STATE OF MISSOURI

# DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT BOOK

# 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: 102006-012 Project Number: 2006-08-025

Owner: Coastal Energy Corporation

Owner's Address: PO Box 218, Willow Springs, MO 65793

Installation Name: Coastal Emulsions of Missouri

Installation Address: 4280 Highway 96, Miller, MO 65707

Location Information: Lawrence County, S29, T29N, R26W

Application for Authority to Construct was made for:

The addition of a 500 hp boiler rated at 21 MMBtu/hr, a 56,000 gallon asphalt emulsion tank, a 33,000 gallon asphalt cement oil tank and two fuel oil tanks with 20,000 and 11,000 gallon capacities. 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 (listed as attachments starting on page 2) are applicable to this permit.

OCT 2 0 2006

EFFECTIVE DATE

Steven Fuller for JLK

DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

MO 780-1204 (1-03)

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.** Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. 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 this (these) air contaminant source(s).

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 as provided in RSMo 643.075. If you choose to appeal, the Air Pollution Control Program must receive your written declaration within 30 days of receipt of this permit.

If you choose not to appeal, this certificate, the project review, your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(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 Department of Natural Resources has established the Outreach and Assistance Center to help in completing future applications or fielding complaints about the permitting process. You are invited to contact them at 1-800-361-4827 or (573) 526-6627, or in writing addressed to Outreach and Assistance Center, P.O. Box 176, Jefferson City, MO 65102-0176.

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 Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention Construction Permit Unit.

:

2006-08-025

Coastal Energy Corporation

PO Box 218, Willow Springs, MO 65793

Coastal Emulsions of Missouri

4280 Highway 96, Miller, MO 65707

Lawrence County, S29, T29N, R26W

The addition of a 500 hp boiler rated at 21 MMBtu/hr, a 56,000 gallon asphalt emulsion tank, a 33,000 gallon asphalt cement oil tank and two fuel oil tanks with 20,000 and 11,000 gallon capacities. This review was conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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."*

Coastal Emulsions of Missouri
Lawrence County, S29, T29N, R26W

1. Operational Limitations
   Coastal Emulsions of Missouri shall burn only #2, #4 fuel oil in the new 21 MMBTU/hr boiler (EP2).

2. Fuel Oil Sulfur Content
   The sulfur content of the fuel to be used in the 21 MMBTU/hr boiler (EP2) shall not exceed 0.50% by weight. Coastal Emulsions of Missouri shall obtain the sulfur content of the fuel oil for each fuel oil delivery from the fuel vendors or conduct their own fuel analysis to evaluate the typical sulfur content weight percent of the fuel oil. The fuel consumption records and statement shall be kept on-site for five (5) years and shall be made immediately available to the Missouri Department of Natural Resources' personnel upon request.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (6) REVIEW
Project Number: 2006-08-025
Installation ID Number: 109-0059
Permit Number:

Coastal Emulsions of Missouri
4280 Highway 96
Miller, MO 65707

Complete: August 4, 2006
Reviewed: August 30, 2006

Parent Company:
Coastal Energy Corporation
PO Box 218
Willow Springs, MO 65793
Lawrence County, S29, T29N, R26W

## REVIEW SUMMARY

- Coastal Emulsions of Missouri has applied for authority to construct a 500 hp boiler rated at 21 MMBtu/hr, a 56,000 gallon asphalt emulsion tank, a 33,000 gallon asphalt cement oil tank and two fuel oil tanks with 20,000 and 11,000 gallon capacities.

- Hazardous Air Pollutant (HAP) emissions are not expected in a significant quantity from the proposed equipment.

- The New Source Performance Standards (NSPS) subpart Dc applies to the proposed equipment.

- No air pollution control equipment is being used in association with the new equipment.

- This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of sulfur oxides ($SO_X$) are above de minimis levels.

- This installation is located in Lawrence County, an attainment area for all criteria air pollutants.

- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].

- Ambient air quality screening was performed to determine the ambient impact of $SO_X$.

- Emissions testing is not required for the source.

- A Basic Operating Permit application is required for this installation within 30 days of equipment startup.

- Approval of this permit is recommended with special conditions.

## INSTALLATION DESCRIPTION

The existing installation is a *de minimis* source under 10 CSR 10-6.060(5). The installation consists a 9.66 MMBtu/hr boiler, one loading rack, two 420,000 gallon, six 79,000 gallon, one 30,000 gallon, one 21,320 gallon, four 20,000 gallon, one 18,800 gallon, two 18,000 gallon, one 12,000 gallon, two 9,400 gallon, two 6,000 gallon and three 4,510 gallon tanks used for storing asphalt cement, asphalt emulsion, heated water, redicote emulsifier, dilute soap solution, distillate oil, tall oil, caustic soda, and Indulin SA-L surfactant. This equipment is used to produce asphalt emulsion.

No construction permits have been issued to Coastal Emulsions of Missouri from the Air Pollution Control Program.

Coastal Emulsions was issued a Notice of Violation for failing to comply with 10 CSR 10-6.060 *Construction Permits Required*. The boiler and four tanks addressed in this document were installed and in operation without the appropriate permits.

## PROJECT DESCRIPTION

The new installation shall consists of one 21 MMBtu/hr boiler (EP2), one 33,000 gallon asphalt cement tank (EP5) with a maximum hourly throughput of 940 gallons, one 56,000 gallon asphalt emulsions tank (EP4) with a maximum hourly throughput of 752 gallons and two fuel oil tanks (EP6) with 20,000 gallon and 11,000 gallon capacities.

## EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, section 1.3 *Fuel Oil Combustion*, September 1998. EPA's TANKS 4.0 software was used to calculate the breathing and working losses from the fuel oil tanks. Emissions factors from project 109-0059-005 were used to calculate breathing and working losses from the asphalt cement and asphalt emulsions tanks. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year.) The following table provides an emissions summary for this project. The only emissions above the *de minimis* levels are $SO_X$ emissions. These emissions are a product of fuel oil combustion in the boiler. No control devices are present to reduce emissions.

Table 1: Emissions Summary (tons per year)

| Pollutant | Regulatory *De Minimis* Levels | **Existing Potential Emissions | Existing Actual Emissions (2005 EIQ) | Potential Emissions of the Application | New Installation Conditioned Potential |
|---|---|---|---|---|---|
| $PM_{10}$ | 15.0 | 8.69 | 0.25 | 0.63 | 9.32 |
| SOx | 40.0 | 21.76 | 0.77 | 47.30 | 69.06 |
| NOx | 40.0 | 6.04 | 2.15 | 13.14 | 19.18 |
| VOC | 40.0 | 2.86 | 1.74 | 2.80 | 5.66 |
| CO | 100.0 | 1.51 | 0.54 | 3.29 | 4.80 |
| HAPs | 10.0/25.0 | 0.13 | 0.09 | 0.03 | 0.16 |

**Existing Potential Emissions taken from project 109-0059-005

## 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 $SO_X$ are above de minimis levels.

## APPLICABLE REQUIREMENTS

Coastal Emulsions of Missouri 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. For a complete list of applicable requirements for your installation, please consult your operating permit.

### GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information,* 10 CSR 10-6.110
  The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required April 1 for the previous year's emissions.

- *Operating Permits*, 10 CSR 10-6.065

- *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 10-3.090

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260

## AMBIENT AIR QUALITY IMPACT ANALYSIS

Ambient air quality modeling was performed to determine the ambient impact of Sulfur oxides. 10.8 lbs./hr of $SO_X$ are emitted through a 12.17 ft tall stack with a 2 ft. diameter, a 400 °F exit temperature, and a 10,500 standard cubic ft/min flow rate. The highest concentration was located 337.93 ft from the stack, which is outside the property boundary.

| Pollutant | Modeled Impact | NAAQS/AAL | Time Period |
|---|---|---|---|
| SOx | 74.26 | 365/90 | 24-hour |
| SOx | 14.85 | 80/20 | Annual |

$SO_X$ concentrations are below the maximum concentrations found in 10 CSR 10-6.010 *Ambient Air Quality Standards* and 10 CSR 10-6.060(11)(A) *Construction Permits Required*.

## 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.

_____ _____

Michael Mittermeyer Date
Environmental Engineer

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated 8/2/2006, received 8/4/2006, designating Coastal Energy Corporation as the owner and operator of the installation.
- U.S. EPA AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Southeast Regional Office Site Survey dated 8/10/2006.

Mr. David Montgomery
President
Coastal Emulsions of Missouri
4280 Highway 96
Miller, MO 65707

RE: New Source Review Permit - Project Number:

Dear Mr. Montgomery:

Enclosed with this letter is your permit to construct. Please study it carefully. 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, your new source review permit application and your revised operating permit 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 have any questions regarding this permit, please do not hesitate to contact me at (573) 751-4817, or you may write to me at the Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, Missouri 65102. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:mml

Enclosures

c: Southeast Regional Office
PAMS File: 2006-08-025
Permit Number: