

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

September 16, 2003

NEW SOURCE REVIEW PERMIT TO INSTALL

No. 24-03

ISSUED TO
Reichhold, Inc.

LOCATED AT
707 Woodward Heights Blvd.
Ferndale, Michigan 48220

IN THE COUNTY OF
Oakland

STATE REGISTRATION NUMBER

N6447

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 Part 5505(1) of Article II, Chapter I, Part 55 (Air Pollution Control) of P.A. 451 of 1994. 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: 2/10/2003	
DATE PERMIT TO INSTALL APPROVED: 9/16/2003	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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
COM	Continuous Opacity Monitoring	°F	Degrees Fahrenheit
EPA	Environmental Protection Agency	gr	Grains
EU	Emission Unit	Hg	Mercury
FG	Flexible Group	hr	Hour
GACS	Gallon of Applied Coating Solids	H ₂ S	Hydrogen Sulfide
GC	General Condition	hp	Horsepower
HAP	Hazardous Air Pollutant	lb	Pound
HVLP	High Volume Low Pressure *	m	Meter
ID	Identification	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	NO _x	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM-10	Particulate Matter less than 10 microns diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	pph	Pound per hour
NSPS	New Source Performance Standards	ppm	Parts per million
NSR	New Source Review	ppmv	Parts per million by volume
PS	Performance Specification	ppmw	Parts per million by weight
PSD	Prevention of Significant Deterioration	psia	Pounds per square inch absolute
PTE	Permanent Total Enclosure	psig	Pounds per square inch gauge
PTI	Permit to Install	scf	Standard cubic feet
RACT	Reasonable Available Control Technology	sec	Seconds
SC	Special Condition Number	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
VE	Visible Emissions	VOC	Volatile Organic Compounds
		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. **[R336.1201(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, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **[R336.1201(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 R336.1210, 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. **[R336.1201(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. **[R336.1201(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 R336.1219 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 R336.1219. The written request shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **[R336.1219]**
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. **[R336.1901]**
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). **[R336.1912]**
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 R336.1301, 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 R336.1303. **[R336.1301]**
 - 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 R336.1370(2). **[R336.1370]**
13. Except as allowed by Rule 285 (a), (b), and (c), the permittee shall not substitute any fuels, coatings, nor raw materials for those described in the application and allowed by this permit, nor make changes to the process or process equipment described in the application without prior notification to and approval by the Air Quality Division. **[R336.1201(1)]**
14. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R336.2001 and R336.2003, under any of the conditions listed in R336.2001. **[R336.2001]**

SPECIAL CONDITIONS

Emission Unit Identification

Emission Unit ID	Emission Unit Description	Stack Identification
EUSOIL	Soil vapor extraction wells, air sparging, vacuum blowers, and an air flow distribution system equipped with a chlorinated catalytic oxidizer and HCL scrubber.	SV01, SV05, SV06
EUGROUNDWATER	Air stripping tower, east and west groundwater extraction blowers, off-site groundwater collection system, and a groundwater flow distribution system equipped with a chlorinated catalytic oxidizer and HCL scrubber.	SV01, SV02, SV03, SV04
Changes to the equipment described in this table are subject to the requirements of R336.1201, except as allowed by R336.1278 to R336.1290.		

Flexible Group Identification

Flexible Group ID	Emission Units Included in Flexible Group	Stack Identification
FGREMED	EUSOIL and EUGROUNDWATER	SV01, SV02, SV03, SV04, SV05, SV06

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirements
1.1a	VOC	FGREMED	2 tpy	12-month rolling time period	SC 1.5, 1.7, 1.8, 1.9, 1.10, 1.11, 1.13	R336.1702(a)
1.1b	Styrene	FGREMED	0.3 tpy	12-month rolling time period	SC 1.5, 1.7, 1.8, 1.9, 1.10, 1.11, 1.13	R336.1225
1.1c	1,2-Dichloroethene	FGREMED	0.5 tpy	12-month rolling time period	SC 1.5, 1.7, 1.8, 1.9, 1.10, 1.11, 1.13	R336.1225
1.1d	Trichloroethene	FGREMED	0.2 tpy	12-month rolling time period	SC 1.5, 1.7, 1.8, 1.9, 1.10, 1.11, 1.13	R336.1225
1.1e	Vinyl Chloride	FGREMED	0.2 tpy	12-month rolling time period	SC 1.5, 1.7, 1.8, 1.9, 1.10, 1.11, 1.13	R336.1225
*12-month rolling time period as determined at the end of each calendar month.						

The following conditions apply to: FGREMED

Equipment

- 1.2 The permittee shall not operate FGREMED unless the catalytic oxidizer is installed, maintained and operated in a satisfactory manner, except as provided in Special Condition 1.4. Satisfactory operation of the catalytic oxidizer includes a minimum catalyst bed inlet temperature of 830 °F, and a maximum space velocity of 10,000 inverse hours. [R336.1225, R336.1702(a), R336.1910]
- 1.3 The permittee shall not operate FGREMED unless the HCL Scrubber is installed, maintained and operated in a satisfactory manner, except as provided in Special Condition 1.4. Satisfactory operation of the HCL

Scrubber includes a pressure drop between five inches water column and 12 inches water column from quench inlet to scrubber outlet, and a pH between 7 and 10. [R336.1225, R336.1910]

- 1.4 The permittee may operate FGREMED and discharge individual air streams uncontrolled directly to the atmosphere if the total emissions from all FGREMED discharge points combined are below the emission limits established in Special Conditions 1.1a through 1.1e. [R336.1225, R336.1702(a)]

Monitoring

- 1.5 The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a temperature monitoring device at the inlet to the catalyst bed of the catalytic oxidizer to monitor and record the temperature on a continuous basis. [R336.1225, R336.1702(a), R336.1910]
- 1.6 The permittee shall monitor, in a satisfactory manner, the pressure drop and pH for the HCL Scrubber portion of FGREMED. [R336.1225, R336.1910]
- 1.7 The permittee shall monitor, in a satisfactory manner, the flow rate, the total VOC concentration and the styrene, 1,2-dichloroethene, trichloroethene, and vinyl chloride concentrations of the effluent stream from the catalytic oxidizer. For the purpose of this permit, total VOC concentration shall be the sum of the ethylbenzene, toluene, xylenes, styrene, 1,2-dichloroethene, trichloroethene, and vinyl chloride concentrations. This shall be done on a monthly basis until four valid samples, which pass all quality assurance and quality control requirements have been obtained. Thereafter, influent streams to the catalytic oxidizer shall be monitored for these parameters on a quarterly basis. Any request for a change in the sampling frequency must be submitted to the AQD District Supervisor for review and approval. [R336.1225, R336.1702(a), R336.1910]
- 1.8 The permittee shall monitor, in a satisfactory manner, the flow rate, the total VOC concentration and the styrene, 1,2-dichloroethene, trichloroethene, and vinyl chloride concentrations of each individual air stream not vented to the catalytic oxidizer. This shall be done for each air stream, beginning when the air stream is no longer vented to the catalytic oxidizer, on a monthly basis, until three valid samples, which pass all quality assurance and quality control requirements have been obtained. Thereafter, each individual air stream not vented to the catalytic oxidizer shall be monitored for these parameters on a quarterly basis. Any request for a change in the sampling frequency must be submitted to the AQD District Supervisor for review and approval. [R336.1225, R336.1702(a), R336.1910]

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Recordkeeping/Reporting/Notification

- 1.9 The permittee shall record the flow rate, the total VOC concentration, and the styrene, 1,2-dichloroethene, trichloroethene, and vinyl chloride concentrations of the effluent streams from the catalytic oxidizer. This shall be done on a monthly basis until four valid samples have been obtained. Thereafter, these parameters shall be recorded on a quarterly basis. All data, including calculation of VOC, styrene, 1,2-dichloroethene, trichloroethene, and vinyl chloride emission rates using Appendix A or an approved equivalent method, shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1225, R336.1702(a), R336.1910]
- 1.10 The permittee shall record the flow rate, the total VOC concentration, and the styrene, 1,2-dichloroethene, trichloroethene, and vinyl chloride concentrations of each individual air stream not vented to the catalytic oxidizer. This shall be done for each air stream, beginning when the air stream is no longer vented to the catalytic oxidizer, on a monthly basis until three valid samples have been obtained. Thereafter, these parameters shall be recorded on a quarterly basis. All data, including calculation of VOC, styrene, 1,2-dichloroethene, trichloroethene, and vinyl chloride emission rates using Appendix A or an approved equivalent method, shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1225, R336.1702(a), R336.1910]

- 1.11 The permittee shall keep, in a satisfactory manner, records of the temperature of the inlet to the catalyst bed of the catalytic oxidizer for FGREMED. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1225, R336.1702(a), R336.1910]**
- 1.12 The permittee shall keep, in a satisfactory manner, records of the pressure drop and pH for the HCL Scrubber portion of FGREMED at least once per calendar week. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1225, R336.1910]**
- 1.13 The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period calculations of VOC, styrene, 1,2-dichloroethene, trichloroethene, and vinyl chloride emission rates for FGREMED. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1225, R336.1702(a)]**

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirements
1.14a	SV01	10	24	R336.1225
1.14b	SV02	6	15	R336.1225
1.14c	SV03	3	21	R336.1225
1.14d	SV04	3	18	R336.1225
1.14e	SV05	4	21	R336.1225
1.14f	SV06	4	18	R336.1225
1.14g	The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.			

