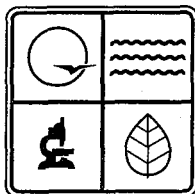


STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES

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: **042006-002**

Project Number: 2005-12-021

Owner: **Buzzi Unicem USA**

Owner's Address: **100 Brodhead Road, Suite 230, Bethlehem, PA 18017**

Installation Name: **Lone Star Industries, Inc. dba Buzzi Unicem USA**

Installation Address: **2524 S. Sprigg Street, Cape Girardeau, MO 63702**

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

Application for Authority to Construct was made for:

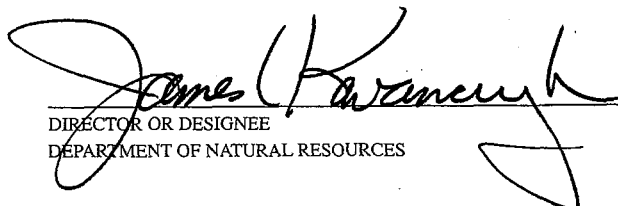
Installation of an apron feeder (RM36), a wobbler feeder (RM37), and a dust collector on barge load out (FM14). This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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

Standard Conditions (on reverse) and Special Conditions (listed as attachments starting on page 2) are applicable to this permit.

APR 5 2006

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.** 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.

2005-12-021

Buzzi Unicem USA

100 Brodhead Road, Suite 230, Bethlehem, PA 18017

Lone Star Industries, Inc. dba Buzzi Unicem USA

2524 S. Sprigg Street, Cape Girardeau, MO 63702

Cape Girardeau County, S18, T30N, R14E

Installation of an apron feeder (RM36), a wobbler feeder (RM37), and a dust collector on barge load out (FM14). This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

Page No.	2
Permit No.	
Project No.	2005-12-021

**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."*

Lone Star Industries, Inc. dba Buzzi Unicem USA  
Cape Girardeau County, S18, T30N, R14E

1. Water Spray

Lone Star Industries, Inc. dba Buzzi Unicem USA shall control particulate matter less than ten (10) microns in diameter (PM<sub>10</sub>) from the Apron Feeder whenever inoperation by using water spray (CD-RM5). The applied moisture will carry over to the Apron Feeder.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE  
SECTION (5) REVIEW

Project Number: 2005-12-021  
Installation ID Number: 031-0021  
Permit Number:

Lone Star Industries, Inc.  
dba Buzzi Unicem USA  
2524 S. Sprigg Street  
Cape Girardeau, MO 63702

Complete: December 19, 2005  
Reviewed: January 17, 2006

Parent Company:  
Buzzi Unicem USA  
100 Brodhead Road, Suite 230  
Bethlehem, PA 18017

Cape Girardeau County, S18, T30N, R14E

REVIEW SUMMARY

- Lone Star Industries, Inc. dba Buzzi Unicem USA has applied for authority to construct an apron feeder (RM36), a wobbler feeder (RM37), and a dust collector on barge load out (FM14).
- Hazardous Air Pollutant (HAP) emissions are not expected from the proposed equipment.
- Subpart OOO of the New Source Performance Standards (NSPS) applies to Nonmetallic Mineral Processing Plant.
- The Maximum Achievable Control Technology (MACT) standard, 40 CFR Part 63, Subpart LLL, *National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry* applies to the installation.
- A dust collector is being used to control the particulate matter less than ten (10) microns in diameter (PM<sub>10</sub>) emissions from the barge loadout (FM14) and water spray is controlling PM<sub>10</sub> from the apron feeder (RM-36).
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM<sub>10</sub> are below de minimis levels.
- This installation is located in Cape Girardeau County, an attainment area for all criteria air pollutants.
- This installation is on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2], Number 3, *Portland Cement Plants*.

- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing is not required for the equipment.
- A Part 70 Operating Permit application is required for this installation within 1 year of equipment startup.
- Approval of this permit is recommended with special conditions.

### INSTALLATION DESCRIPTION

Lone Star Industries, Inc. dba Buzzi Unicem USA – Cape Girardeau owns and operates a cement manufacturing installation in Cape Girardeau County. This cement manufacturing plant is an existing major source of air emissions. This facility was issued a Part 70 Operating Permit (OP2001-029) on April 19, 2001. The following construction permits have been issued to Lone Star Industries, Incorporated from the Air Pollution Control Program. The following permits have been issued to Lone Star Industries, Inc. dba Buzzi Unicem USA from the Air Pollution Control Program.

Table 1: Construction permits issued to Lone Star Industries, Inc dba Buzzi Unicem USA

Permit Number	Description
0483-009..011	Equipment modification
0691-010	Tires as fuel substitute
0392-001	Liquid hazardous waste
0693-009	Amend permit to identify filter pot cleaning
0496-007	Add three (3) clinker silos
0697-004	Replace crusher
1197-012	Installation of spray tower and baghouse and replacement of the raw mill fan, the clinker cooler fans and grade, belt KB-1200, belt R-3700 motor, raw material elevator KB-1600, and the raw mill separator
1197-012A	Amendment to Permit No. 1197-012
102000-016	Addition of a new quarry to supply raw material for the kiln
042002-002	Installation of a synthetic gypsum process at the existing Cape Girardeau cement plant
0496-007A	Amendment to Permit No. 0496-007
102000-016	Permit extension granted
072003-007	Modification to the existing blended synthetic gypsum process
102000-016	Second permit extension granted
092004-007	Temporary Permit for possible usage of petroleum coke to replace a portion of the coal currently being combusted in cement kiln
062005-005	Temporary Permit to evaluate the introduction of chipped tire-derived fuel (TDF) into the calciner as a fuel
092004-007A	Extension of Temporary Permit 092004-007
102005-018	Installation of a hopper, belt conveyor, and storage bin with a loadout spout to offload raw materials from barges to haul trucks

## PROJECT DESCRIPTION

Lone Star Industries, Inc dba Buzzi Unicem USA is applying for the authority to construct an apron feeder (RM36), a wobbler feeder (RM37), and a dust collector on barge load out (FM14). The apron feeder and the wobbler feeder are replacing the existing grizzly feeder (RM5) and will allow soil and fine rock to bypass the primary crusher allowing “cap rock” to be processed by primary crusher. A dust collector is being added to barge load out in order to sufficiently load grain barges at same rate as cement barges. The addition of the dust collector will not increase emissions and no permit is required specifying the FM14.

## 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 *Crushed Stone Processing and Pulverized Mineral Processing* (8/2004). Existing actual emissions are from the 2004 Emissions Inventory Questionnaire (EIQ). 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> Levels	Existing Potential Emissions	Existing Actual Emissions (2004 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM <sub>10</sub>	15.0	Major	389.73	10.08	N/A
SO <sub>x</sub>	40.0	Major	1,420.79	0.00	N/A
NO <sub>x</sub>	40.0	Major	1,740.88	0.00	N/A
VOC	40.0	Major	40.45	0.00	N/A
CO	100.0	Major	11,268.73	0.00	N/A
HAPs	10.0/25.0	Major	26.97	0.00	N/A

N/A = Not Applicable

Emissions from the wobbler feeder (RM37) are expected to be greater than a typical conveyor. The emission factor used in this analysis was two times the conveyor transfer point emissions. This factor was chosen as the wobbler design is capable of allowing twice as much material to be processed and allows for multiple transfer points. The addition of the dust collector (FM14), project number 2005-12-022, was included in this permit and does not increase potential emissions.

## 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 PM<sub>10</sub> are below de minimis levels.

## APPLICABLE REQUIREMENTS

Lone Star Industries, Inc. dba Buzzi Unicem USA 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 Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- *New Source Performance Regulations*, 10 CSR 10-6.070 – *New Source Performance Standards (NSPS) for Nonmetallic Mineral Processing Plant*, 40 CFR Part 60, Subpart OOO.
- *Maximum Achievable Control Technology (MACT) Regulations*, 10 CSR 10-6.075, *National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry*, 40 CFR Part 63, Subpart LLL.



## 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.

\_\_\_\_\_  
Michael Sanchez  
Environmental Engineer

\_\_\_\_\_  
Date

### PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated December 6, 2005, received December 12, 2006, designating Buzzi Unicem USA 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 December 21, 2005.

Mr. Paul Schell  
Environmental Engineer  
Lone Star Industries, Inc. dba Buzzi Unicem USA  
P.O. Box 520  
Cape Girardeau, MO 63702

RE: New Source Review Permit - Project Number: 2005-12-021

Dear Mr. Schell:

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 with your 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, MO 65102. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale  
New Source Review Unit Chief

KBH:msl

Enclosures

c: Southeast Regional Office  
PAMS File 2005-12-021

Permit Number: