MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

April 11, 2011

PERMIT TO INSTALL
234-10A

ISSUED TO
RBS Citizens, NA

LOCATED AT
16410 Stephens Road
Eastpointe, Michigan

IN THE COUNTY OF
Macomb

STATE REGISTRATION NUMBER
N0700

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: **April 7, 2011**	
DATE PERMIT TO INSTALL APPROVED: **April 11, 2011**	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
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_2S	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	ng	Nanogram
MDNRE	Michigan Department of Natural Resources and Environment (Department)	NO_x	Oxides of Nitrogen
MSDS	Material Safety Data Sheet	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM10	PM less than 10 microns diameter
NSPS	New Source Performance Standards	PM2.5	PM less than 2.5 microns diameter
NSR	New Source Review	pph	Pound 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	Reasonably 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_2	Sulfur Dioxide
SRN	State Registration Number	THC	Total Hydrocarbons
TAC	Toxic Air Contaminant	tpy	Tons per year
TEQ	Toxicity Equivalence Quotient	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. **(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, 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)
EUSOIL	Soil vapor extraction well system equipped with an electric catalytic oxidizer.
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: EUSOIL

DESCRIPTION: Soil vapor extraction well system.

POLLUTION CONTROL EQUIPMENT: Electric catalytic oxidizer.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOC	0.22 tpy	12-month rolling time period as determined at the end of each calendar month.	EUSOIL	SC VI.5	R 336.1205(3), R 336.1225, R 336.1702(a)
2. Hydrogen chloride	5.8 tpy	12-month rolling time period as determined at the end of each calendar month.	EUSOIL	SC VI.6	R 336.1205(3), R 336.1224, R 336.1225

II. MATERIAL LIMITS

N/A

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUSOIL unless the catalytic oxidizer is installed, maintained and operated in a satisfactory manner. Satisfactory operation of the catalytic oxidizer includes a minimum VOC destruction efficiency of 97 percent (by weight), a minimum catalyst bed inlet temperature of 626°F, and a maximum space velocity of 4,800 inverse hours. **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1910)**

2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the inlet, interior, and outlet temperatures of the catalytic oxidizer catalyst bed on a continuous basis and to automatically shut down EUSOIL if the catalyst bed temperature drops below 626°F during operation. **(R 336.1205(3), R 336.1225, R 336.1702(a), 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 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. **(R 336.1205(3), R 336.1225, R 336.1702(a))**

2. The permittee shall monitor and record, in a satisfactory manner, the flow rate, the total VOC concentration and the cis-1,2-dichloroethene, methylene chloride, trichloroethene, and vinyl chloride concentrations of the influent stream(s) to the catalytic oxidizer. As an alternative to monitoring the cis-1,2-dichloroethene, methylene chloride, trichloroethene, and vinyl chloride concentrations of the influent stream(s) to the

catalytic oxidizer, the permittee may monitor and record, in a satisfactory manner, the flow rate and hydrogen chloride concentration of the effluent stream of the catalytic oxidizer. This monitoring and recording shall be done on a weekly basis until four valid samples, which pass all quality assurance and quality control requirements have been obtained. Thereafter, the permittee shall monitor for these parameters on a bi-weekly basis. The permittee shall submit any request for a change in the sampling frequency to the AQD District Supervisor for review and approval. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

3. The permittee shall monitor the inlet, interior, and outlet temperatures of the catalytic oxidizer catalyst bed on a continuous basis. **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1910)**

4. The permittee shall keep, in a satisfactory manner, weekly records of the catalyst bed inlet, interior, and outlet temperatures. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1910)**

5. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period calculations of the VOC emission rate for EUSOIL. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1225, R 336.1702(a))**

6. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period calculations of the hydrogen chloride emission rate for EUSOIL. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3), R 336.1224, R 336.1225)**

VII. REPORTING

1. The permittee shall submit the following to the AQD District Supervisor using Appendix A or an approved equivalent method:
   a) flow rate (influent and effluent, if measured, of the catalytic oxidizer)
   b) total VOC concentration of the influent stream(s) to the catalytic oxidizer
   c) the cis-1,2-dichloroethene, methylene chloride, trichloroethene, and vinyl chloride concentrations concentration of the influent stream(s) to the catalytic oxidizer
   d) calculations of VOC emission rates
   e) calculations of hydrogen chloride emission rates, which must be based on the total chlorine in the catalytic oxidizer influent stream(s) or the hydrogen chloride in the catalytic oxidizer effluent stream.

   The information shall be submitted within 30 days following collection of the initial data, and thereafter within 30 days following the end of the month in which the data were collected. The permittee must submit any request for a change in the reporting frequency to the AQD District Supervisor for review and approval. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

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. SVSOIL	4.25	20	R 336.1225, R 336.1901

IX. OTHER REQUIREMENTS

N/A

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

APPENDIX A
Soil Remediation Emission Calculation and Recordkeeping

Source Name		**Contact Person**	
Location		**County**	
Recordkeeping Period		**Permit Number**	**Pollutant(s)**
Start Date	**End Date**		

	V	**C**	**E_S**	**P_S**
Date	**Air Volume Flow Rate (ft^3/min)**	**Inlet Concentration (mg/m^3)[1]**	**Control Efficiency (Percent)**	**VOC Emissions (lbs/hr)[2]**
EXAMPLE	1,000	10,000	95	1.9

[1] Parts per million (ppm) in air is by volume and does not equal milligrams per liter (mg/ℓ).
[2] Identify which pollutant the emissions are being calculated for.

EQUATION TO CALCULATE EMISSIONS:

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

Signature: _____ **Date:** _____

Telephone No.: _____