



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: 092011-006 Project Number: 2011-03-075
Installation Number: 031-N007

Parent Company: BP North America Products, Inc.

Parent Company Address: 2601 South Sprigg Street, Cape Girardeau, MO 63701

Installation Name: Amoco Oil Cape Girardeau Terminal

Installation Address: 2601 South Sprigg Street, Cape Girardeau, MO 63701

Location Information: Cape Girardeau County, S18, T30N, R14E

Application for Authority to Construct was made for:

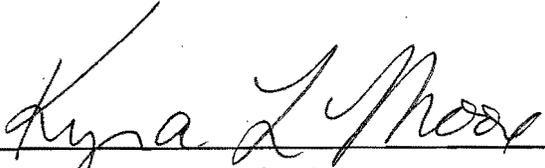
The installation of a soil vapor extraction system to remove contaminated groundwater and soil from Amoco Oil Cape Girardeau Terminal. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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

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

SEP 28 2011

EFFECTIVE DATE


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 Departments' 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.

Page No.	3
Permit No.	
Project No.	2011-03-075

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."

Amoco Oil Cape Girardeau Terminal
Cape Girardeau County, S18, T30N, R14E

1. Emission Limitation
 - A. Amoco Oil Cape Girardeau Terminal shall emit less than 40.0 tons of Volatile Organic Compounds (VOCs) from the Soil Vapor Extraction system (SVE-1) in any consecutive 12-month period.
 - B. Amoco Oil Cape Girardeau Terminal shall emit less than ten (10.0) tons of Ethylbenzene, Toluene, and Xylene from the Soil Vapor Extraction system (SVE-1) in any consecutive 12-month period.
 - C. Amoco Oil Cape Girardeau Terminal shall emit less than two (2.0) tons of Benzene from the Soil Vapor Extraction system (SVE-1) in any consecutive 12-month period.
 - D. Amoco Oil Cape Girardeau Terminal shall emit less than twenty-five (25.0) tons combined of Hazardous Air Pollutants (HAPs) from the Soil Vapor Extraction system (SVE-1) in any consecutive 12-month period.
 - E. Attachment A, Attachment B, Attachment C, and Attachment D or equivalent forms approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions 1(A) and 1(B), Amoco Oil Cape Girardeau Terminal shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.
2. Flow Meter

A flow meter shall be installed on stack (SVE-1) before any testing is done on the Soil Vapor Extraction system.
3. Performance Testing
 - A. Amoco Oil Cape Girardeau Terminal shall conduct performance tests in order to develop emission factors so the emission rates can be calculated

Page No.	4
Permit No.	
Project No.	2011-03-075

SPECIAL CONDITIONS:

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from the stack (SVE-1) of the Soil Vapor Extraction system. The emission rates will be recorded and made sure they do not exceed the de minimis/screen modeling action (SMAL) levels for VOC, Benzene, Ethylbenzene, Toluene, and Xylene.

- B. Amoco Oil Cape Girardeau Terminal shall conduct performance tests in accordance to 10 CSR 10-6.030 Sampling Methods for Air Pollution Sources.
- C. The first test shall be performed within fifteen (15) days after achieving the maximum production rate of the equipment, but not later than 30 days after initial start-up of operation and shall be conducted in accordance with the Stack Test Procedures outlined in Special Condition Number 4.
- D. A completed Proposed Test Plan Form (enclosed) must be submitted to the Air Pollution Control Program prior to the proposed test date so that the Air Pollution Control Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The Proposed Test Plan may serve the purpose of notification and must be approved by the Director prior to conducting the required emission testing.
- E. Stack testing shall be performed on the Soil Vapor Extraction systems' stack (SVE-1) to determine the VOC, Benzene, Ethylbenzene, Toluene, and Xylene emission rates once per month for the first six months and then quarterly for the remainder of its existence at the Amoco Oil Cape Girardeau Terminal site to determine the VOC and HAP emissions.

4. Test Reporting

- A. Two (2) copies of a written report of the performance test results shall be submitted to the Director within thirty (30) days of completion of the first required testing. The report must include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required U.S. EPA Method for at least one (1) sample run. All tests ran after the initial testing shall have a summary report prepared of the performance test results. Each summary report of each individual test shall be kept on-site and kept on file for (5) five years after completion of the test. These summary reports should include all information necessary to analyze the emissions from the Accelerated Remediation Technologies' Dynamic Subsurface Circulation system.

Page No.	5
Permit No.	
Project No.	2011-03-075

SPECIAL CONDITIONS:

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

- B. The test report is to fully account for all operational and emission parameters addressed both in the permit conditions as well as in any other applicable state or federal rules or regulations.
 - C. This report must demonstrate how total emissions from the Amoco Oil Cape Girardeau Terminal remediation system will remain below de minimis levels as outlined in Table 1. If the data and emissions calculations show that the VOC and/or any HAP is greater than de minimis levels or if any HAP emitted is greater than the SMAL Amoco Oil Cape Girardeau Terminal must cease operation of the Soil Vapor Extraction system (SVE-1). Alternatively, Amoco Oil Cape Girardeau Terminal may undergo a Section (6) review of this project. Amoco Oil Cape Girardeau Terminal shall implement any such plan immediately upon its approval by the Director.
5. Record Keeping and Reporting Requirements
- A. Amoco Oil Cape Girardeau Terminal 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.
 - B. Amoco Oil Cape Girardeau Terminal shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten 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 (5) REVIEW

Project Number: 2011-03-075
Installation ID Number: 031-N007
Permit Number:

Amoco Oil Cape Girardeau Terminal
2601 South Sprigg Street
Cape Girardeau, MO 63701

Complete: March 28, 2011

Parent Company:
BP North America Products, Inc.
2601 South Sprigg Street
Cape Girardeau, MO 63701

Cape Girardeau County, S18, T30N, R14E

REVIEW SUMMARY

- Amoco Oil Cape Girardeau Terminal has applied for authority to install a soil vapor extraction system to remove contaminated groundwater and soil from the Amoco Oil Cape Girardeau Terminal site.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAPs of concern from this process are Benzene (CAS# 71-43-2), Ethylbenzene (CAS# 100-41-4), Toluene (CAS# 108-88-3), and Xylene (CAS# 1330-20-7)..
- None of the New Source Performance Standards (NSPS) apply to the installation.
- Maximum Achievable Control Technology (MACT) 40 CFR Part 63, Subpart GGGGG, *National Emission Standard for Hazardous Air Pollutants: Site Remediation* does not apply to the proposed equipment because this installation is not a major source for HAPs and will be conditioned below the major source levels by this permit.
- No air pollution control equipment is being used in association with the new equipment.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required. Potential emissions of Pollutant are conditioned below de minimis levels.
- This installation is located in Cape Girardeau 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 not performed since potential emissions of the application are conditioned below de minimis levels.
- Emissions testing is required for the equipment.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

BP North America Products, Inc. formerly operated a petroleum storage facility in Cape Girardeau, Missouri. The installation name was Amoco Oil Cape Girardeau Terminal (031-N007). The facility has been shut down since 1985 and all operating equipment has been removed from the site. No construction or operating permits have been issued for this site.

No permits have been issued to Amoco Oil Cape Girardeau Terminal from the Air Pollution Control Program.

PROJECT DESCRIPTION

BP North America Products, Inc. has proposed to install a Soil Vapor Extraction (SVE) system at the Amoco Oil Cape Girardeau Terminal (031-N007). The SVE system consists of 9 extraction wells, buried collection piping and an enclosed vapor extraction unit consisting of vapor extraction blowers, knockoff tanks, and piping headers with flow and pressure instrumentation. The maximum hourly design flow rate of the SVE system is 360 Standard Cubic Feet of Mass per Minute. The off-gases generated by removing soil vapors directly from the substrate are vented to the atmosphere via a single stack from the extraction blowers.

EMISSIONS/CONTROLS EVALUATION

The potential emissions from the SVE system are difficult to calculate due to the variability in the ground water and soil contamination. It was assumed that the potential emissions of this application are greater than the de minimis levels for VOC, total HAPs, and greater than the Screen Modeling Action Levels (SMAL) for individual HAPs. BP North America Products, Inc will be conducting and stack testing on the SVE system in order to accurately calculate the emissions from the SVE system. BP North America Products, Inc will track their emissions of VOC and HAPs in order to stay below the de minimis levels for VOC, total HAPs, and stay below the SMAL for individual HAPs. The SMALs for each individual HAP can be found in Attachment D of this permit. 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.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> / SMAL Levels	Existing Potential Emissions	Existing Actual Emissions	Potential Emissions of the Application	New Installation Conditioned Potential
PM _{2.5}	10.0	N/A	N/A	N/A	N/A
PM ₁₀	15.0	N/A	N/A	N/A	N/A
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	>40.0	<40.0
CO	100.0	N/A	N/A	N/A	N/A
HAPs	10.0/25.0	N/A	N/A	>25.0	<25.0
Benzene	^a 2.0	N/A	N/A	>2.0	<2.0
Ethylbenzene	^a 10.0	N/A	N/A	>10.0	<10.0
Toluene	^a 10.0	N/A	N/A	>10.0	<10.0
Xylene	^a 10.0	N/A	N/A	>10.0	<10.0

N/A = Not Applicable

^aScreen Modeling Action Levels

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all criteria pollutants are conditioned below de minimis levels.

APPLICABLE REQUIREMENTS

Amoco Oil Cape Girardeau Terminal 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 Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Gerad Fox
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated March 22, 2011, received March 24, 2011, designating BP North America Products, Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Southeast Regional Office Site Survey, dated April 31, 2011.

Ms. Tammy Brendel
Site Coordinator
Amoco Oil Cape Girardeau Terminal
P.O. Box 8507
Sugar Creek, MO 64054

RE: New Source Review Permit - Project Number: 2011-03-075

Dear Ms. Brendel:

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 and your new source review permit application. 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 Gerad Fox, at the Department's 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

Kendall B. Hale
New Source Review Unit Chief

KBH:gfl

Enclosures

c: Southeast Regional Office
PAMS File: 2011-03-075

Permit Number: