

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

May 16, 2017

**PERMIT TO INSTALL**  
145-07C

**ISSUED TO**  
Vibracoustic USA, Inc.

**LOCATED AT**  
180 Dawson Street  
Sandusky, Michigan

**IN THE COUNTY OF**  
Sanilac

**STATE REGISTRATION NUMBER**  
A6445

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:

**February 7, 2017**

DATE PERMIT TO INSTALL APPROVED:

**May 16, 2017**

SIGNATURE:

DATE PERMIT VOIDED:

SIGNATURE:

DATE PERMIT REVOKED:

SIGNATURE:

## PERMIT TO INSTALL

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**Common Abbreviations / Acronyms**

<b>Common Acronyms</b>		<b>Pollutant / Measurement Abbreviations</b>	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO <sub>2e</sub>	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
EU	Emission Unit	gr	Grains
FG	Flexible Group	HAP	Hazardous Air Pollutant
GACS	Gallons of Applied Coating Solids	Hg	Mercury
GC	General Condition	hr	Hour
GHGs	Greenhouse Gases	HP	Horsepower
HVLP	High Volume Low Pressure*	H <sub>2</sub> S	Hydrogen Sulfide
ID	Identification	kW	Kilowatt
IRSL	Initial Risk Screening Level	lb	Pound
ITSL	Initial Threshold Screening Level	m	Meter
LAER	Lowest Achievable Emission Rate	mg	Milligram
MACT	Maximum Achievable Control Technology	mm	Millimeter
MAERS	Michigan Air Emissions Reporting System	MM	Million
MAP	Malfunction Abatement Plan	MW	Megawatts
MDEQ	Michigan Department of Environmental Quality	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO <sub>x</sub>	Oxides of Nitrogen
NA	Not Applicable	ng	Nanogram
NAAQS	National Ambient Air Quality Standards	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM <sub>10</sub>	Particulate Matter equal to or less than 10 microns in diameter
NSPS	New Source Performance Standards	PM <sub>2.5</sub>	Particulate Matter equal to or less than 2.5 microns in diameter
NSR	New Source Review	pph	Pounds per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO <sub>2</sub>	Sulfur Dioxide
SNCR	Selective Non-Catalytic Reduction	TAC	Toxic Air Contaminant
SRN	State Registration Number	Temp	Temperature
TEQ	Toxicity Equivalence Quotient	THC	Total Hydrocarbons
USEPA/EPA	United States Environmental Protection Agency	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

\*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 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
EUGUSBI	An 18-station rotary table polyurethane reaction injection molding machine. Model #P 518, Serial #4656. This machine will be using mold release and cleanup solvent.	NA
EUINJECTIONMOLD	50 injection molding presses which include the use of mold release agents.	NA
EUINJECTIONMOLD2	10 injection molding presses which include the use of mold release agents, solvent based inks and rubber compounds.	NA
EUAIRSTRIPPER	Air stripper and activated carbon control.	NA
EUSOIL	Soil vapor extraction process using activated carbon control.	NA
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.		

**The following conditions apply to: EUGUSBI**

**DESCRIPTION:** Rotary polyurethane injection molding machine.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:** NA

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. VOC	36.0 tpy	12-month rolling time period as determined at the end of each calendar month	EUGUSBI	SC VI.3	R 336.1225, R 336.1702(a)

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall capture all waste materials (mold release, cleanup solvent, etc.) and shall store them in closed containers. The permittee shall dispose of all waste materials (mold release, cleanup solvent, etc.) in an acceptable manner in compliance with all applicable state rules and federal regulations. **(R 336.1224, R 336.1702(a))**
2. The permittee shall handle all VOC containing materials, including mold release and cleanup solvents, in a manner to minimize the generation of fugitive emissions. The permittee shall keep containers covered at all times except when operator access is necessary. **(R 336.1224, R 336.1225, R 336.1702(a))**

**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 complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1224, R 336.1225, R 336.1702(a))**
2. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each mold release and cleanup solvent, including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1702(a))**
3. The permittee shall keep the following information on a monthly basis for EUGUSBI:
  - a) Gallons of each mold release and cleanup solvent used.
  - b) VOC content, in pounds per gallon, of each mold release and cleanup solvent used.
  - c) VOC mass emission calculations determining the monthly emission rate in tons per calendar month.
  - d) VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1225, R 336.1702(a))**

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

NA

**IX. OTHER REQUIREMENTS**

NA

**The following conditions apply to: EUINJECTIONMOLD**

**DESCRIPTION:** 50 injection molding presses which include the use of mold release agents.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:** NA

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. VOC	9.1 tpy	12-month rolling time period as determined at the end of each calendar month	Use of mold release in EUINJECTIONMOLD	SC VI.4	R 336.1702(a)
2. VOC and Acetone combined	1.0 tpy	12-month rolling time period as determined at the end of each calendar month	Use of solvent-based marking inks in EUINJECTIONMOLD	SC VI.5	R 336.1224, R 336.1702(a)

**II. MATERIAL LIMITS**

1. The permittee shall not process more than 6,000 tons of rubber in the 50 injection mold presses per year based upon a 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a), R 336.1702(a))**

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**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 complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702)**

2. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each material, including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1702(a))**
3. The permittee shall keep records of processed rubber quantities for the 50 injection molding presses within EUINJECTIONMOLD. The permittee shall keep all records on site at the facility and make them available to the Department upon request. **(R 336.1205(1)(a), R 336.1702(a))**
4. The permittee shall keep the following information on a monthly basis for the mold release portion of EUINJECTIONMOLD:
  - a) Gallons (with water) of each mold release agent and agent reducer used.
  - b) VOC content (with water) of each mold release agent and agent reducer as applied.
  - c) VOC mass emission calculations determining the monthly emission rate in tons per calendar month.
  - d) VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records using mass balance, or in an alternative format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1225, R 336.1702)**

5. The permittee shall keep the following information on a monthly basis for the solvent-based marking inks portion of EUINJECTIONMOLD:
  - a) Gallons (with water) of each coating and reducer used.
  - b) VOC and acetone content (with water) of each coating and reducer as applied.
  - c) VOC and acetone mass emission calculations determining the monthly combined emission rate in tons per calendar month.
  - d) VOC and acetone mass emission calculations determining the annual combined emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records according to the methods in Appendix A, or in an alternate format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1224, R 336.1702(a))**

**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. SVINJECTIONMOLD	NA	24	R 336.1225, 40 CFR 52.21(c) & (d)

**IX. OTHER REQUIREMENTS**

NA

**The following conditions apply to: EUINJECTIONMOLD2**

**DESCRIPTION:** 10 injection molding presses which include the use of mold release agents, solvent based inks and rubber compounds.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:** NA

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. VOC and Acetone combined	250 lb/yr	12-month rolling time period as determined at the end of each calendar month	Use of solvent-based marking inks and cleaning solvents in EUINJECTIONMOLD2	SC VI.4	R 336.1224, R 336.1702(a)
2. VOC	4.1 tpy	12-month rolling time period as determined at the end of each calendar month	Use of rubbers in EUINJECTIONMOLD2	SC VI.5	R 336.1702(a)

**II. MATERIAL LIMITS**

1. The permittee shall not process more than 600 tons of rubber in EUINJECTIONMOLD2 per year based upon a 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a), R 336.1225, R 336.1702(a))**
2. The permittee shall not process more than 50 tons of rubber Compound #11 in EUINJECTIONMOLD2 per year based upon a 12-month rolling time period as determined at the end of each calendar month. **(R 336.1225(1))**
3. The permittee shall not process more than 75 tons of rubber Compound #14 in EUINJECTIONMOLD2 per year based upon a 12-month rolling time period as determined at the end of each calendar month. **(R 336.1225(1))**
4. The permittee shall not process more than 16 tons of rubber Compound #22 in EUINJECTIONMOLD2 per year based upon a 12-month rolling time period as determined at the end of each calendar month. **(R 336.1225(1))**
5. The permittee shall not use solvent-based mold release agents in EUINJECTIONMOLD2. **(R 336.1225, R 336.1702(a))**

### **III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall capture all waste materials (mold release, paint, cleanup solvent, etc.) and shall store them in closed containers. The permittee shall dispose of all waste materials (mold release, cleanup solvent, etc.) in an acceptable manner in compliance with all applicable state rules and federal regulations. **(R 336.1224, R 336.1225, R 336.1702(a))**
2. The permittee shall handle all VOC and HAP containing materials, including mold release, paint and cleanup solvents, in a manner to minimize the generation of fugitive emissions. The permittee shall keep containers covered at all times except when operator access is necessary. **(R 336.1224, R 336.1225, R 336.1702(a))**

### **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 complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702)**
2. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each material, including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1702(a))**
3. The permittee shall keep records the amount and type of each rubber processed through the 10 injection molding presses within EUINJECTIONMOLD2 in tons per calendar month and tons per 12-month rolling time period as determined at the end of each calendar month. The permittee shall keep all records on site at the facility and make them available to the Department upon request. **(R 336.1205(1)(a), R 336.1225, R 336.1702(a))**
4. The permittee shall keep the following information on a monthly basis for the solvent-based marking inks portion of EUINJECTIONMOLD2:
  - a) Gallons (with water) of each marking ink used.
  - b) VOC (with water) and acetone content of each marking ink as applied.
  - c) VOC and acetone mass emission calculations determining the monthly combined emission rate in pounds per calendar month.
  - d) VOC and acetone mass emission calculations determining the annual combined emission rate in pounds per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records according to the methods in Appendix A, or in an alternate format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1224, R 336.1702(a))**

5. The permittee shall keep the following information on a monthly basis for EUINJECTIONMOLD2:
- a) The identity and amount (in tons) of each rubber compound used.
  - b) The appropriate emission factors for each raw material used (AP-42 Proposed Emissions Factors Section 4.12, Manufacture of Rubber Products, February 2009 may be used; or an alternate factor approved by the AQD District Supervisor)
  - c) VOC mass emission calculations determining the monthly emission rate in tons per calendar month.
  - d) VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1225, R 336.1702(a))**

**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:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/ Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVINJECTIONMOLD2A	66	22.75	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVINJECTIONMOLD2B	54	22	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVINJECTIONMOLD2C	25	21.33	R 336.1225, 40 CFR 52.21(c) & (d)

**IX. OTHER REQUIREMENTS**

NA

**The following conditions apply to: EUAIRSTRIPPER**

**DESCRIPTION:** Air stripper and activated carbon control.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:** Activated carbon control

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. VOC	1.9 tpy	12-month rolling time period as determined at the end of each calendar month	EUAIRSTRIPPER	SC VI.2	R 336.1702(a)
2. VOC	0.44 pph	Test Protocol*	EUAIRSTRIPPER	SC VI.2	R 336.1225
3. Trichloroethylene (TCE)	0.23 pph	Test Protocol*	EUAIRSTRIPPER	SC VI.2	R 336.1225
4. 1,1-dichloroethene (1,1-DCE)	0.003 pph	Test Protocol*	EUAIRSTRIPPER	SC VI.2	R 336.1225
* Test protocol shall specify averaging time					

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate EUAIRSTRIPPER unless the activated carbon control is installed and operating properly. **(R 336.1224, R 336.1702(a))**
2. The permittee shall keep a fresh air stripper carbon canister on site to allow expeditious replacement of a spent carbon canister. When the fresh canister replaces a spent canister, the permittee shall obtain another fresh canister within six weeks. **(R 336.1224, R 336.1702(a))**

**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 complete all required records in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition.  
**(R 336.1205, R 336.1224, R 336.1702)**
2. The permittee shall monitor and record the flow rate and total VOC concentration of the influent and effluent water streams of the air stripper in EUAIRSTRIPPER on a monthly basis in a manner and with instrumentation acceptable to the Air Quality Division. The monthly samples shall be collected at the same time as the carbon breakthrough checks required in SC VI.3. As a minimum, the VOCs which should be included in determining the total VOC concentration are trichloroethene; (cis & trans) -1,2-dichloroethene; 1,1-dichloroethene; and 1,1,1-trichloroethane. All data, including calculation of VOC emission rates, shall be kept on file and made available to the Air Quality Division upon request. Any request for a change in the sampling and/or reporting frequency must be submitted to the District Supervisor for review and approval.  
**(R 336.1224, R 336.1702(a))**
3. The permittee shall monitor the air stripper's carbon absorption unit for breakthrough of the carbon canister at least once every two weeks, and shall immediately replace the spent carbon canister if breakthrough is detected, or shall shut down the system until the spent carbon canister can be replaced. All data, including the results of the carbon breakthrough checks, as well as the carbon canister changeout dates shall be kept on file and made available to the Air Quality Division upon request. Any request for a change in the sampling and/or reporting frequency must be submitted to the District Supervisor for review and approval.  
**(R 336.1224, R 336.1702(a))**

**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:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/ Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVAIRSTRIPPER	10	30	R 336.1225, 40 CFR 52.21(c) & (d)

**IX. OTHER REQUIREMENTS**

NA

**The following conditions apply to: EUSOIL**

**DESCRIPTION:** Soil vapor extraction process using activated carbon control.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:** Activated carbon control

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. VOC	2.5 tpy	12-month rolling time period as determined at the end of each calendar month	EUSOIL	SC VI.2	R 336.1702(a)
2. VOC	0.57 pph	Test Protocol*	EUSOIL	SC VI.2	R 336.1225
3. Trichloroethylene (TCE)	0.12 pph	Test Protocol*	EUSOIL	SC VI.2	R 336.1225
4. 1,1-dichloroethene (1,1-DCE)	0.001 pph	Test Protocol*	EUSOIL	SC VI.2	R 336.1225

\* Test protocol shall specify averaging time

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate EUSOIL unless the activated carbon control is installed and operating properly. **(R 336.1224, R 336.1702(a))**

**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 complete all required records in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205, R 336.1224, R 336.1702)**
2. The permittee shall monitor and record the flow rate and total VOC concentration of the influent stream to the activated carbon control of EUSOIL on a monthly basis, and the effluent stream of the activated carbon control on a quarterly basis, in a manner and with instrumentation acceptable to the Air Quality Division. Quarterly monitoring of the effluent stream of the activated carbon control shall be performed in conjunction with the collection of a monthly influent sample. As a minimum, the VOCs which should be included in determining the total VOC concentration are trichloroethene; (cis & trans) -1,2-dichloroethene; 1,1-dichloroethene; and 1,1,1-trichloroethane. All data, including calculation of VOC emission rates, shall be kept using Appendix E (influent stream) and Appendix F (effluent stream) or approved equivalent method, on and made available to the Air Quality Division upon request. Any request for a change in the sampling and/or reporting frequency must be submitted to the District Supervisor for review and approval. **(R 336.1224, R 336.1702(a))**
3. The permittee shall keep a record showing the date and time of carbon canister changes and the hours of process operation between changes for EUSOIL. These records shall be kept on file and made available to the Air Quality Division upon request. **(R 336.1224, R 336.1702(a))**

**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:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/ Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVSOIL	6	37	R 336.1225, 40 CFR 52.21(c) & (d)

**IX. OTHER REQUIREMENTS**

NA

**FLEXIBLE GROUP SUMMARY TABLE**

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

<b>Flexible Group ID</b>	<b>Flexible Group Description</b>	<b>Associated Emission Unit IDs</b>
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grandfathered equipment and exempt equipment.	

**The following conditions apply Source-Wide to: FGFACILITY**

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

**POLLUTION CONTROL EQUIPMENT:** NA

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. Each Individual HAP	Less than 10 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(1)
2. Aggregate HAPs	Less than 25 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(1)
3. VOCs	Less than 90 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.3	R 336.1205(3)

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

NA

**V. TESTING/SAMPLING**

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

1. The permittee shall determine the HAP content of any material as received and as applied, using manufacturer's formulation data. Upon request of the AQD District Supervisor, the permittee shall verify the manufacturer's HAP formulation data using EPA Test Method 311. **(R 336.1205(1))**
2. The permittee shall determine the VOC content, water content, and density of any MATERIAL, as applied and as received, using federal Reference Test Method 24. Upon prior written approval by the AQD District Supervisor, the permittee may determine the VOC content from manufacturer's formulation data. If the Method 24 and the formulation values should differ, the permittee shall use the Method 24 results to determine compliance. **(R 336.1205(3))**

**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 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205)**
2. The permittee shall keep the following information on a monthly basis for FGFACILITY:
  - a) Gallons or pounds of each HAP containing material used.
  - b) Where applicable, gallons or pounds of each HAP containing material reclaimed.
  - c) HAP content, in pounds per gallon or pounds per pound, of each HAP containing material used.
  - d) Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month.
  - e) 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.

The permittee shall keep the records using mass balance, or in an alternative format acceptable to the AQD District Supervisor. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(1))**

3. The permittee shall keep the following information on a monthly basis for FGFACILITY:
  - a) Gallons or pounds of each VOC containing material used.
  - b) Where applicable, gallons or pounds of each VOC containing material reclaimed.
  - c) VOC content, in pounds per gallon or pounds per pound, of each VOC containing material used.
  - d) VOC emission calculations determining the monthly emission rate in tons per calendar month.
  - e) VOC emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records using mass balance, or in an alternative format acceptable to the AQD District Supervisor. The permittee shall keep all records on file for a period of at least five years 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





**APPENDIX C**

	<b>A</b>	<b>B</b>	<b>C = A x B</b>	<b>D</b>	<b>E</b>	<b>F = D x E</b>	<b>G = C - F</b>
<b>Purge or Cleanup Solvent</b>	<b>Solvent Used (gallons)</b>	<b>Lbs VOC/Gal of Solvent</b>	<b>Pounds VOC for Solvent Used</b>	<b>Solvent Recovered (gallons)</b>	<b>Lbs VOC/Gal of Solvent</b>	<b>Pounds VOC for Solvent Recovered</b>	<b>VOC Emitted (pounds)</b>

Total pounds VOC from solvent used, H = Sum of C

Total pounds VOC from solvent recovered, I = Sum of F

Total pounds VOC emitted, J = Sum of G

Solvent Recovery Rate, K = I/H

Total tons VOC emitted per 12-month rolling time period beginning \_\_\_\_\_



**APPENDIX E**

**Soil Remediation Emission Calculation and Recordkeeping  
Influent Sample**

<b>Source Name:</b>	<b>Contact Person:</b>
<b>Location:</b>	<b>County:</b>
<b>Recordkeeping Period Start Date:</b>	<b>Recordkeeping Period End Date:</b>
<b>Permit Number:</b>	

<b>Date</b>	<b>A Air Flow (ft<sup>3</sup>/min)</b>	<b>Toxic Air Contaminant (Enter data for each TAC)</b>	<b>B Inlet Concentration (mg/m<sup>3</sup>)</b>	<b>C Control Efficiency (Percent)</b>	<b>D TAC Emissions (lb/hr)</b>
<i>Example</i>	<i>1,000</i>	<i>Compound X</i>	<i>10,000</i>	<i>05</i>	<i>1.9</i>
		TCE			
		1,1 DCE			
		(trans & cis) 1,2 DCE			
		1,1,1 TCA			
		<b>TOTAL</b>			

EQUATION TO CALCULATE EMISSIONS:

$$D \frac{\text{lbs}}{\text{hr}} = A \frac{\text{ft}^3}{\text{min}} \times 0.02832 \frac{\text{m}^3}{\text{ft}^3} \times 60 \frac{\text{min}}{\text{hr}} \times B \frac{\text{mg}}{\text{m}^3} \times 0.001 \frac{\text{g}}{\text{mg}} \times 0.002205 \frac{\text{lbs}}{\text{g}} \times \frac{(100 - C)}{100}$$

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Telephone Number:** \_\_\_\_\_

**APPENDIX F**

**Soil Remediation Emission Calculation and Recordkeeping  
Effluent Sample**

<b>Source Name:</b>	<b>Contact Person:</b>
<b>Location:</b>	<b>County:</b>
<b>Recordkeeping Period Start Date:</b>	<b>Recordkeeping Period End Date:</b>
<b>Permit Number:</b>	

	<b>A</b>		<b>B</b>	<b>C</b>
<b>Date</b>	<b>Air Flow (ft<sup>3</sup>/min)</b>	<b>Toxic Air Contaminant</b> (Enter data for each TAC)	<b>Effluent Concentration (mg/m<sup>3</sup>)</b>	<b>TAC Emissions (lb/hr)</b>
<i>Example</i>	<i>1,000</i>	<i>Compound X</i>	<i>10,000</i>	<i>1.9</i>
		TCE		
		1,1 DCE		
		(trans & cis) 1,2 DCE		
		1,1,1 TCA		
		<b>TOTAL</b>		

EQUATION TO CALCULATE EMISSIONS:

$$C \frac{\text{lbs}}{\text{hr}} = A \frac{\text{ft}^3}{\text{min}} \times 0.02832 \frac{\text{m}^3}{\text{ft}^3} \times 60 \frac{\text{min}}{\text{hr}} \times B \frac{\text{mg}}{\text{m}^3} \times 0.001 \frac{\text{g}}{\text{mg}} \times 0.002205 \frac{\text{lbs}}{\text{g}}$$

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Telephone Number:** \_\_\_\_\_