTRAIN3	Solid/liquid resin reactor train #3 including a reactor, a monomer batching scale tank, a monomer feeding scale tank, a continuous recycle tank, a purge tank, an evaporator, and a process condenser; controlled by the RTO system.		FG-SGO FG-JONFACILITY
EUJONSGOTRAIN4	Solid/liquid resin reactor train #4 including a reactor, a monomer batching scale tank, a monomer feeding scale tank, a continuous recycle tank, a purge tank, an evaporator, and a process condenser; controlled by the RTO system.		FG-SGO FG-JONFACILITY
EUSGOCOOLBELT	Three polymer cooling belts; controlled by the RTO system.		FG-SGO FG-JONFACILITY
EUSGOGRINDER	Three polymer dicers; controlled by fabric filter F-1091.		FG-SGO FG-JONFACILITY

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUSGOOTHER	SGO blending tanks D-1116, D-1171, and D-1181; vent knockout tank D-1056; post-WFE addition tanks D-1091 and D-1095; raw material tanks D-1002 and D-1003; inhibitor tank D-1004; controlled by the RTO system.		FG-SGO FG-JONFACILITY
EUJONRESINCUT1	Two resin cutting/blending vessels, two process condensers and two water scrubbers; controlled by the RTO system.		FG-RESINCUT FG-JONFACILITY
EUJONRESINCUT2	One raw material scale and dispersion tank and one wastewater collection tank; uncontrolled.		FG-RESINCUT FG-JONFACILITY
EUJONPRODD-0701	Emulsion product storage tank #1; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0702	Emulsion product storage tank #2; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0703	Emulsion product storage tank #3; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0704	Emulsion product storage tank #4; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0705	Emulsion product storage tank #5; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0706	Emulsion product storage tank #6; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0707	Emulsion product storage tank #7; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0708	Emulsion product storage tank #8; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0709	Emulsion product storage tank #9; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0710	Emulsion product storage tank #10; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0711	Emulsion product storage tank #11; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0712	Emulsion product storage tank #12; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0713	Emulsion product storage tank #13; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0714	Emulsion product storage tank #14; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0715	Emulsion product storage tank #15; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0716	Emulsion product storage tank #16; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0717	Emulsion product storage tank #17; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0718	Emulsion product storage tank #18; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0719	Emulsion product storage tank #19; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0720	Emulsion product storage tank #20; uncontrolled.		FG-PRODUCTS FG-JONFACILITY

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUJONPRODD-0721	Emulsion product storage tank #21; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0722	Emulsion product storage tank #22; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0723	Emulsion product storage tank #23; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0724	Emulsion product storage tank #24; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0725	Emulsion product storage tank #25; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0726	Emulsion product storage tank #26; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0727	Emulsion product storage tank #27; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0728	Emulsion product storage tank #28; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0729	Emulsion product storage tank #29; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0730	Emulsion product storage tank #30; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0731	Emulsion product storage tank #31; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0732	Emulsion product storage tank #32; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0733	Emulsion product storage tank #33; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0911	Resin cut storage tank #11; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0912	Resin cut storage tank #12; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0913	Resin cut storage tank #13; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0914	Resin cut storage tank #14; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0915	Resin cut storage tank #15; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0916	Resin cut storage tank #16; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0917	Resin cut storage tank #17; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0918	Resin cut storage tank #18; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0919	Resin cut storage tank #19; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0920	Resin cut storage tank #20; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0931	Resin cut storage tank #31; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0932	Resin cut storage tank #32; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0933	Resin cut storage tank #33; uncontrolled.		FG-PRODUCTS FG-JONFACILITY

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUJONPRODD-0934	Resin cut storage tank #34; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0935	Resin cut storage tank #35; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0936	Resin cut storage tank #36; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0937	Low pressure resin cut storage tank #37; controlled by the RTO system.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0938	Low pressure resin cut storage tank #38; controlled by the RTO system.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0939	Low pressure resin cut storage tank #39; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0940	Low pressure resin cut storage tank #40; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0941	Low pressure resin cut storage tank #41; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-0942	Low pressure resin cut storage tank #42; uncontrolled.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-1141	Polyol storage tank D-1141; controlled by the RTO system.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-1142	Polyol storage tank D-1142; controlled by the RTO system.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-1143	Polyol storage tank D-1143; controlled by the RTO system.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODD-1144	Polyol storage tank D-1144; controlled by the RTO system.		FG-PRODUCTS FG-JONFACILITY
EUJONPRODSILO1	Solid grade resin storage silo #1; controlled by fabric filter F-1091.		FG-PRODSILOS FG-PRODUCTS FG-JONFACILITY
EUJONPRODSILO2	Solid grade resin storage silo #2; controlled by fabric filter F-1091.		FG-PRODSILOS FG-PRODUCTS FG-JONFACILITY
EUJONPRODSILO3	Solid grade resin storage silo #3; controlled by fabric filter F-1091.		FG-PRODSILOS FG-PRODUCTS FG-JONFACILITY
EUJONEMULDRUMLINE1	Emulsion polymer product drumming line #1; uncontrolled.		FG-DRUMMING FG-JONFACILITY
EUJONEMULDRUMLINE2	Emulsion polymer product drumming line #2; uncontrolled.		FG-DRUMMING FG-JONFACILITY
EUJONRESINDRUMLINE	Resin product drumming line; controlled by the RTO system.		FG-DRUMMING FG-JONFACILITY

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.

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-RAWMATLS	Raw materials storage tanks. Note: Volatile Organic Liquid (VOL) storage tanks with a capacity greater than 75 m ³ are subject to NSPS Kb	EUJONTK-0001, EUJONTK-0002, EUJONTK-0003, EUJONTK-0004, EUJONTK-0005, EUJONTK-0006, EUJONTK-0007, EUJONTK-0008, EUJONTK-0009, EUJONTK-0010, EUJONTK-0011, EUJONTK-0012, EUJONTK-0014, EUJONTK-0015, EUJONTK-0016
FG-EMULSIONS	Emulsion Polymer Production	EUJONEMULTRAIN1, EUJONEMULTRAIN2, EUJONEMULTRAIN3, EUJONEMULTRAIN4, EUJONEMULTANKS
FG-SGO	Solid/Liquid Grade Resin Production. Organic resin production is subject to the requirements of Rule 631 through Rule 702(d).	EUJONSGOTRAIN1, EUJONSGOTRAIN2, EUJONSGOTRAIN3, EUJONSGOTRAIN4, EUSGOCOOLBELT, EUSGOGRINDER, EUSGOOTHER
FG-RESINCUT	Solvent cutting and water blending of resin.	EUJONRESINCUT1, EUJONRESINCUT2
FG-PRODSILOS	Three (3) product silos.	EUJONPRODSILO1, EUJONPRODSILO2, EUJONPRODSILO3
FG-PRODUCTS	Product storage, includes the three product silos.	EUJONPRODD-0701, EUJONPRODD-0702, EUJONPRODD-0703, EUJONPRODD-0704, EUJONPRODD-0705, EUJONPRODD-0706, EUJONPRODD-0707, EUJONPRODD-0708, EUJONPRODD-0709, EUJONPRODD-0710, EUJONPRODD-0711, EUJONPRODD-0712, EUJONPRODD-0713, EUJONPRODD-0714, EUJONPRODD-0715, EUJONPRODD-0716, EUJONPRODD-0717, EUJONPRODD-0718, EUJONPRODD-0719, EUJONPRODD-0720, EUJONPRODD-0721, EUJONPRODD-0722, EUJONPRODD-0723, EUJONPRODD-0724, EUJONPRODD-0725, EUJONPRODD-0726, EUJONPRODD-0727, EUJONPRODD-0728, EUJONPRODD-0729, EUJONPRODD-0730, EUJONPRODD-0731, EUJONPRODD-0732, EUJONPRODD-0733, EUJONPRODD-0911, EUJONPRODD-0912, EUJONPRODD-0913, EUJONPRODD-0914, EUJONPRODD-0915, EUJONPRODD-0916, EUJONPRODD-0917, EUJONPRODD-0918, EUJONPRODD-0919, EUJONPRODD-0920, EUJONPRODD-0931, EUJONPRODD-0932, EUJONPRODD-0933, EUJONPRODD-0934, EUJONPRODD-0935, EUJONPRODD-0936, EUJONPRODD-0937, EUJONPRODD-0938, EUJONPRODD-0939, EUJONPRODD-0940, EUJONPRODD-0941, EUJONPRODD-0942, EUJONPRODD-1141, EUJONPRODD-1142, EUJONPRODD-1143, EUJONPRODD-1144, FG-PRODSILOS
FG-DRUMMING	Product filling.	EUJONEMULDRUMLINE1, EUJONEMULDRUMLINE2, EUJONRESINDRUMLINE

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-OTHER	Hydroxyl waste tank D-1053; acid-functional waste tank D-1054; cleaner tanks D-1061 and D-1062, and D-1063; Hazardous waste storage tanks D-1081 and D-1082; controlled by the RTO system.	
FG-RTO	Regenerative thermal oxidizer system used to control VOC emissions from multiple emission units.	FG-RAWMATLS, FG-EMULSIONS, EUJONSGOTRAIN1, EUJONSGOTRAIN2, EUJONSGOTRAIN3, EUJONSGOTRAIN4, EUSGOCOLBELT, EUSGOOTHER, EUJONRESINCUT1, EUJONPRODD-0937, EUJONPRODD-0938, EUJONPRODD-1141, EUJONPRODD-1142, EUJONPRODD-1143, EUJONPRODD-1144, FG-DRUMMING, FG-OTHER
FG-JONFACILITY	All process equipment at the Joncryn Polymers plant including equipment covered by other permits, grand-fathered equipment and exempt equipment.	

FG-RAWMATLS FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Raw materials storage tanks. Note: Volatile Organic Liquid (VOL) storage tanks with a capacity greater than 75 m³ are subject to NSPS Kb

Emission Unit: EUJONTK-0001, EUJONTK-0002, EUJONTK-0003, EUJONTK-0004, EUJONTK-0005, EUJONTK-0006, EUJONTK-0007, EUJONTK-0008, EUJONTK-0009, EUJONTK-0010, EUJONTK-0011, EUJONTK-0012, EUJONTK-0014, EUJONTK-0015, EUJONTK-0016

POLLUTION CONTROL EQUIPMENT

RTO System

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall limit the FG-RAWMATLS ethyl acrylate throughput to 379,000 gallons per 12-month rolling time period, as determined at the end of each calendar month. **(R 336.1205(3), R 336.1225, R 336.1702(a))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Kb, as they apply to EUJONTK-0001, EUJONTK-0002, EUJONTK-0003, EUJONTK-0004, EUJONTK-0005, EUJONTK-0006, EUJONTK-0007, and EUJONTK-0008. **(40 CFR Part 60 Subparts A and Kb)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip EUJONTK-0004 according to the requirements of 40 CFR 60.112b(a). These requirements include, but are not limited to, the following: **(R 336.1205(3), R 336.1225, R 336.1702(b), R 336.1910, 40 CFR Part 60 Subparts A & Kb)**
 - a) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in 40 CFR 60.485(b). **(40 CFR 60.112b(a)(3)(i))**

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

2. The permittee shall keep, in a satisfactory manner, records of the gallons of FG-RAWMATLS ethyl acrylate throughput for each month and 12-month rolling time period, as determined at the end of each calendar month. The permittee shall keep these records on file and make them available to the Department upon request. **(R 336.1205(3), R 336.1225, R 336.1702(a))**

3. The permittee shall keep readily accessible records showing the dimension and an analysis showing the capacity of EUJONTK-0001, EUJONTK-0002, EUJONTK-0003, EUJONTK-0004, EUJONTK-0005, EUJONTK-0006, EUJONTK-0007, and EUJONTK-0008. The permittee shall keep these records on file for the life of the storage vessel and make them available to the Department upon request. **(40 CFR 60.116b(b))**

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).

FG-EMULSIONS FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Emulsion Polymer Production

Emission Unit: EUJONEMULTRAIN1, EUJONEMULTRAIN2, EUJONEMULTRAIN3, EUJONEMULTRAIN4, EUJONEMULTANKS

POLLUTION CONTROL EQUIPMENT

RTO System

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall not produce more than 241,000,000 pounds of emulsion polymer per 12-month rolling time period, as determined at the end of each calendar month, in FG-EMULSIONS. **(R 336.1205(3), R 336.1224, 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 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a))**
2. The permittee shall keep, in a satisfactory manner, records of the pounds of emulsion polymer produced in FG-EMULSIONS for each month and 12-month rolling time period, as determined at the end of each calendar month. The permittee shall keep these records on file and make them available to the Department upon request. **(R 336.1205(3), R 336.1224, 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).

FG-SGO
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Solid/Liquid Grade Resin Production. Organic resin production is subject to the requirements of Rule 631 through Rule 702(d).

Emission Unit: EUJONSGOTRAIN1, EUJONSGOTRAIN2, EUJONSGOTRAIN3, EUJONSGOTRAIN4, EUSGOCOOBELT, EUSGOGRINDER, EUSGOOTHER

POLLUTION CONTROL EQUIPMENT

RTO system for EUJONSGOTRAIN1, EUJONSGOTRAIN2, EUJONSGOTRAIN3, EUJONSGOTRAIN4, EUSGOCOOBELT, EUSGOOTHER, Fabric filter F-1091 for EUSGOGRINDER

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	0.10 lb per 1,000 pounds of exhaust gas	Hourly	EUSGOGRINDER	SC V.1	R 336.1205(3), R 336.1331

II. MATERIAL LIMIT(S)

1. The permittee shall not produce more than 142,000,000 pounds of resin per 12-month rolling time period, as determined at the end of each calendar month, in FG-SGO. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EUSGOGRINDER unless fabric filter F-1091 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining a pressure drop across the filter as specified in the fabric filter operating procedures, which the permittee shall keep on site and make available to the Department upon request. **(R 336.1205(3), R 336.1331)**
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the pressure drop across F-1091 on a daily basis. Any request for a change in the monitoring frequency shall be submitted to the AQD District Supervisor for review and approval. **(R 336.1205(3), R 336.1331)**

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 shall verify the PM emission rate from EUSGOGRINDER by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Appendix A and/or Part 10 of the Michigan Air Pollution Control Rules. The emission rate during testing shall be determined by the average of the acceptable test runs performed in accordance with the method requirements. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 60 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(3), R 336.1331, R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall 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 recordkeeping, reporting or notification special condition. **(R 336.1205(3), R 336.1225, R 336.1702)**
2. The permittee shall keep, in a satisfactory manner, records of the pounds of resin produced in FG-SGO for each month and 12-month rolling time period, as determined at the end of each calendar month. The permittee shall keep these records on file and make them available to the Department upon request. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a))**
3. The permittee shall keep, in a satisfactory manner, records of the monitored pressure drop across F-1091. The permittee shall keep these records on file and make them available to the Department upon request. **(R 336.1205(3), R 336.1331)**

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).

FG-RESINCUT FLEXIBLE GROUP CONDITIONS
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DESCRIPTION

Solvent cutting and water blending of resin

Emission Unit: EUJONRESINCUT1, EUJONRESINCUT2

POLLUTION CONTROL EQUIPMENT

Water scrubber and RTO system for EUJONRESINCUT1

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall not produce more than 143,000,000 pounds of cut resin per 12-month rolling time period, as determined at the end of each calendar month, in FG-RESINCUT. **(R 336.1205(3), R 336.1224, 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 recordkeeping, reporting or notification special condition. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a))**
2. The permittee shall keep, in a satisfactory manner, records of the pounds of cut resin produced in FG- RESINCUT for each month and 12-month rolling time period, as determined at the end of each calendar month. The permittee shall keep these records on file and make them available to the Department upon request. **(R 336.1205(3), R 336.1224, 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).

**FG-PRODUCTS
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Product storage

Emission Unit: EUJONPRODSILO1, EUJONPRODSILO2, EUJONPRODSILO3 (these first three make up FG-PRODSILOS) and EUJONPRODD-0701, EUJONPRODD-0702, EUJONPRODD-0703, EUJONPRODD-0704, EUJONPRODD-0705, EUJONPRODD-0706, EUJONPRODD-0707, EUJONPRODD-0708, EUJONPRODD-0709, EUJONPRODD-0710, EUJONPRODD-0711, EUJONPRODD-0712, EUJONPRODD-0713, EUJONPRODD-0714, EUJONPRODD-0715, EUJONPRODD-0716, EUJONPRODD-0717, EUJONPRODD-0718, EUJONPRODD-0719, EUJONPRODD-0720, EUJONPRODD-0721, EUJONPRODD-0722, EUJONPRODD-0723, EUJONPRODD-0724, EUJONPRODD-0725, EUJONPRODD-0726, EUJONPRODD-0727, EUJONPRODD-0728, EUJONPRODD-0729, EUJONPRODD-0730, EUJONPRODD-0731, EUJONPRODD-0732, EUJONPRODD-0733, EUJONPRODD-0911, EUJONPRODD-0912, EUJONPRODD-0913, EUJONPRODD-0914, EUJONPRODD-0915, EUJONPRODD-0916, EUJONPRODD-0917, EUJONPRODD-0918, EUJONPRODD-0919, EUJONPRODD-0920, EUJONPRODD-0931, EUJONPRODD-0932, EUJONPRODD-0933, EUJONPRODD-0934, EUJONPRODD-0935, EUJONPRODD-0936, EUJONPRODD-0937, EUJONPRODD-0938, EUJONPRODD-0939, EUJONPRODD-0940, EUJONPRODD-0941, EUJONPRODD-0942, EUJONPRODD-1141, EUJONPRODD-1142, EUJONPRODD-1143, EUJONPRODD-1144

POLLUTION CONTROL EQUIPMENT

RTO system for EUJONPRODD-0937 through EUJONPRODD 0938 and EUJONPRODD-1141 through EUJONPRODD-1144 and fabric filter F-1091 for FG-PRODSILOS

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Ethyl acrylate	0.0144 pph	Hourly	FG-PRODUCTS equipment not vented to the RTO system	SC V.1, SC VI.3	R 336.1205(3) R 336.1225 R 336.1702(a)
2. PM	0.10 lb per 1,000 pounds of exhaust gas	Hourly	FG-PRODSILOS	SC V.2	R 336.1205(3) R 336.1331

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

- The permittee shall not operate FG-PRODSILOS unless fabric filter F-1091 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining a pressure drop across the filter as specified in the fabric filter operating procedures, which the permittee shall keep on site and make available to the Department upon request. **(R 336.1205(3), R 336.1331)**

2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the pressure drop across F-1091 on a daily basis. Any request for a change in the monitoring frequency shall be submitted to the AQD District Supervisor for review and approval. **(R 336.1205(3), R 336.1331)**

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 shall verify the ethyl acrylate emission rate from FG-PRODUCTS equipment not vented to the RTO system by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Appendix A. The emission rate during testing shall be determined by the average of the acceptable test runs performed in accordance with the method requirements. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 60 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(3), R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)**
2. Upon request from the AQD District Supervisor, the permittee shall verify the PM emission rate from FG-PRODSILOS by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Appendix A and/or Part 10 of the Michigan Air Pollution Control Rules. The emission rate during testing shall be determined by the average of the acceptable test runs performed in accordance with the method requirements. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 60 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(3), R 336.1331, R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall 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 recordkeeping, reporting or notification special condition. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a))**
2. The permittee shall keep, in a satisfactory manner, records of the monitored pressure drop across F-1091. The permittee shall keep these records on file and make them available to the Department upon request. **(R 336.1205(3), R 336.1331)**
3. The permittee shall keep throughput records on a monthly basis and other records necessary to demonstrate compliance with the ethyl acrylate emission limit listed in SC I.1. The emission rate may be calculated based upon monthly records, prorated to an hourly rate. The permittee shall keep these records on file and make them available to the Department upon request. **(R 336.1205(3), 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. SV-PROD1 ^a	55	47.0	R 336.1225 40 CFR 52.21(c) & (d)
2. SV-PROD2 ^a	55	58.5	R 336.1225 40 CFR 52.21(c) & (d)
a. This stack is not required to be discharged unobstructed vertically upwards 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).

**FG-DRUMMING
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Product Filling

Emission Unit: EUJONEMULDRUMLINE1, EUJONEMULDRUMLINE2, EUJONRESINDRUMLINE

POLLUTION CONTROL EQUIPMENT

RTO system for EUJONRESINDRUMLINE

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Ethyl acrylate	0.0144 pph	Hourly	FG-DRUMMING equipment not vented to the RTO system	SCV.1, SC VI.3	R 336.1205(3) R 336.1225 R 336.1702(a)

II. MATERIAL LIMIT(S)

1. The permittee shall limit loading of organic compounds into delivery vessels from stationary vessels in FG-DRUMMING to less than 5,000,000 gallons per year of organic compounds with a true vapor pressure of more than 1.5 psia at actual conditions. Gallons per year shall be based upon a 12-month rolling time period, as determined at the end of each calendar month. **(R 336.1706)**

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))**

1. Upon request from the AQD District Supervisor, the permittee shall verify the ethyl acrylate emission rate from FG-DRUMMING equipment not vented to the RTO system by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Appendix A. The emission rate during testing shall be determined by the average of the acceptable test runs performed in accordance with the method requirements. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 60 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(3), R 336.1225, R 336.1702, 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 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 recordkeeping, reporting or notification special condition. (R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a))
2. The permittee shall keep throughput records on a monthly basis and other records necessary to demonstrate compliance with the ethyl acrylate emission limit listed in SC I.1. The emission rate may be calculated based upon monthly records, prorated to an hourly rate. The permittee shall keep these records on file and make them available to the Department upon request. (R 336.1205(3), R 336.1225, R 336.1702(a))
3. The permittee shall keep, in a satisfactory manner, records of the gallons of organic compounds with a true vapor pressure of more than 1.5 psia at actual conditions loaded into delivery vessels from stationary vessels in FG-DRUMMING for each month and 12-month rolling time period, as determined at the end of each calendar month. The permittee shall keep these records on file and make them available to the Department upon request. (R 336.1706))

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. SV-DRUM	10	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).

**FG-RTO
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Regenerative thermal oxidizer system used to control VOC emissions from multiple emission units

Emission Unit: FG-RAWMATLS, FG-EMULSIONS, FG-OTHER, EUJONSGOTRAIN1, EUJONSGOTRAIN2, EUJONSGOTRAIN3, EUJONSGOTRAIN4, EUSGOCOOBELT, EUSGOOTHER, EUJONRESINCUT1, EUJONPRODD-0937, EUJONPRODD-0938, EUJONPRODD-1141, EUJONPRODD-1142, EUJONPRODD-1143, EUJONPRODD-1144, EUJONEMULDRUMLINE1, EUJONEMULDRUMLINE2, EUJONRESINDRUMLINE

POLLUTION CONTROL EQUIPMENT

RTO system

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Ethyl acrylate	0.21 pph	Hourly	FG-RTO	SC V.1, SC V.2, SC VI.4	R 336.1205(3) R 336.1225 R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall submit for approval by the AQD, as an attachment to the notification required by 40 CFR 60.7(a)(1) or 40 CFR 60.7(a)(2), an operating plan containing the information listed in 40 CFR 60.113b(c)(1). **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 60.113b(c)(1))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate any equipment vented to the RTO system unless the RTO system is installed, maintained, and operating in a satisfactory manner, except as allowed by SC IV.4. Satisfactory operation includes maintaining the 3-hour average firebox temperature at 28 °C (50 °F) below the average temperature during the most recent performance test at which compliance was demonstrated or higher, reducing the total organic compounds (minus methane and ethane) (TOC) by 98 weight percent, and operating in accordance with the operating plan. TOC is expressed as the sum of the actual compounds, not carbon equivalents. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 60.112b(a)(3)(ii))**
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to continuously monitor and record the firebox temperature of the RTO. Satisfactory manner includes measuring the temperature to within 1 percent (relative to degrees Celsius) or ±0.5 °C (±0.9 °F), whichever is greater. Continuous monitoring means at least one measurement every fifteen minutes. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
3. The permittee shall not install bypass valves that could divert a vent stream from the RTO, except as allowed by SC IV.4 when the vent stream goes to the emergency vent stack of the RTO. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

4. During periods of shutdown of the RTO system for maintenance or offline inspections, the permittee may vent storage tank and process tank breathing losses to the atmosphere by way of the RTO emergency vent stack (stack listed in SC VIII.2). During RTO shutdowns, the permittee shall minimize uncontrolled emissions by shutting down production processes so that the only emissions occurring during these events are the breathing losses from the storage and process tanks. During RTO shutdowns, the permittee shall not transfer any material into or out of any storage or process tank and shall not apply heat to any storage or process tank. **(R 336.1205(3), R 336.1225, R 336.1702)**

V. TESTING/SAMPLING

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

1. Every five years, the permittee shall verify and quantify the ethyl acrylate emission rate and TOC destruction efficiency from FG-RTO by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, 40 CFR 60 Subpart Kb)**
2. No later than December 31, 2019, and continuing every two (2) years thereafter, the permittee shall submit a test plan for FG-RTO to determine the VOC destruction efficiency. The test plan shall meet the requirements specified in Exhibit A of Consent Order AQD No. 2018-03 and be submitted to the AQD Detroit District Supervisor and the AQD Technical Programs Unit Supervisor for approval prior to testing. Within thirty (30) days after AQD approval of a test plan submitted by the permittee, the permittee shall conduct stack testing for VOC destruction Efficiency on FG-RTO. Within sixty (60) days after the test completion, the permittee shall submit to the AQD Detroit District Supervisor and the AQD Technical Programs Unit Supervisor a test report that includes the test data and results. Not less than seven (7) days prior to any stack testing which will be used to demonstrate compliance, the permittee or an authorized agent shall notify the AQD Detroit District Supervisor and the AQD Technical Programs Unit Supervisor, in writing, of the time and place of the tests and who shall conduct them. A representative of the AQD shall have the opportunity to witness the tests. After two (2) consecutive testing events demonstrating compliance with the minimum VOC destruction efficiency limits for FG-RTO, the permittee may return to the testing schedule in Special Condition V.1. **(Consent Order AQD No. 2018-03)**

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 recordkeeping, reporting or notification special condition. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a))**
2. The permittee shall monitor the parameters of the closed vent system and RTO system in accordance with the operating plan submitted to the AQD in accordance with SC III.1, unless the plan was modified by the AQD during the review process. In this case, the modified plan applies. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 60.113b(c)(1))**
3. The permittee shall conduct regular inspections, as outlined below, of the RTO for the purpose of determining the operating condition of the RTO. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a) Regular inspections of the thermal oxidizer shall be conducted during scheduled outages or downtime, but not less frequently than every 12-months.
 - b) The operational condition, and if necessary, reasons for the failure or malfunction of the different components of the thermal oxidizer shall be determined during the inspection.
 - c) Any repairs and corrective actions, needed to address the causes of malfunction or failure shall be performed within one hour. If the problem is not corrected within one hour, the facility shall promptly discontinue the source of emissions to the thermal oxidizer until any repairs and corrective actions needed to address the causes of malfunction or failure is performed.

4. The permittee shall keep a copy of the operating plan required by SC III.1 on file for the life of the RTO system and make it available to the Department upon request. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 60.115b(c)(1))**
5. The permittee shall keep a record of the measured values of the parameters monitored in accordance with SC VI.2. The permittee shall keep these records on file and make them available to the Department upon request. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 60.115b(c)(2))**
6. The permittee shall keep up-to-date, readily-accessible records of the following information measured during each performance test, and shall include the following information in the report of the initial performance test in addition to the written results of such performance tests as required under 40 CFR 60.8. The same information specified in this condition shall be submitted in the reports of all subsequently required performance tests where either the emission control efficiency of a combustion device or the outlet concentration of TOC (minus methane and ethane) is determined. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**
 - a) The average firebox temperature of the RTO measured at least every 15 minutes and averaged over the performance test period,
 - b) The percent reduction of TOC (minus methane and ethane) achieved by the RTO,
 - c) A description of the location at which the vent stream is introduced into the RTO, and
 - d) All periods when the RTO device is not operating.
7. The permittee shall keep up-to-date, readily accessible continuous records of the following: **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a))**
 - a) The temperature measurements specified under SC IV.2 and
 - b) Records of periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. Periods of operation during which the parameter boundaries established during the most recent performance test are exceeded is defined as all 3-hour periods of operation during which the average combustion temperature was more than 28 °C (50 °F) below the average combustion temperature during the most recent performance test at which compliance was demonstrated.
8. The permittee shall keep, in a satisfactory manner, records of the date, duration, and description of any shutdown of the RTO, including what was done prior to the shutdown to minimize emissions and the estimated amount of emissions released into the atmosphere. All records shall be kept on file and made available to the Department upon request. **(R 336.1205(3), R 336.1225, R 336.1702)**

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. SV-RTO	24	36.5	R 336.1225 40 CFR 52.21(c) & (d)
2. SV-RTOEMERVENT	24	27	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).

**FG-JONFACILITY
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

All process equipment at the Joncryl Polymers Plant including equipment covered by other permits, grand-fathered equipment and exempt equipment

Emission Units: All emission units associated with the Joncryl Polymers Plant including all emission units listed in the Emission Unit Summary Table.

POLLUTION CONTROL EQUIPMENT

RTO, fabric filter and water scrubber

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	36 tpy	12-month rolling time period as determined at the end of each calendar month	FG-JONFACILITY	SC VI.2	R 336.1205(3)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall implement and maintain a leak detection and repair (LDAR) program equivalent to the requirements of Rule 628 (R 336.1628), except as specified below, for FG-JONFACILITY as approved by the AQD District Supervisor. **(R 336.1205(3), R336.1702(a))**
 - a) Annual inspections of difficult to monitor components are not required to take place during the period of April 1 through June 30, as specified in Rule 628(2)(b).
 - b) Reports required by Rule 628(13) may be submitted semi-annually instead of quarterly.

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 recordkeeping, reporting or notification special condition. **(R 336.1205(3))**
2. 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 FG-JONFACILITY. The permittee shall keep these records on file and make them available to the Department upon request. **(R 336.1205(3))**

3. The permittee shall keep, in a satisfactory manner, records required by the LDAR program for FG- JONFACILITY, as required by SC 8.2. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(3), 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).