

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

December 4, 2014

PERMIT TO INSTALL
157-10C

ISSUED TO
Alpha Resins, LLC

LOCATED AT
17350 Ryan Road
Detroit, Michigan

IN THE COUNTY OF
Wayne

STATE REGISTRATION NUMBER
B2927

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:

November 12, 2014

DATE PERMIT TO INSTALL APPROVED:

December 4, 2014

SIGNATURE:

DATE PERMIT VOIDED:

SIGNATURE:

DATE PERMIT REVOKED:

SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	BTU	British Thermal Unit
BACT	Best Available Control Technology	°C	Degrees Celsius
CAA	Clean Air Act	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
CO ₂ e	Carbon Dioxide Equivalent	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H ₂ S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
GHGs	Greenhouse Gases	kW	Kilowatt
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfunction Abatement Plan	NO _x	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality (Department)	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	PM with aerodynamic diameter ≤10 microns
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	PM with aerodynamic diameter ≤ 2.5 microns
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonably Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO ₂	Sulfur Dioxide
SCR	Selective Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TAC	Toxic Air Contaminant	µg	Microgram
TEQ	Toxicity Equivalence Quotient	VOC	Volatile Organic Compound
VE	Visible Emissions	yr	Year

* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

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 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 R 336.1219 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 R 336.1219 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 R 336.1301, 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 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 R 336.1370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

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 (Process Equipment & Control Devices)	Flexible Group ID
EUTANK111	20,000 gallon blowout storage tank	FG100TANKFARM
EUTANK112	25,000 gallon product storage tank	FG100TANKFARM
EUTANK113	25,000 gallon storage tank	FG100TANKFARM
EUTANK114	20,000 gallon storage tank	FG100TANKFARM
EUTANK115	18,700 gallon phenol storage tank	FG100TANKFARM
EUTANK116	25,000 gallon phenol storage tank	FG100TANKFARM
EUTANK147	12,000 gallon storage tank	FG100TANKFARM
EUTANK148	20,000 gallon product storage tank	FG100TANKFARM
EUTANK149	10,000 gallon product storage tank	FG100TANKFARM
EUTANK150	10,000 gallon storage tank	FG100TANKFARM
EUTANK151	12,000 gallon storage tank	FG100TANKFARM
EUTANK152	12,000 gallon intermediate storage tank	FG100TANKFARM
EUTANK153	12,000 gallon storage tank	FG100TANKFARM
EUTANK154	12,000 gallon storage tank	FG100TANKFARM
EUTANK155	12,000 gallon formaldehyde storage tank	FG100TANKFARM
EUTANK156	12,000 gallon product storage tank	FG100TANKFARM
EUTANK157	10,000 gallon intermediate storage tank	FG100TANKFARM
EUTANK158	10,000 gallon distillate storage tank	FG100TANKFARM
EUTANK201	20,000 gallon furfuryl alcohol storage tank	FG200TANKFARM
EUTANK202	20,000 gallon furfuryl alcohol storage tank	FG200TANKFARM
EUTANK203	20,000 gallon ester storage tank	FG200TANKFARM
EUTANK204	20,000 gallon solvent storage tank	FG200TANKFARM
EUTANK205	20,000 gallon kerosene storage tank	FG200TANKFARM
EUTANK206	20,000 gallon distillate storage tank	FG200TANKFARM
EUTANK207	20,000 gallon methanol storage tank	FG200TANKFARM
EUTANK208	20,000 gallon solvent storage tank	FG200TANKFARM
EUTANK209	20,000 gallon mineral spirits storage tank	FG200TANKFARM
EUTANK210	10,000 gallon storage tank	FG200TANKFARM
EUTANK211	20,000 gallon solvent storage tank	FG200TANKFARM
EUTANK212	20,000 gallon solvent storage tank	FG200TANKFARM
EUTANK213	10,000 gallon storage tank	FG200TANKFARM
EUTANK214	20,000 gallon storage tank	FG200TANKFARM
EUTANK316	20,000 gallon intermediate storage tank	FG300TANKFARM
EUTANK317	20,000 gallon storage tank	FG300TANKFARM

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EUTANK318	20,000 gallon storage tank	FG300TANKFARM
EUTANK319	25,000 gallon MDI storage tank	FG300TANKFARM
EUTANK320	25,000 gallon MDI storage tank	FG300TANKFARM
EUTANK403	12,000 gallon storage tank	FG400TANKFARM
EUTANK404	20,000 gallon product storage tank	FG400TANKFARM
EUTANK405	12,000 gallon linseed oil storage tank	FG400TANKFARM
EUTANK406	12,000 gallon product storage tank	FG400TANKFARM
EUTANK407	12,000 gallon raw material storage tank	FG400TANKFARM
EUTANK408	12,000 gallon raw material storage tank	FG400TANKFARM
EUTANK502	6,000 gallon isocyanate storage tank	FG500TANKFARM
EUTANK503	6,000 gallon isocyanate storage tank	FG500TANKFARM
EUTANK504	125 gallon extender storage tank	FG500TANKFARM
EUTANK505	125 gallon extender storage tank	FG500TANKFARM
EUTANK506	125 gallon extender storage tank	FG500TANKFARM
EUREACTOR2	4,000 gallon resin reactor	FGBUILDINGD
EUREACTOR3	5,000 gallon resin reactor	FGBUILDINGD
EUREACTOR4	6,800 gallon resin reactor	FGBUILDINGD
EUREACTOR5	6,500 gallon resin reactor	FGBUILDINGD
EUREACTOR6	6,500 gallon resin reactor	FGBUILDINGD
EUBLENDTANK11	5,000 gallon blend tank	FGBUILDINGD
EUBLENDTANK12	660 gallon blend tank	FGBUILDINGD
EUBLENDTANK14	5,000 gallon blend tank	FGBUILDINGD
EUBLENDTANK15	5,000 gallon blend tank	FGBUILDINGD
EUBLENDTANK16	4,900 gallon blend tank	FGBUILDINGD
EUBLENDTANK16OV	660 gallon overflow blend tank	FGBUILDINGD
EUREACTORK1	Alkyd reactor K-1	FGBUILDINGK
EUREACTORK2	Reactor K-2 – filled with cold water and used as a heat sink for reactor K-1	FGBUILDINGK
EUREACTORK3	Reactor K-3 blend tank	FGBUILDINGK
EUREACTORK4	Reactor K-4 used for waste water storage	FGBUILDINGK
EUREACTORK5	Reactor K-5	FGBUILDINGK
EUBLENDTANK18	Blend tank 18	FGBUILDINGK
EUTANK322	6,000 gallon thinning tank	FGBUILDINGK
EUBLENDTANK10	660 gallon blend tank	FGBUILDINGG
EUBLENDTANK13	3,200 gallon blend tank	FGBUILDINGG
EUBLENDTANK17	5,000 gallon blend tank	FGBUILDINGG
EUBSBLENDTANK	10,000 gallon big scale blend tank	FGBUILDINGG
EUFSBLENDTANK1	2,000 gallon floor scale blend tank	FGBUILDINGG
EUFSBLENDTANK2	2,000 gallon floor scale blend tank	FGBUILDINGG

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EUFORMALIN1	15,000 gallon formalin storage tank	FGFACILITY
EUFORMALIN2	15,000 gallon formalin storage tank	FGFACILITY
EUDISTILLATE	20,000 gallon distillate storage tank	FGFACILITY
EUBOILER1	Natural gas fired boiler rated at less than 16 mmBtu/hr	FGFACILITY
EUBOILER2	Natural gas fired boiler rated at less than 6 mmBtu/hr	FGFACILITY
EUBACKUPGEN	500 kW (or less) natural gas fired emergency generator	FGFACILITY
EUPASTILLATOR1	Pastillator line 1 used for solidifying phenol formaldehyde resins into pellets.	FGFACILITY
EUPASTILLATOR2	Pastillator line 2 used for solidifying phenol formaldehyde resins into pellets.	FGFACILITY
EUPASTILLATOR3	Pastillator line 3 used for solidifying phenol formaldehyde resins into pellets.	FGFACILITY
EUNEWTANK1	15,000 gallon product storage tank	FGFACILITY
EUNEWTANK2	15,000 gallon product storage tank	FGFACILITY
EUNEWTANK3	15,000 gallon product storage tank	FGFACILITY
EUNEWTANK4	5,000 gallon resin product blending tank	FGFACILITY
EUNEWTANK5	10,000 gallon product storage tank	FGFACILITY
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 336.1290.		

The following conditions apply to:
EUBOILER1

DESCRIPTION: Natural gas fired boiler rated at less than 16 mmBtu/hr

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

1. The permittee shall burn only natural gas in EUBOILER1. **(R 336.1205, R 336.1225, R 336.1702, R 336.1901, 40 CFR 52.21(c) & (d), 40 CFR Part 60 Subparts Dc)**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The heat input capacity of EUBOILER1 shall not exceed a maximum of 16.0 MM BTU per hour. **(R 336.1205, 40 CFR 52.21(c) & (d), 40 CFR Part 60 Subpart Dc)**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor, in a satisfactory manner, the natural gas usage rate for EUBOILER1 on a monthly basis. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d), 40 CFR 60.48c(g))**
2. The permittee shall keep, in a satisfactory manner, all monthly fuel use records for EUBOILER1, as required by SC VI.1., on file at the facility and make them available to the Department upon request. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d), 40 CFR 60.48c(g))**
3. The permittee shall monitor emissions, operating information, and keep records for EUBOILER1 in accordance with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Dc. The permittee shall make all records available to the Department upon request. **(40 CFR Part 60 Subparts A and Dc)**

VII. REPORTING

1. The permittee shall provide written notification of construction and operation to comply with the federal Standards of Performance for New Stationary Sources, 40 CFR 60.7. The permittee shall submit this notification to the AQD District Supervisor within the time frames specified in 40 CFR 60.7. **(40 CFR 60.7)**

VIII. STACK/VENT RESTRICTIONS

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. SVBOILER1	36	28.6	40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

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 Dc, as they apply to EUBOILER1. **(40 CFR Part 60 Subparts A & Dc)**

The following conditions apply to:
EUBACKUPGEN

DESCRIPTION: 500 kW (or less) natural gas fired emergency generator

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

1. The permittee shall demonstrate compliance for EUBACKUPGEN with the emission limits under 40 CFR Part 60, Subpart JJJJ. **(40 CFR 60 Subpart JJJJ)**

II. MATERIAL LIMITS

1. The permittee shall burn only pipeline quality natural gas in EUBACKUPGEN. **(R 336.1205(3), R 336.1225, 40 CFR 60.4230)**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUBACKUPGEN greater than 500 hours per year, based on a 12-month rolling time period. **(R 336.1205(3), R 336.1225, 40 CFR 52.21 (c) & (d))**
2. The permittee may operate EUBACKUPGEN for no more than 100 hours per 12-month rolling time period as determined at the end of each calendar month for the purpose of necessary maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Permittee may petition the Department for approval of additional hours to be used for maintenance checks and readiness testing. A petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency internal combustion engines beyond 100 hours per year. **(40 CFR 60.4243(d))**
3. The permittee shall install, maintain, and operate EUBACKUPGEN and any control device according to the manufacturer's emission-related written instructions, over the entire life of the engine. In addition, the permittee may only change those settings that are permitted by the manufacturer. The permittee shall also meet the applicable requirements of 40 CFR part 1068. **((R 336.1205(1)(a) & (3), R 336.1225, R 336.1910, 40 CFR 52.21(c) & (d), 40 CFR 60.4234, 40 CFR 60.4243(a))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a non-resettable device to monitor and record the hours of operation for EUBACKUPGEN. **(R 336.1205(3), R 336.1225, 40 CFR 52.21 (c) & (d), 40 CFR 60.4237)**
2. The nameplate capacity of EUBACKUPGEN shall not exceed 500 kW, as certified by the equipment manufacturer. **(R 336.1205(1)(a) & (3), 40 CFR 60.4230(a))**

V. TESTING/SAMPLING

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

1. Within 180 days after commencement of trial operation, the permittee shall verify NO_x, CO, and VOC emission rates from EUBACKUPGEN, by testing at owner's expense, in accordance with Department requirements or by providing manufacturer certification documentation as required in SC VI.2. If testing is to be performed, the permittee must submit a complete stack-testing plan to the AQD. No less than 60 days prior to testing, the permittee must submit a complete stack-testing 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 336.2001, R 336.2003, R 336.2004, 40 CFR 60.4244, 40 CFR 60.4245(a))**

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(1)(a) & (3), 40 CFR 52.21 (c) & (d))**
2. The permittee shall keep, in a satisfactory manner, a record of testing required in SC V.1 or manufacturer certification documentation indicating that EUBACKUPGEN meets the applicable emission limitations contained in the federal Standards of Performance for New Stationary Sources 40 CFR Part 60 Subpart JJJJ. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4245(a))**
3. The permittee shall monitor and record the hours of operation of EUBACKUPGEN during emergencies and non-emergencies, on a monthly and 12-month rolling time period basis, in a manner acceptable to the District Supervisor, Air Quality Division. The permittee shall record the time of operation of EUBACKUPGEN and the reason it was in operation during that time. **(R 336.1205(1)(a) & (3), 40 CFR 60.4243(d))**

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 EUBACKUPGEN. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

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. SVBACKUPGEN	12	28.6	R 336.1225

IX. OTHER REQUIREMENTS

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 JJJJ, as they apply to EUBACKUPGEN. **(40 CFR Part 60 Subparts A & JJJJ)**

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
FG100TANKFARM	100 Tank Farm – raw materials and products from Building D	EUTANK111, EUTANK112, EUTANK113, EUTANK114, EUTANK115, EUTANK116, EUTANK147, EUTANK148, EUTANK149, EUTANK150, EUTANK151, EUTANK152, EUTANK153, EUTANK154, EUTANK155, EUTANK156, EUTANK157, EUTANK158
FG200TANKFARM	200 Tank Farm – solvents	EUTANK201, EUTANK202, EUTANK203, EUTANK204, EUTANK205, EUTANK206, EUTANK207, EUTANK208, EUTANK209, EUTANK210, EUTANK211, EUTANK212, EUTANK213, EUTANK214
FG300TANKFARM	300 Tank Farm – intermediate products	EUTANK316, EUTANK317, EUTANK318, EUTANK319, EUTANK320, EUTANK322
FG400TANKFARM	400 Tank Farm – raw materials and products from Building K	EUTANK403, EUTANK404, EUTANK405, EUTANK406, EUTANK407, EUTANK408
FG500TANKFARM	500 Tank Farm – part two products	EUTANK502, EUTANK503, EUTANK504, EUTANK505, EUTANK506
FGBUILDINGD	Phenolic/formaldehyde resins and furfuryl alcohol resins production housed in Building D. Consists of reactors and blend tanks.	EUREACTOR2, EUREACTOR3, EUREACTOR4, EUREACTOR5, EUREACTOR6, EUBLENDTANK11, EUBLENDTANK12, EUBLENDTANK14, EUBLENDTANK15, EUBLENDTANK16, EUBLENDTANK16OV
FGBUILDINGK	Alkyd production housed in Building K. Consists of one active reactor (EUREACTORK1) and several other reactors used for other purposes.	EUREACTORK1, EUREACTORK2, EUREACTORK3, EUREACTORK4, EUREACTORK5, EUBLENDTANK18, EUTANK322
FGBUILDINGG	Group of blending tanks housed in Building G	EUBLENDTANK10, EUBLENDTANK13, EUBLENDTANK17, EUBSBLENDTANK, EUFSBLENDTANK1, EUFSBLENDTANK2
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	

The following conditions apply to:
FG200TANKFARM

DESCRIPTION: 200 Tank Farm – solvents

Emission Units: EUTANK201, EUTANK202, EUTANK203, EUTANK204, EUTANK205, EUTANK206,
EUTANK207, EUTANK208, EUTANK209, EUTANK210, EUTANK211, EUTANK212,
EUTANK213, EUTANK214

POLLUTION CONTROL EQUIPMENT: Nitrogen blanket on EUTANK207

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUTANK207 unless the nitrogen blanket system is installed, maintained, and operated in a satisfactory manner. **(R 336.1205, R 336.1702, R 336.1901, R 336.1910)**

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

NA

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
FGBUILDINGD

DESCRIPTION: Phenolic/formaldehyde resins and furfuryl alcohol resins production housed in Building D. Consists of reactors and blend tanks.

Emission Units: EUREACTOR2, EUREACTOR3, EUREACTOR4, EUREACTOR5, EUREACTOR6, EUBLENDTANK11, EUBLENDTANK12, EUBLENDTANK14, EUBLENDTANK15, EUBLENDTANK16, EUBLENDTANK16OV

POLLUTION CONTROL EQUIPMENT: Main scrubber, ammonia scrubber

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Formaldehyde	114 lb/yr ¹	12-month rolling time period as determined at the end of each calendar month	EUREACTOR5 and EUREACTOR6	SC VI.4	R 336.1225

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGBUILDINGD unless all applicable provisions of Rule 631 are met. **(R 336.1205, R 336.1631, R 336.1901, R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate any FGBUILDINGD reactor or blend tank unless the main scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the main scrubber includes, but is not limited to, maintaining a minimum pressure drop across the plate of 0.7 inches water gauge. **(R 336.1205, R 336.1631, R 336.1901, R 336.1910)**
2. The permittee shall not operate EUREACTOR3, EUREACTOR4, EUREACTOR5, or EUREACTOR6 unless the ammonia scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the ammonia scrubber includes, but is not limited to, maintaining a minimum scrubber liquid pH of 9.0. **(R 336.1205, R 336.1631, R 336.1901, R 336.1910)**
3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the main scrubber pressure drop on a continuous basis. **(R 336.1205, R 336.1631, R 336.1901, R 336.1910)**
4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the ammonia scrubber liquid pH on a continuous basis. **(R 336.1205, R 336.1631, R 336.1901, R 336.1910)**

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep, in a satisfactory manner, all daily records of the main scrubber pressure drop for days that any FGBUILDINGD reactor or blend tank is in operation on file at the facility and make them available to the Department upon request. (R 336.1205, R 336.1631, R 336.1901, R 336.1910)
2. The permittee shall keep, in a satisfactory manner, all daily records of the ammonia scrubber liquid pH for days that EUREACTOR3, EUREACTOR4, EUREACTOR5, or EUREACTOR6 is in operation on file at the facility and make them available to the Department upon request. (R 336.1205, R 336.1631, R 336.1901, R 336.1910)
3. The permittee shall keep records for FGBUILDINGD as specified in Rule 631(6) to show compliance with Rule 631. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1205, R 336.1631, R 336.1901)
4. The permittee shall keep, in a satisfactory manner, formaldehyde emission calculations determining the total annual emission rate in pounds per 12-month rolling time period as determined at the end of each calendar month from EUREACTOR5 and EUREACTOR6, as required by SC I.1. 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

NA

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVSCRUBBER	32 ¹	56 ¹	R 336.1225

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to:
FGBUILDINGK

DESCRIPTION: Alkyd production housed in Building K. Consists of one active reactor (EUREACTORK1) and several other reactors used for other purposes.

Emission Units: EUREACTORK1, EUREACTORK2, EUREACTORK3, EUREACTORK4, EUREACTORK5, EUBLENDTANK18, EUTANK322

POLLUTION CONTROL EQUIPMENT: Scrubber (Shutte Koerting Type 7010 Cast Iron Eductor), thermal oxidizer (Hirt Combustion Engineering)

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGBUILDINGK unless all applicable provisions of Rule 631 are met. **(R 336.1205, R 336.1631, R 336.1901, R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUREACTORK1 unless the scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the scrubber includes, but is not limited to, maintaining a minimum liquid flow rate of 30 gallons per minute. **(R 336.1205, R 336.1631, R 336.1901, R 336.1910)**
2. The permittee shall not operate EUREACTORK1 unless the thermal oxidizer is installed, maintained and operated in a satisfactory manner. Satisfactory operation of the thermal oxidizer includes a minimum VOC destruction efficiency of 90 percent (by weight), and maintaining a minimum temperature of 600 °F and a minimum retention time of 0.5 seconds. **(R 336.1205, R 336.1631, R 336.1901, R 336.1910)**
3. The permittee shall equip and maintain the FGBUILDINGK scrubber with a device to monitor the liquid flow rate, on a continuous basis, during operation of EUREACTORK1. **(R 336.1205, R 336.1901, R 336.1910)**
4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a temperature monitoring device in the combustion chamber of the thermal oxidizer to monitor and record the temperature, on a continuous basis, during operation of EUREACTORK1. **(R 336.1205, R 336.1901, 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 monitor and record, in a satisfactory manner, the temperature in the combustion chamber of the thermal oxidizer, on a continuous basis, during operation of EUREACTORK1. Temperature data recording shall consist of measurements made at equally spaced intervals, not to exceed 15 minutes per interval. **(R 336.1205, R 336.1631, R 336.1901, R 336.1910)**
2. The permittee shall keep, in a satisfactory manner, all daily records of the scrubber liquid flow rate for days that EUREACTORK1 is in operation on file at the facility and make them available to the Department upon request. **(R 336.1205, R 336.1631, R 336.1901, R 336.1910)**
3. The permittee shall keep, in a satisfactory manner, operating temperature records for the thermal oxidizer as required by SC VI.1. If the measured operating temperature of the thermal oxidizer falls below 600 °F during operation of EUREACTORK1, the permittee may demonstrate compliance based upon a three-hour average temperature, by calculating the average operating temperature for each three hour period which includes one or more temperature readings below 600 °F. The permittee shall keep all records and calculations on file at the facility and make them available to the Department upon request. **(R 336.1205, R 336.1631, R 336.1901, R 336.1910)**
4. The permittee shall keep records for FGBUILDINGK as specified in Rule 631(6) to show compliance with Rule 631. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205, R 336.1631, R 336.1901)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

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. SVOXIDIZER	16 ¹	29 ¹	R 336.1901

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to:
FGBUILDINGG

DESCRIPTION: Group of blending tanks housed in Building G

Emission Units: EUBLENDTANK10, EUBLENDTANK13, EUBLENDTANK17, EUBSBLENDTANK,
EUFSBLENDTANK1, EUFSBLENDTANK2

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGBUILDINGG unless all applicable provisions of Rule 631 are met. **(R 336.1205, R 336.1631, R 336.1901, R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep records for FGBUILDINGG as specified in Rule 631(6) to show compliance with Rule 631. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205, R 336.1631, R 336.1901)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

The following conditions apply Source-Wide to:
FGFACILITY

DESCRIPTION: All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.

I. EMISSION LIMITS

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

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGFACILITY unless all applicable provisions of Rule 631 are met. **(R 336.1205, R 336.1631, R 336.1901, R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETERS

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 keep records for FGFACILITY as specified in Rule 631(6) to show compliance with Rule 631. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205, R 336.1631, R 336.1901)**

2. The permittee shall keep, in a satisfactory manner, individual and aggregate HAP emission calculations determining the annual emission rate of each in tons per 12-month rolling time period as determined at the end of each calendar month, as required by SC I.1 and I.2. For the first month following permit issuance, the calculations shall include the summation of emissions from the 11-month period immediately preceding the issuance date. For each month thereafter, calculations shall include the summation of emissions for the appropriate number of months prior to permit issuance plus the months following permit issuance for a total of 12 consecutive months. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(3))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA