



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: 022016 - 015 Project Number: 2015-01-028
Installation Number: 075-0026

Parent Company: Roeslein and Associates, Inc.

Parent Company Address: 9200 Watson Road, Suite 200, St. Louis, MO 63126

Installation Name: Roeslein Alternative Energy Missouri, LLC - Ruckman

Installation Address: Near County Road and State Highway N, Northeast of Gentry, MO

Location Information: Gentry County, S3/4/9/10, T64N, R31W

Application for Authority to Construct was made for:

Installation of impermeable covers on seven (7) existing lagoons and the corresponding gas collection, cleaning, compression and flare systems. This review was conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

- Standard Conditions (on reverse) are applicable to this permit.
- Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

Feb 26, 2016
EFFECTIVE DATE

Kyra L Moore
DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Department's Air Pollution Control Program of the anticipated date of start up of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of these air contaminant sources.

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant sources(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

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SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

Roeslein Alternative Energy Missouri, LLC - Ruckman
S3/4/9/10, T64N, R31W

1. Operational Limits
 - A. Roeslein Alternative Energy Missouri, LLC – Ruckman shall divert the biogas to either the flares or the gas cleaning system at all times. The installation shall not emit the biogas directly into the atmosphere.
 - B. Before the biogas cleaning system becomes operational, Roeslein Alternative Energy Missouri, LLC – Ruckman shall divert all of the biogas to the flares. The time period for venting all biogas to flares shall begin from the date of permit issuance and not be more than twelve (12) consecutive months.
 - C. Before the biogas cleaning system becomes operational, Roeslein Alternative Energy Missouri, LLC – Ruckman shall limit the biogas combusted in each flare to a total no more than 39,420,000 scf per twelve (12) consecutive month period.
 - D. Once the biogas cleaning system becomes operational, Roeslein Alternative Energy Missouri, LLC shall divert the biogas to the flare only in case of cleaning system shut downs. The amount of biogas shall not exceed 2,000,000 scf per twelve (12) consecutive months for each flare.
 - E. Roeslein Alternative Energy Missouri, LLC – Ruckman shall notify the Compliance/Enforcement Unit of the Air Pollution Control Program of the start of operations for the biogas cleaning system within 30 days of startup of the system.
 - F. Roeslein Alternative Energy Missouri, LLC – Ruckman shall install gauges, meters, or other devices on the flares to measure the amount of biogas combusted.

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SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

- G. Roeslein Alternative Energy Missouri, LLC – Ruckman shall record the monthly amount of biogas combusted by the flares using Attachment A, or equivalent forms, to show compliance with Special Condition 1.C. and 1.D.
2. Control Device Requirement - Flares
- A. The flares shall be operated and maintained in accordance with the manufacturer's specifications. Roeslein Alternative Energy Missouri, LLC - Ruckman shall maintain a copy of the flare manufacturer's specifications on site.
 - B. Roeslein Alternative Energy Missouri, LLC - Ruckman shall maintain an operating and maintenance log for the flares which shall include the following:
 - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
3. Sampling Requirements for Hydrogen Sulfide (H₂S) and Ammonia (NH₃)
- A. Roeslein Alternative Energy Missouri, LLC - Ruckman shall sample the biogas to determine the H₂S and NH₃ concentrations.
 - B. The H₂S concentration shall not exceed 0.25 percent by volume and the NH₃ concentration shall not exceed 0.34 percent by volume.
 - C. Roeslein Alternative Energy Missouri, LLC – Ruckman shall collect samples once per month. During each collection event, three samples shall be taken from the same lagoon. One hour shall be the minimum time of collection for each sample. The results shall be averaged to compare with the limits in Special Condition 3.B.
 - D. The first sample collection shall be performed within 30 days after startup of operations. Sampling shall be performed using an approved EPA method or a method approved by the Missouri Air Pollution Control Program. Roeslein Alternative Energy Missouri, LLC – Ruckman shall submit a testing protocol to the Missouri Air Pollution Control Program at least fourteen (14) days before the first test for approval. All subsequent tests shall be performed in accordance with the approved testing protocol.

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SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

- E. Each collection event shall be performed at a different lagoon. After a collection event has been performed at a lagoon, the same lagoon cannot be sampled until a collection event has been performed on all the other lagoons.
- F. If any of the sampling result shows an exceedances of the values in Special Condition 3.B., Roeslein Alternative Energy Missouri, LLC - Ruckman shall do the following:
 - 1) If the exceedance occurs before the gas cleaning system becomes operational, Roeslein Alternative Energy Missouri, LLC – Ruckman shall submit ambient impact modeling results to show that the SO_x and NO_x potential emissions do not exceed their respective NAAQS. Roeslein Alternative Energy Missouri, LLC – Ruckman shall also submit an emissions analysis to show that the NO_x and SO_x potential emissions do not exceed the major source levels of 250 tpy.
 - 2) If the exceedance occurs after the gas cleaning system becomes operational, Roeslein Alternative Energy Missouri, LLC shall submit an emissions analysis to show that the NO_x and SO_x potential emissions do not exceed the *de minimis* level of 40 tons per year.
 - 3) If the installation cannot show compliance with Special Conditions 3.F.1) and 3.F.2), it shall contact the Air Pollution Control Program for further instructions.
- 4. Control Device Requirement – Bio-Scrubber
 - A. Roeslein Alternative Energy Missouri, LLC – Ruckman shall control H₂S emissions from the biogas cleaning system using a bio-scrubber as specified in the permit application.
 - B. The scrubber shall be operated and maintained in accordance with the manufacturer’s specifications. The scrubber shall be equipped with a gauge or meter, which indicates the pressure drop across the scrubber. The gauges or meters shall be located such that Department of Natural Resources’ employees may easily observe them.
 - C. Roeslein Alternative Energy Missouri, LLC – Ruckman shall monitor and record the operating pressure drop of the scrubber at least once every 24 hours while the biogas cleaning system is in operation. The pressure drop shall be maintained within the design conditions specified by the manufacturer’s performance warranty.

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SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

- D. Roeslein Alternative Energy Missouri, LLC – Ruckman shall maintain a copy of the bio-scrubber’s manufacturer’s performance warranty on site.
 - E. Roeslein Alternative Energy Missouri, LLC – Ruckman shall maintain an operating and maintenance log for the scrubber that shall include the following:
 - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
5. Record Keeping and Reporting Requirements
- A. Roeslein Alternative Energy Missouri, LLC - Ruckman shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources’ personnel upon request. These records shall include MSDS for all materials used
 - B. Roeslein Alternative Energy Missouri, LLC - Ruckman shall report to the Air Pollution Control Program’s Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after the end of the month during which any record required by this permit show an exceedance of a limitation imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (6) REVIEW

Project Number: 2015-01-028
Installation ID Number: 075-0026
Permit Number:

Roeslein Alternative Energy Missouri, LLC - Ruckman Complete: January 16, 2015
Near County Road and State Highway N
Northeast of Gentry, MO

Parent Company:
Roeslein & Associates, Inc.
9200 Watson Road, Suite 200
St. Louis, MO 63126-1528

Gentry County, S3/4/9/10, T64N, R31W

REVIEW SUMMARY

- Roeslein Alternative Energy Missouri, LLC - Ruckman has applied for authority to install impermeable covers on seven (7) existing lagoons and the corresponding gas collection, cleaning, compression and flare systems.
- HAP emissions are expected from the proposed equipment. HAPs of concern are products of combustion.
- None of the New Source Performance Standards (NSPS) apply to the installation.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- Seven (7) flares are being used to control the emissions from the lagoons. A bio-scrubber will be used to control H₂S emissions from the biogas cleaning system once the biogas cleaning system is operational.
- This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Conditioned potential emissions of all pollutants are above *de minimis* levels, but below major source levels, before the biogas cleaning system is operational. The potential emissions of all pollutants will be less than their respective *de minimis* levels after the biogas cleaning system becomes operational.
- This installation is located in Gentry County, an attainment area for all criteria pollutants.
- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.

- Ambient air quality modeling was performed to determine the ambient impacts of NO_x and SO_x.
- Emissions testing is not required for the equipment. However, sampling is required to determine the H₂S and NH₃ concentrations in the biogas.
- No operating permit is required for this installation. After the biogas cleaning system becomes operational, emissions of all pollutants would be under their respective de minimis levels and no federal regulations (i.e. MACT, NSPS, etc.) apply to the installation.
- Approval of this permit is recommended with special conditions.

INSTALLATION/PROJECT DESCRIPTION

Roeslein Alternative Energy Missouri, LLC (RAEM) proposes to install impermeable covers on seven (7) existing lagoons at the Murphy Brown of Missouri - Ruckman Farm in Gentry County. The biogas generated at the lagoons will either be purified into methane or be diverted to a flare. RAEM will construct the project in two (2) phases. The first phase involves the installation of the lagoon covers and flare skids while the second phase includes the installation of the gas cleaning and compression equipment. During the first phase, RAEM will divert all of the biogas to the flare to collect gas flow rate and composition data. The results will be used to determine the sizing of the gas cleaning and compression systems. Once the gas cleaning and compression systems are operational, the flares will only be operated intermittently during gas cleaning system shutdowns. RAEM expects to operate each flare for a maximum of 2 mmscf/yr after the gas cleaning system is operational.

In 2013, Murphy Brown of Missouri, LLC installed impermeable covers and flares on two lagoons. At that time, a no permit required letter was issued for the construction (Project 2012-10-057) by the Air Pollution Control Program but it did not include any gas cleaning systems. RAEM will construct gas cleaning systems for these two lagoons and therefore, the two lagoons are included as part of this project. At the end of construction, there will be nine impermeable lagoon covers and their corresponding gas collection, cleaning, compression and flare systems.

Because the potential emissions of the installation after the first 12 months of operations are expected to be less than de minimis, the installation is considered a minor source for construction permits. It is not required to apply for an operating permit as no federal regulations (i.e. NSPS, MACT, and NESHAP) apply. The facility has asked to keep the design of the cleaning system and some of the emission factors confidential per Missouri State Rules 10 CSR 10-6.210, *Confidential Information*. Therefore, no information is given in this permit regarding the types of equipment involved in the cleaning process and no emission factors are specifically listed. This permit is a public version and there is no confidential version of the permit.

EMISSIONS/CONTROLS EVALUATION

Emissions from phase one and phase two of the project were calculated. Emissions from the flares were calculated from emission factors from EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, or from mass balances. PM_{2.5}, PM₁₀, PM and CO emissions from the flare were calculated from emission factors in AP-42, Chapter 2.4, *Municipal Solid Waste Landfill*, 11/98. SO_x emissions were calculated from mass balances assuming that all H₂S contained in the biogas is oxidized to SO_x. H₂S emissions were calculated assuming that 95% of the H₂S is oxidized, which should be a conservative value since AP-42, Chapter 2.4 suggests a value greater than 98%. The concentration used in the calculation for H₂S is 0.25 percent by volume. NO_x can be formed from the oxidation of ammonia (NH₃) contained in the biogas, the fixation of atmospheric nitrogen with oxygen (thermal NO_x), and the reaction with partially oxidized compounds within the flare (prompt NO_x). NO_x emissions from the oxidation of NH₃ were calculated using mass balances assuming a concentration of 0.34 percent by volume. Thermal and Prompt NO_x emissions were calculated using emission factor in AP-42, Chapter 2.4. The concentrations of H₂S and NH₃ were provided by the company and the company is required to sample the biogas periodically to ensure that the values are not exceeded. VOC emissions from the biogas passing through the flare were calculated assuming that a 0.01 fraction of the methane production potential are emitted as VOC and that 99.2% will be destroyed by the flare. The 0.01 fraction was taken from the EPA document, *Emissions From Animal Feeding Operations, Draft*, 8/2001 and the 99.2% device control efficiency is from AP-42, Chapter 2.4, Table 2.4-3. VOC emissions from combustion were determined using the emission factor in AP-42, Chapter 1.4, *Natural Gas Combustion*, 7/98.

CO₂ emissions from combustion of the flares were calculated using an emission factor from AP-42, Chapter 2.4. CO₂ emissions from the biogas were calculated from mass balances assuming that 34% of the biogas is CO₂, which is a typical number for biogas. CH₄ emissions from combustion were calculated from mass balances assuming that 65% of the biogas is CH₄ and applying a 98% default control efficiency for the use of the flare.

All of the emissions were calculated using a biogas flow rate of 75 scfm, which reflects the maximum production rate from each lagoon as shown through sampling. The facility is required in this permit to measure and record the biogas flow rate to ensure that this maximum production rate is not exceeded. This should yield a conservative estimate of emissions. The CH₄ and CO₂ emissions can also be calculated using the emission factors from 40 CFR 98, Subpart C, Table C-1 and C-2. However, the emission factors from 40 CFR 98 were not used for this project because it yielded a lower estimate of emissions than the other methods. Once the cleaning system becomes operational, there will be CH₄ and CO₂ emissions from the exit streams. CO₂ emissions were calculated from mass balances assuming that all of the CO₂ generated by the biogas is emitted. CH₄ emissions were calculated using performance data provided by the manufacturer. N₂O Emissions were calculated using the emission factor in 40 CFR 98. No N₂O emission factors are available from AP-42. HAP emissions from combustion were calculated using emission factors in AP-42, Chapter 2.4.

The impermeable membrane is not expected to capture 100% of the biogas. To calculate fugitive emissions, it was assumed that only 97.5% of the biogas would be captured. This is the capture efficiency given in 40 CFR 98, Subpart JJ, *Manure Management*, Table JJ-6, *Collection Efficiencies of Anaerobic Digesters*.

Particulate emissions from the haul road were estimated using the equations in AP-42, Chapter 13.2.2, *Unpaved Roads*, 11/2006. The haul road is used to haul compressed methane and are only included in the emissions from Phase II of the project.

There will be H₂S emissions from the flares and the gas cleaning system due to the H₂S content in the biogas. However, the emissions are not considered part of this project because they existed in the gas before the addition of the equipment. The H₂S emissions are not generated by the equipment. Instead, with the addition of the flares and the bio-scrubber at the outlet stream of the gas cleaning system, the H₂S emissions from the lagoons will be less than the emissions before this project. The bio-scrubber is required by a special condition in this permit to ensure its proper operation in control of odor.

For CO₂ emissions from the gas cleaning system, it was assumed that 20% of the exit stream will be CO₂. For CH₄ emissions, it was assumed that 0.4% of the exit stream consists of CH₄. Both of these values are from the manufacturer's specifications.

The GHG-Mass emissions were calculated by summing the CO₂, CH₄ and N₂O emissions. The GHG-CO₂e emissions were calculated by multiplying the CO₂, CH₄, and N₂O emissions by their respective global warming potential (1 for CO₂, 25 for CH₄, and 298 for N₂O) and adding the results.

The following table provides an emissions summary for this project. For Phase I, which may last up to a maximum of twelve (12) months, emissions were calculated assuming that each flare produces no more than 39,420,000 scf of biogas per year. Phase II emissions were calculated assuming that each flare is only being used for 2 mmscf/yr of biogas and that otherwise, the biogas is being diverted to the gas cleaning system.

Table 1: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	Phase I Conditioned Potential Emissions	Phase II Potential Emissions (tpy)	Phase I Conditioned Potential Emissions (tpy)	Phase II Conditioned Potential Emissions (tpy)
PM	25.0	1.96	0.58	N/A	N/A
PM ₁₀	15.0	1.96	0.25	N/A	N/A
PM _{2.5}	10.0	1.96	0.11	N/A	N/A
SO _x	40.0	75.13	3.81	N/A	N/A
NO _x	40.0	73.44	3.73	N/A	N/A
VOC	40.0	2.44	0.20	N/A	N/A
CO	100.0	86.48	4.38	N/A	N/A
GHG (CO ₂ e)	¹ N/A	27,452.64	6,778.29	N/A	N/A
GHG (mass)	¹ N/A	21,677.94	2,399.51	N/A	N/A
HAPs	10.0/25.0	0.22	0.08	N/A	N/A

N/A = Not Applicable

Note 1: On June 23, 2014, the U.S. Supreme Court determined, in *Utility Air Regulatory Group v. Environmental Protection Agency* (No. 12-1146), that GHG can no longer be treated as an air pollutant for the purpose of determining whether a source is a major source required to obtain a PSD permit.

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are above de minimis but below major source levels before the biogas cleaning system is operational. Potential emissions of all pollutants will be below the de minimis level once the biogas cleaning system is operational.

APPLICABLE REQUIREMENTS

Roeslein Alternative Energy Missouri, LLC - Ruckman shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220

- *Restriction of Emission of Odors*, 10 CSR 10-6.165
- *Control of Sulfur Dioxide Emissions*, 10 CSR 10-6.261

AMBIENT AIR QUALITY IMPACT ANALYSIS

Ambient air quality modeling was performed to determine the ambient impact of NO_x and SO_x. Results show that the ambient impacts of all pollutants are below the regulatory levels. More information regarding the AAQIA can be found in the memorandum “Ambient Air Quality Impact Analysis (AAQIA) for Roeslein Alternative Energy Missouri, LLC – Ruckman Farm – Gentry County Site -2015-01-028.”

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Chia-Wei Young
New Source Review Unit

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated January 16, 2015 received January 16, 2015, designating Roeslein Alternative Energy Missouri, LLC as the owner and operator of the installation.

APPENDIX A

Abbreviations and Acronyms

%	percent	m/s	meters per second
°F	degrees Fahrenheit	Mgal	1,000 gallons
acfm	actual cubic feet per minute	MW	megawatt
BACT	Best Available Control Technology	MHDR	maximum hourly design rate
BMPs	Best Management Practices	MMBtu	Million British thermal units
Btu	British thermal unit	MMCF	million cubic feet
CAM	Compliance Assurance Monitoring	MSDS	Material Safety Data Sheet
CAS	Chemical Abstracts Service	NAAQS ...	National Ambient Air Quality Standards
CEMS	Continuous Emission Monitor System	NESHAPs National Emissions Standards for Hazardous Air Pollutants
CFR	Code of Federal Regulations	NO_x	nitrogen oxides
CO	carbon monoxide	NSPS	New Source Performance Standards
CO₂	carbon dioxide	NSR	New Source Review
CO_{2e}	carbon dioxide equivalent	PM	particulate matter
COMS	Continuous Opacity Monitoring System	PM_{2.5}	particulate matter less than 2.5 microns in aerodynamic diameter
CSR	Code of State Regulations	PM₁₀	particulate matter less than 10 microns in aerodynamic diameter
dscf	dry standard cubic feet	ppm	parts per million
EQ	Emission Inventory Questionnaire	PSD	Prevention of Significant Deterioration
EP	Emission Point	PTE	potential to emit
EPA	Environmental Protection Agency	RACT	Reasonable Available Control Technology
EU	Emission Unit	RAL	Risk Assessment Level
fps	feet per second	SCC	Source Classification Code
ft	feet	scfm	standard cubic feet per minute
GACT	Generally Available Control Technology	SIC	Standard Industrial Classification
GHG	Greenhouse Gas	SIP	State Implementation Plan
gpm	gallons per minute	SMAL	Screening Model Action Levels
gr	grains	SO_x	sulfur oxides
GWP	Global Warming Potential	SO₂	sulfur dioxide
HAP	Hazardous Air Pollutant	tph	tons per hour
hr	hour	tpy	tons per year
hp	horsepower	VMT	vehicle miles traveled
lb	pound	VOC	Volatile Organic Compound
lbs/hr	pounds per hour		
MACT	Maximum Achievable Control Technology		
µg/m³	micrograms per cubic meter		

Mr. Chris Roach
Director of Project Development
Roeslein Alternative Energy Missouri, LLC
9200 Watson Road, Suite 200
St. Louis, MO 63126-1528

RE: New Source Review Permit - Project Number: 2015-01-028

Dear Mr. Roach:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions and your new source review permit application is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to §§621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission, whose contact information is: Administrative Hearing Commission, Truman State Office Building, 573-751-2422, 573-751-5018, website: www.ao.mo.gov/ahc. If you have any questions regarding this permit, please do not hesitate to contact Chia-Wei Young, at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

SH:cyl

Enclosures

c: Northeast Regional Office
PAMS File: 2015-01-028

Permit Number: