

STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES

Matt Blunt, Governor • Doyle Childers, Director

www.dnr.mo.gov

SEP 29 2006

Mr. Ken Anderson  
Environmental, Safety, & Health Coordinator  
Ameren UE  
PO Box 66149  
St. Louis, MO 63166-6149

RE: Temporary Permit for Concrete Plant  
Expiration Date: March 31, 2007  
Project Number: 2006-09-022  
Permit Number: **092006-011**

Dear Mr. Anderson:

On September 15, 2006, The Air Pollution Control Program received your request to obtain a temporary construction permit for your new concrete plant, 179-0032, to operate in Reynolds County (S26, T33N, R02W). This plant will be used to construct concrete pads to test the feasibility of the Roller Compacted Concrete (RCC) Mix Design Program developed to rebuild the Taum Sauk upper reservoir. Your request is hereby granted under Missouri State Rule 10 CSR 10-6.060 *Construction Permits Required (3) Temporary Installation and Pilot Plants*. This temporary permit will expire on March 31, 2007. The concrete plant shall not operate beyond this date.

Rock from the existing site will be transported offsite to a commercial quarry operator, crushed to design specifications, and be brought back to the site. The resulting aggregates will be mixed with cement, fly ash, and water in a mixer to produce concrete. The fly ash will be transported in from Ameren's Meramec power plant and be stockpiled at the site. The area of the storage pile is expected to be approximately 320 square feet, and the moisture content of the fly ash, when delivered, is expected to be between 20-30%. Due to the small size of the storage pile and the high moisture content of the fly ash, all PM<sub>10</sub> emission from the fly ash storage pile (i.e. wind erosion, fly ash load in, etc.) shall be considered negligible and not taken into account in the ambient impact analysis and emissions evaluations.

The maximum hourly design rate of the concrete plant is 700 tons per hour. The primary emission point of the plant, which is the central mixer, shall be located at least 3,400 feet from the nearest property boundary. The ambient impact at this site shall not exceed the National Ambient Air Quality Standard (NAAQS) of 150 µg/m<sup>3</sup> of particulate matter less than ten microns (PM<sub>10</sub>) at or beyond the nearest property boundary in any single 24-hour period. Screening tools were used to evaluate the daily PM<sub>10</sub> ambient impact at the nearest property

boundary. The results show that for the PM<sub>10</sub> ambient impact of the plant to remain below 150 µg/m<sup>3</sup>, the plant shall be limited to a production rate of no more than 8,352 tons of concrete per day. The operators shall use Attachment A, or other equivalent form(s), to track its daily production and the resulting daily PM<sub>10</sub> ambient impact to ensure compliance. A PM<sub>10</sub> ambient impact factor was developed for the plant and included in Attachment A to be used in calculating the daily PM<sub>10</sub> ambient impact.

**Table 1: Ambient Air Quality Impact Analysis of PM<sub>10</sub>, 24-Hour Averaging Time**

Operation	Ambient Impact Factor (µg/m <sup>3</sup> /ton)	Modeled Impact (µg/m <sup>3</sup> )	*Background (µg/m <sup>3</sup> )	NAAQS (µg/m <sup>3</sup> )	Daily Production Limit (tons)
1. Solitary	0.0180	150.00	N/A	150.00	8,352

\* Background PM<sub>10</sub> level is not applicable (N/A).

The concrete plant will use a diesel engine/generator with a maximum design rate of 320 horsepower to power its equipment. The diesel engine shall only operate while the plant is running. If the company decides, after the issuance of the permit, that it would like to operate the diesel engine while the plant is not in operation, a new permit review will be required.

Ameren UE requested to limit its PM<sub>10</sub> emission to under the de minimis level of 15 tons per year and must track its PM<sub>10</sub> emission to ensure compliance. Record Keeping Sheet, Attachment B, or other equivalent form(s), shall be used for this purpose. An emission factor was developed for PM<sub>10</sub> and included in Attachment B for use in calculating PM<sub>10</sub> emission based on production rate.

**Table 2: Emissions Summary (tons per year)**

Air Pollutant	Regulatory <i>De Minimis</i> Levels	Potential Emissions of the Application	*New Installation Conditioned Potential	Emission Factor (lb/ton)
PM <sub>10</sub>	15.0	342.4	<15	0.1117
SO <sub>x</sub>	40.0	2.95	0.13	N/A
NO <sub>x</sub>	40.0	44.91	1.97	N/A
VOC	40.0	3.67	0.16	N/A
CO	100.0	9.67	0.42	N/A
HAPs	10.0/25.0	0.04	0.00	N/A

Note: N/A = Not Applicable

\* Conditioned potential based on limit in permit conditions. Other pollutants proportionately reduced.

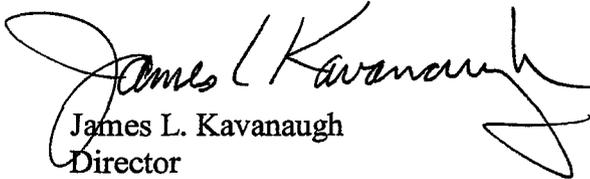
Mr. Ken Anderson  
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You are obligated to meet all applicable air pollution control rules, Department of Natural Resources' rules, or any other applicable federal, state, or local agency regulations. Specifically, you should avoid violating *Restriction of Emissions of Odors*, 10 CSR 10-6.170, *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, and 10 CSR 10-6.220, *Restriction of Emissions of Visible Air Contaminants*.

A copy of this letter and your temporary permit must be kept on-site with the plant and be made available to Department of Natural Resources personnel upon request. If the conditions surrounding this approval change, such as substantiated citizen complaints or failure to meet the New Source Performance Standards, approval for this site may be revoked. If we can be of further assistance, please contact Chia-Wei Young at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, Missouri 65102, or you may telephone (573) 751-4817. Thank you for your time and cooperation.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

  
James L. Kavanaugh  
Director

JLK:cwyl

Enclosures

c: Mr. Steve Feeler, Compliance/Enforcement Section  
Southeast Regional Office  
PAMS File: 2006-09-022

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**SITE-SPECIFIC 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); by the Missouri Rules listed in Title 10, Division 10 of the Codes of State Regulations (specifically 10 CSR 10-6.060); by 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority"; by 10 CSR 10-6.010 "Ambient Air Quality Standards" and 10 CSR 10-6.060 subsections (5)(D) and (6)(A); and by control measures requested by the applicant, in their permit application, to reduce the amount of air pollutants being emitted, in accordance with 10 CSR 10-6.060 paragraph (6)(E)3.*

Site ID No.: 179-0032  
 Site Address: Route 1, Annapolis, MO 63654  
 Site County: Reynolds County (S26, T33N, R2W)

1. National Ambient Air Quality Standards (NAAQS) Limitation for Particulate Matter Less Than Ten Microns in Diameter (PM<sub>10</sub>)
  - A. The operator(s) for Ameren UE's temporary concrete plant, 179-0032, shall ensure, while operating at this site, that the ambient impact of PM<sub>10</sub> at or beyond the nearest property boundary does not exceed 150 µg/m<sup>3</sup> in any 24-hour period, in accordance with the Federal NAAQS requirements (40 CFR 50.6).
  - B. To demonstrate compliance, the operator(s) shall maintain a daily record of material processed. Attachment A, *Daily Ambient PM<sub>10</sub> Impact Tracking Record*, or other equivalent form(s), will be used for this purpose.
2. Annual Emission Limit of Particulate Matter Less Than Ten Microns in Diameter (PM<sub>10</sub>)
  - A. The operator(s) shall ensure that Ameren UE's temporary concrete plant, 179-0032, emits less than 15 tons of PM<sub>10</sub> into the atmosphere in any 12-month period.
  - B. To demonstrate compliance, the operator(s) shall maintain a daily record of material processed and PM<sub>10</sub>. Attachment B, *Monthly PM<sub>10</sub> Emissions Tracking Record*, or other equivalent form(s), will be used for this purpose.
3. Usage of Undocumented Watering on Haul Road(s) and Vehicular Activity Area(s)
 

The operator(s) shall control the emission of particulate matter from the haul road(s) and the vehicular activity areas of the storage pile(s). The operator(s) shall apply a water spray on these sources whenever conditions exist that would allow visible fugitive emissions to enter the ambient air beyond the property boundaries. Undocumented watering is to be used on the following haul road(s) and vehicular activity area(s): Haul road used to transport finished product to the test pad and vehicular activity around all storage piles.
4. Pavement of Haul Road(s)
  - A. The operator(s) shall pave the specified haul with materials such as asphalt, concrete, and/or other material(s) after receiving approval from the Program. The pavement will be applied in accordance with industry standards for such pavement so as to achieve "Control of Fugitive Emissions" while the plant is operating. The following haul road(s) are to be paved: Haul Road for Sand, Road for Aggregates, Haul Road for Cement.
  - B. Maintenance and/or repair of the surfaces will be conducted as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions from these areas while the plant is operating.
  - C. The operator(s) shall periodically water, wash and/or otherwise clean all of the paved portions of the haul road(s) as necessary to prevent visible fugitive emissions from entering the ambient air beyond the property boundaries.
5. Moisture Content Testing of Storage Piles Requirement
  - A. The moisture content of the stockpiled rock will reduce particulate emissions. Ameren UE claimed the moisture content of the stored rock to be greater than or equal to 1.5 wt.%, which shall be verified by testing.

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- B. Testing shall be conducted according to approved methods, such as those prescribed by the *American Society for Testing Materials (ASTM D-2216 or C-566)*, EPA AP-42 Appendix C.2, or other method(s) approved by the Director. The first test shall be conducted within five (5) days after startup of the plant.
  - C. The operator may obtain a copy of the test results of the inherent moisture content from the supplier(s) of the aggregate. Otherwise, the operator shall obtain test samples from each source of untested aggregate. The written analytical report shall include the raw data and moisture content (wt.%) of each sample, the test date, and the original signature of the individual performing the test. Within 5 days of completion of the required tests, the report shall be filed on-site or at Ameren UE's main office.
  - D. If the moisture content result of the first test is less than 1.5 wt.%, a second test must be performed within five (5) days. If the result of the second test is less than 1.5 wt.%, Ameren UE shall apply for a new construction permit to account for the revised information or install wet spray devices on the affected units.
6. **Baghouse(s) Control System Requirements**
    - A. Ameren UE shall install and operate baghouse(s) to restrict the emission of particulate matter. The baghouse(s) must be used whenever these units are in operation. The baghouse(s) shall be installed on the following units: Cement Unloading .
    - B. Ameren UE shall install instruments to monitor the operating pressure drop across the baghouse. All instruments and control equipment shall be calibrated, maintained and operated according to the manufacturer's preventive maintenance recommendations. The operator(s) shall check and record the pressure drop across the baghouse filter once per operating day when the associated equipment (Cement Unloading) is in operation. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
  7. **Prohibition Against Concurrent Operations Without Further Air Pollution Control Program Review**  
The temporary plant is prohibited from operating whenever any other plant(s) are located at this site
  8. **Restriction on Minimum Distance to Nearest Property Boundary**  
The primary emission point of the portable plant, which is the mixer loading, shall be located at least 3,400 feet from the nearest property boundary whenever it is operating at this site.
  9. **Restriction on the Use of Diesel Engine(s)/Generator(s)**  
The operator(s) shall only run the diesel engine(s)/generator(s) when the plant is in operation. If the company, after the issuance of the permit, decides that it would like to run the diesel engine(s)/generator(s) when the plant is not in operation, then a new permit review will be required.
  10. **Record Keeping Requirement**  
The operator(s) shall maintain all records required by this permit while the plant is operating at the site and shall make them available to any Missouri Department of Natural Resources' personnel upon request.
  11. **Reporting Requirement**  
The operator(s) shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedances of the limitations imposed by this permit.



