



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: 042009-006 Project Number: 2008-09-029

Parent Company: 89 Regional Readiness Command

Parent Company Address: ATTN: ARRC-CSK-LGS, Wichita, KS 67210

Installation Name: U.S. Army Support Center and Fort Leonard Wood

Installation Address: 1334 First Street, ATTN: IMNW-LNW-PWEE,
Fort Leonard Wood, MO 65743-8944

Location Information: Pulaski County, S21, T35N, R8W

Application for Authority to Construct was made for:

A new rock crushing plant to be located on U.S. Army Maneuver Support Center and Fort Leonard Wood property. This equipment will be used to train soldiers. Rock is processed through 2 crusher(s), 4 screen(s), and 13 conveyor(s). The rock crushing plant has a maximum hourly design rate (MHDR) of 150 tons per hour (tph). This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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

APR 9 2009

EFFECTIVE DATE

A handwritten signature in black ink, appearing to read "James K. Kawencuk".
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 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 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 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 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."

U.S. Army Support Center and Fort Leonard Wood
Pulaski County, S21, T35N, R8W

1. Annual Emission Limit of Particulate Matter Less Than Ten Microns in Diameter (PM₁₀)
 - A. The operator(s) shall ensure that U.S. Army Support Center and Fort Leonard Wood rock crushing plant emits less than 15 tons of PM₁₀ into the atmosphere in any 12-month period.
 - B. To demonstrate compliance, the operator(s) shall maintain a daily record of material processed and PM₁₀. Attachment A, *Monthly PM₁₀ Emissions Tracking Record*, or other equivalent form(s), will be used for this purpose.
2. U.S. Army Support Center and Fort Leonard Wood 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 vehicle activity area(s): Haul Road #1 (HR01), Haul Road #2 (HR02), and the vehicle area around stockpile (EP15C).
3. Usage of Wet Suppression Control System on Equipment
 - A. U.S. Army Support Center and Fort Leonard Wood shall install and operate wet spray devices to restrict the emission of particulate matter. These wet spray devices must be used to control fugitive emissions whenever these units are in operation. The wet spray devices shall be installed on the following units:
 - 1) Scalping screen (EP03)
 - 2) Primary crusher (EP04)
 - 3) 3 conveyors from primary crushing (EP05)
 - 4) Primary screening (EP06)
 - 5) Secondary crushing (EP07)
 - 6) 3 conveyors from secondary crushing (EP08).
 - 7) Secondary screening (EP09)
 - 8) 10 conveyor/stackers (EP10)
 - 9) Tertiary screening (EP11)
 - B. Watering may be suspended during periods of freezing conditions, when use of the wet spray devices may damage the equipment. During these conditions, the operator(s) shall adjust the production rate to control fugitive

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SPECIAL CONDITIONS:

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

- emissions from these units. The operator shall record a brief description of such events in a daily log.
4. Silt Content Testing Requirement – Storage Pile – Aggregate Rock
 - A. The reduced silt content of the aggregate rock Storage Pile(s) (Pile #1) will reduce particulate emissions. U.S. Army Support Center and Fort Leonard Wood claimed the silt content to be less than or equal to 1.6 wt.%, which shall be verified by testing.
 - B. Testing shall be conducted according to approved methods, such as those prescribed by the *American Society for Testing Materials (ASTM C-136)*, EPA AP-42 Appendix C.2, or other method(s) approved by the Director. The first test shall be no later than 45 days after startup. Testing shall be conducted at least once every two years after the initial test, during the months of June through September, while the rock crushing plant is active at this site.
 - C. The operator shall obtain test samples from each storage pile (Pile # 1). The written analytical report shall include the raw data and silt content (wt.%) of each sample, the test date, and the original signature of the individual performing the test. Within 30 days of completion of the required tests, the report shall be submitted to the Enforcement section of the Air Pollution Control Program, and a copy shall be sent to the Regional Office.
 - D. If the silt content result of the first test is greater than 1.6 wt.%, a second test must be performed within 30 days. If the result of the second test is greater than 1.6% wt.%, U.S. Army Support Center and Fort Leonard Wood shall apply for a new construction permit to account for the revised information.
 5. Restriction on Process Configuration of Primary Emission Point(s)

The maximum hourly design rate of the plant is equal to the sum of the design rate(s) of the primary emission point(s). U.S. Army Support Center and Fort Leonard Wood has designated the following unit(s) as the primary emission point(s) of the rock crushing plant: primary crusher (EP04). Bypassing the primary emission point(s) for processing is prohibited.
 6. Record Keeping Requirement

The operator(s) 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.
 7. 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.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (Section 5) REVIEW
Project Number: 2008-09-029
Installation ID Number: 169-0004
Permit Number:

U.S. Army Support Center and Fort Leonard Wood Complete: 09/11/2008
1334 First Street, ATTN: IMNW-LNW-PWEE
Fort Leonard Wood, MO 65743-8944

Parent Company:
89 Regional Readiness Command
ATTN: ARRC-CSK-LGS
Wichita, KS 67210

Pulaski County, S21, T35N, R8W

REVIEW SUMMARY

- U.S. Army Support Center and Fort Leonard Wood has applied for authority to construct a rock crushing plant to be located and operated on county plant number 169-0004. This plant will be used to train soldiers.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAPs of concern from this process are those associated with combustion of diesel fuel.
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment. Subpart OOO of the New Source Performance Standards *Standards of Performance for Nonmetallic Mineral Processing Plants* does not apply to this plant. The plant's capacity 150 tph is below the hourly threshold for Subpart OOO applicability greater than 150 tph.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- Undocumented watering of the haul roads is being used to control the particulate emissions from haul roads and spray bars are being used to control particulate emissions from the equipment in this permit.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of particulate matter are conditioned to be below de minimis levels.
- This installation is located in Pulaski 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].
- Emissions testing is not required for the equipment.
- The equipment in this permit will become part of the operating permit issued to Fort Leonard Wood. A revision to Operating Permit OP2006-006 is required for this installation.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

The U.S. Army operates the Fort Leonard Wood military training post in Pulaski County. It is located on 63,000 acres. A rock quarry is located on the eastern edge adjacent to the Big Piney River. Fort personnel currently operate two crushing plant and a hot asphalt plant for the purpose of providing training for the military. This will be the forth plant in operation but this plant will be operated by 89th Regional Readiness Command (Army Reserves) The quarry operation is located some 850 meters from the Big Piney river.

No permits have been issued to 89th Regional Readiness Command (Army Reserves) from the Air Pollution Control Program.

PROJECT DESCRIPTION

89th Regional Readiness command (Army Reserves) plans to install a Cedar Rapids 150 tph crushing plant at site #66 on Fort Leonard Wood. Site #66 is the previous location of the Army National Guard 150 tph Cedar Rapids plant. The plant previously operated at Fort Drum in New York. When this plant is operational, the Army National Guard plant will no longer be authorized to operate on the Fort Leonard Wood property.

The 89th plant will operate to instruct student soldiers from a variety of soldier groups about 5 -6 days per class with 4 classes per year. The plant will be in operation some 20-34 days per year. This plant is part of the US Army MANSEN -Fort Leonard Wood and is being located within the Forts boundaries. The operation of the plant will allow for a number of different soldier training groups to be trained at the plant on the Fort Leonard Wood property. The operation of the National Guard plant only allowed for training by the National Guard and had its own County Plant identification number 169-0020. This restriction to training is no longer applied even though this plant will be located at the site of the former Army National Guard 150 tph Cedar Rapids plant. This installation has the same county plant identification number as the US Army MANSEN - Fort Leonard Wood, 169-0004.

The daily PM₁₀ ambient impact from this plant this plant operating at 150 tph is estimated to be 0.49ug/m³ out of 150 ug/m³ allowed. Therefore no recordkeeping is required for this plant. This plant does not have a daily tonnage limitation. The plant does have a yearly tonnage limitation. This plant will be operating in connection with three other student training plants already permitted for this installation. The active Army 577 the Engineering Battalion presently owns these three plants. These plants are not restricted from joint simultaneous operation. Combined ambient impact has not been consider because of the activity of the plants is for training of soldiers and Fort Leonard Wood has an extensive monitoring network surrounding the installation monitoring real time ambient impact.

The training plants are a Cedar Rapids crushing plant, Thunderbird crushing plant and a hot asphalt plant. The crushing plants are located about 1/2 mile south and the Asphalt plant is about 1/2 mile southwest. Operating permit OP 2006-006 has been issued for these plants. None of the plants operates more than 60 or 70 days a year. Plans are in place to remove the Thunderbird plant.

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 11.19.2 dated (1/95). 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 1: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions	Potential Emissions of the Application	New Installation Conditioned Potential
PM ₁₀	15.0	N/D	N/A	312.22	<15
SOx	40.0	N/D	N/A	0.01	N/D
NOx	40.0	N/D	N/A	0.09	N/D
VOC	40.0	N/D	N/A	0.01	N/D
CO	100.0	N/D	N/A	0.02	N/D
HAPs	10.0/25.0	N/D	N/A	0.0	N/D

N/A = Not Applicable; N/D = Not Determined

Most of the equipment associated with the plant is directly controlled by water sprays to reduce emission of PM₁₀. The appropriate control efficiencies from AP-42 section 11.19.2 for the various equipment was used to account for the reduction in emissions (75% for crushers, 94.4 for screens and 96.6 for conveyors /stackers). This plant and the quarry operations share a common pit haul road. The haul road length used in this permit came from permit number 095-017A. Therefore, this 50 percent control was used for the common portion of the haul road for the plant in this review.

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 Particulate Matter are conditioned to below de minimis levels.

APPLICABLE REQUIREMENTS

U.S. Army Support Center and Fort Leonard Wood 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
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 June 1 for the previous year's emissions.
- *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

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.

Timothy Paul Hines
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

The Application for Authority to Construct form, dated July 09, 2008, received September 11, 2008, designating U.S. Army Support Center and Fort Leonard Wood 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 September 30, 2008.

Mr. George Green
Equipment Manager ECS 66
U.S. Army Support Center
3420 Iowa Ave, Bldg 5137
Fort Leonard Wood, MO 65473-8944

RE: New Source Review Permit - Project Number: 2008-09-029

Dear Mr. Green:

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 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 Timothy Paul Hines, at the departments' 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:thl

Enclosures

c: Southeast Regional Office
PAMS File: 2008-09-029

Permit Number: