

FINAL DRAFT/PROPOSED CAAPP PERMIT  
American Minerals, Inc.  
I.D. No.: 069015AAI  
Application No.: 96030121  
January 9, 2003

217/782-2113

CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT  
and  
TITLE I PERMIT<sup>1</sup>

PERMITTEE

American Minerals, Inc.  
Attn: Fred Feazel  
R.R. #1 - Box 47, Ferrell Road  
Rosiclare, Illinois 62982

Application No.: 96030121                      I.D. No.: 069015AAI  
Applicant's Designation:                      Date Received: March 7, 1996  
Operation of: Micro nutrients and mineral products plant  
Date Issued: TO BE DETERMINED                      Expiration Date<sup>2</sup>: DATE  
Source Location: R.R. #1-Ferrell Road, Rosiclare, Hardin County  
Responsible Official: Fred Feazel, Plant Manager

This permit is hereby granted to the above-designated Permittee to OPERATE a Micro nutrients and mineral products plant, pursuant to the above referenced permit application. This permit is subject to the conditions contained herein.

If you have any questions concerning this permit, please contact Mangu Patel at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:MJP:psj

cc: Illinois EPA, FOS, Region 3  
USEPA

<sup>1</sup> This permit may contain terms and conditions which address the applicability, and compliance if determined applicable, of Title I of the Clean Air Act and regulations promulgated thereunder, including 40 CFR 52.21 - federal Prevention of Significant Deterioration (PSD) and 35 IAC Part 203 - Major Stationary Sources Construction and Modification. Any such terms and conditions are identified within the permit.

<sup>2</sup> Except as provided in condition 8.7 of this permit.

TABLE OF CONTENTS

		<u>PAGE</u>
1.0	SOURCE IDENTIFICATION	4
	1.1 Source	
	1.2 Owner/Parent Company	
	1.3 Operator	
	1.4 General Source Description	
2.0	LIST OF ABBREVIATIONS/ACRONYMS USED IN THIS PERMIT	5
3.0	INSIGNIFICANT ACTIVITIES	7
	3.1 Identification of Insignificant Activities	
	3.2 Compliance with Applicable Requirements	
	3.3 Addition of Insignificant Activities	
4.0	SIGNIFICANT EMISSION UNITS AT THIS SOURCE	9
5.0	OVERALL SOURCE CONDITIONS	11
	5.1 Source Description	
	5.2 Applicable Regulations	
	5.3 Non-Applicability of Regulations of Concern	
	5.4 Source-Wide Operational and Production Limits and Work Practices	
	5.5 Source-Wide Emission Limitations	
	5.6 General Recordkeeping Requirements	
	5.7 General Reporting Requirements	
	5.8 General Operational Flexibility/Anticipated Operating Scenarios	
	5.9 General Compliance Procedures	
6.0	NOT APPLICABLE TO THIS PERMIT	17
7.0	UNIT SPECIFIC CONDITIONS	18
	7.1 Unit 01 Process emission units	
	7.2 Unit 02 Calcine Plant-Fuel combustion	
	7.3 Unit 03 Fugitive emissions	
8.0	GENERAL PERMIT CONDITIONS	38
	8.1 Permit Shield	
	8.2 Applicability of Title IV Requirements	
	8.3 Emissions Trading Programs	
	8.4 Operational Flexibility/Anticipated Operating Scenarios	

PAGE

8.5	Testing Procedures	
8.6	Reporting Requirements	
8.7	Obligation to Comply with Title I Requirements	
9.0	STANDARD PERMIT CONDITIONS	44
9.1	Effect of Permit	
9.2	General Obligations of Permittee	
9.3	Obligation to Allow Illinois EPA Surveillance	
9.4	Obligation to Comply with Other Requirements	
9.5	Liability	
9.6	Recordkeeping	
9.7	Annual Emissions Report	
9.8	Requirements for Compliance Certification	
9.9	Certification	
9.10	Defense to Enforcement Actions	
9.11	Permanent Shutdown	
9.12	Reopening And Reissuing Permit For Cause	
9.13	Severability Clause	
9.14	Permit Expiration and Renewal	
10.0	ATTACHMENTS	
10.1	Attachment 1 - Particulate Matter Emission Table New Process Emission Units	1-1
10.2	Attachment 2 - Particulate Matter Emission Table Existing Process Emission Units	2-2
10.3	Attachment 3 - Example Certification by a Responsible Official	3-1
10.4	Attachment 4 - Guidance on Revising This Permit	4-1
10.5	Attachment 5 - Form 199-CAAPP, Application For Construction Permit (For CAAPP Sources Only)	5-1
10.6	Attachment 6 - Guidance on Renewing This Permit	6-1

1.0 SOURCE IDENTIFICATION

1.1 Source

American Minerals, Inc.  
R.R. #1 - Box 47, Ferrell Road  
Rosiclare, Illinois 62982  
618/285-6558

I.D. No.: 069015AAI  
Standard Industrial Classification: 1061, Metal mining,  
ferroalloy ore, except  
Vanadium

1.2 Owner/Parent Company

American Premier, Inc.  
901 East 8th Avenue, Suite 200  
King of Prussia, PA 19406

1.3 Operator

American Minerals, Inc.  
R.R. #1 - Box 47, Ferrell Road  
Rosiclare, Illinois 62982

Fred Feazel - Plant Manager  
618/285-6558

1.4 General Source Description

The source is located in Hardin County in Rosiclare. The following is a general process description of the operations at American Minerals, Inc., located in Rosiclare, Hardin County. The facility produces a variety of mineral products, and consists of four major processing plants that contain one or more of the emission units. Individual operations at the facility are typical of mineral processing plants and include components such as belt conveyors, screw conveyors, bucket elevators, storage bins, screening equipment, dryers, a calciner, roll crushers, cone crushers, ball mills, mixers, pelletizers, bagging stations, and bulk truck load-outs. Those operations that generate significant particulate emissions are controlled by fabric filter dust collectors (baghouses or storage bin vent filters).

2.0 LIST OF ABBREVIATIONS/ACRONYMS USED IN THIS PERMIT

Act	Illinois Environmental Protection Act [415 ILCS 5/1 et seq.]
AP-42	Compilation of Air Pollutant Emission Factors, Volume 1, Stationary Point and Other Sources (and Supplements A through F), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711
ACMA	Alternative Compliance Market Account
ATUs	Allotment Trading Units
BAT	Best Available Technology
Btu	British thermal unit
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
CO	Carbon Monoxide
ERMS	Emission Reduction Market System
°F	degrees Fahrenheit
ft <sup>3</sup>	cubic foot
gal	gallon
gm	gram
gr/scf	Grain per standard cubic foot
HAP	Hazardous Air Pollutant
Hp	horse power
hr	hour
IAC	Illinois Administrative Code
I.D. No.	Identification Number of Source, assigned by Illinois EPA
Illinois EPA	Illinois Environmental Protection Agency
°K	degrees Kelvin
Kg	kilogram
KW	Kilowatts
lb	Pound
MACT	Maximum Available Control Technology
mmcf	Million cubic feet
MG	Megagram
M	Meter
mmBtu	Million British thermal units
mo	month
MW	Megawatts
NO <sub>x</sub>	Nitrogen Oxides
NSPS	New Source Performance Standards
OM	Organic Material
PM	Particulate Matter

FINAL DRAFT/PROPOSED CAAPP PERMIT  
American Minerals, Inc.  
I.D. No.: 069015AAI  
Application No.: 96030121  
January 9, 2003

PM <sub>10</sub>	Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 microns as measured by applicable test or monitoring methods
ppm	Parts per million
PSD	Prevention of Significant Deterioration
psia	pounds per square inch absolute
RMP	Risk Management Plan
scf	standard cubic foot
SO <sub>2</sub>	Sulfur Dioxide
T	Ton
T1	Title I - identifies Title I conditions that have been carried over from an existing permit
T1N	Title I New - identifies Title I conditions that are being established in this permit
T1R	Title I Revised - identifies Title I conditions that have been carried over from an existing permit and subsequently revised in this permit
USEPA	United States Environmental Protection Agency
VOL	Volatile Organic Liquid
VOM	Volatile Organic Material
wt.	weight
yr	year

3.0 INSIGNIFICANT ACTIVITIES

3.1 Identification of Insignificant Activities

The following activities at the source constitute insignificant activities as specified in 35 IAC 201.210:

3.1.1 Activities determined by the Illinois EPA to be insignificant activities, pursuant to 35 IAC 201.210(a)(1) and 201.211, as follows:

None

3.1.2 Activities that are insignificant activities based upon maximum emissions, pursuant to 35 IAC 201.210(a)(2) or (a)(3), as follows:

None

3.1.3 Activities that are insignificant activities based upon their type or character, pursuant to 35 IAC 201.210(a)(4) through (18), as follows:

Number of Activities	Activity Description	35 IAC Regulatory Citation
4	Space heaters (Natural Gas 0.08 mmBtu/hr)	201.210(a)(4)(B)
4	Binder storage tanks	201.210(a)(17)

3.1.4 Activities that are considered insignificant activities pursuant to 35 IAC 201.210(b).

3.2 Compliance with Applicable Requirements

Insignificant activities are subject to applicable requirements notwithstanding status as insignificant activities. In particular, in addition to regulations of general applicability, such as 35 IAC 212.301 and 212.123 (Condition 5.2.2), the Permittee shall comply with the following requirements, as applicable:

3.2.1 For each cold cleaning degreaser, the Permittee shall comply with the applicable equipment and operating requirements of 35 IAC 215.182, 218.182, or 219.182.

3.2.2 For each particulate matter process emission unit, the Permittee shall comply with the applicable particulate matter emission limit of 35 IAC 212.321 or 212.322. For

example, the particulate matter emissions from a process emission unit shall not exceed 0.55 pounds per hour if the emission unit's process weight rate is 100 pounds per hour or less, pursuant to 35 IAC 266.110.

- 3.2.3 For each organic material emission unit that uses organic material, e.g., a mixer or printing line, the Permittee shall comply with the applicable VOM emission limit of 35 IAC 215.301, 215.301, or 215.301, which requires that organic material emissions not exceed 8.0 pounds per hour or do not qualify as photochemically reactive material as defined in 35 IAC 211.4690.

### 3.3 Addition of Insignificant Activities

- 3.3.1 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type that is identified in Condition 3.1, until the renewal application for this permit is submitted, pursuant to 35 IAC 201.212(a).
- 3.3.2 The Permittee must notify the Illinois EPA of any proposed addition of a new insignificant activity of a type addressed by 35 IAC 201.210(a) and 201.211 other than those identified in Condition 3.1, pursuant to Section 39.5(12)(b) of the Act.
- 3.3.3 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type identified in 35 IAC 201.210(b).

4.0 SIGNIFICANT EMISSION UNITS AT THIS SOURCE

Emission Unit	Description	Equipment	Emission Control Equipment
01	Grinding Circuit No.1 (EU-2)	Feed Hoppers Bucket Elevator Feed Bin Rotary Dryer Ball Mill Feed System Ball Mill Air Classifier Finished Product Bins	- - - Baghouse CD-03 Baghouse CD-03 Baghouse CD-04 Baghouse CD-04 Bin vent Filters
	Grinding Circuit No.2 (EU-3)	Feed Hoppers Bucket Elevators Feed Bins Shaker Screen Rotary Dryer Ball Mill Feed System Ball Mill Air Classifier Finished Product Bins	- - - - Baghouse CD-08 Baghouse CD-08 Baghouse CD-09 Baghouse CD-09 Bin vent Filters
	Granusol Mixing Circuit (EU-4)	Feed Hopper Bucket Elevator Feed Bins Bucket Elevator Mixer #1 Mixer #2 Finished Product Bin	- Baghouse CD-17 Bin vent Filters Baghouse CD-17 Baghouse CD-16 Baghouse CD-15
	Granusol Line No.1 (EU-5)	Crude Bin Finished Product Bins Screen Crusher Bucket Elevator Dryer Feed Hoppers Feed Bucket Elevator Feed Bins Pelletizer Binder Tanks	Bin vent Filter Baghouse CD-18 Baghouse CD-21 - - Baghouse CD-18 - Baghouse CD-21 Bin vent Filters Bin vent Filters -
	Granusol Line No.2 (EU-6)	Finished Product Bins Screen Crusher Bucket Elevators Dryer Feed Hoppers Feed Bin Binder Tanks Pelletizer	Baghouse CD-17 Baghouse CD-17 Baghouse CD-17 Baghouse CD-17 Baghouse CD-17 Baghouse CD-17 Bin vent Filter Baghouse CD-17 Baghouse EP-1003

FINAL DRAFT/PROPOSED CAAPP PERMIT  
American Minerals, Inc.  
I.D. No.: 069015AAI  
Application No.: 96030121  
January 9, 2003

Emission Unit	Description	Equipment	Emission Control Equipment
01 (Cont.)	Calcine Plant (Process) (EU-7)	Feed Hopper Screen Crusher Bucket Elevators Feed Bin Calciner Cooling Tube Mill Air Classifier Finished Product Bin	- - - - - Baghouse CD-22 Baghouse CD-22 Baghouse CD-22 Baghouse CD-22 -
	Magnesium Oxide Plant (EU-8)	Feed Hopper Scalping Screen Scrap Bin Bucket Elevator Finished Product Bin	- - - - Bin vent Filter
	Oil Spray System (EU-9)	Feed Hoppers Bucket Elevators Mineral Oil Reservoir Oil Sprayer	
	Plant Crusher (EU-10)	Feed Hoppers Jaw Crusher Shaker Screen Cone Crusher	
02	Calcine Plant (Fuel combustion)	Natural gas burners	
03	Fugitive	Unpaved haul road, Storage piles, Barge unloading and truck transfers	Water spray, Material moisture

5.0 OVERALL SOURCE CONDITIONS

5.1 Source Description

5.1.1 This permit is issued based on the source requiring a CAAPP permit as a major source of PM and HAP emissions.

5.2 Applicable Regulations

5.2.1 Specific emission units at this source are subject to particular regulations as set forth in Section 7 (Unit-Specific Conditions) of this permit.

5.2.2 In addition, emission units at this source are subject to the following regulations of general applicability:

- a. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 IAC 212.301 and 212.314.
- b. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 IAC 212.122, pursuant to 35 IAC 212.123(a), except as allowed by 35 IAC 212.123(b) and 212.124.

5.2.3 Ozone Depleting Substances

The Permittee shall comply with the standards for recycling and emissions reduction of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

#### 5.2.4 Risk Management Plan

Should this stationary source, as defined in 40 CFR Section 68.3, become subject to the Accidental Release Prevention regulations in 40 CFR Part 68, then the owner or operator shall submit [40 CFR 68.215(a)(2)(i) and (ii)]:

- a. A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR 68.10(a); or
- b. A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the Risk Management Plan (RMP), as part of the annual compliance certification required by 40 CFR Part 70 or 71.

- 5.2.5
  - a. Should this stationary source become subject to a regulation under 40 CFR Parts 60, 61, or 63, or 35 IAC after the date issued of this permit, then the owner or operator shall, in accordance with the applicable regulation(s), comply with the applicable requirements by the date(s) specified and shall certify compliance with the applicable requirements of such regulation(s) as part of the annual compliance certification, as required by 40 CFR Part 70 or 71.
  - b. No later than upon the submittal for renewal of this permit, the owner or operator shall submit, as part of an application, the necessary information to address either the non-applicability of, or demonstrate compliance with all applicable requirements of any potentially applicable regulation which was promulgated after the date issued of this permit.

#### 5.2.6 Episode Action Plan

- a. If the source is required to have an episode action plan pursuant to 35 IAC 244.142, the Permittee shall

maintain at the source and have on file with the Illinois EPA a written episode action plan (plan) for reducing the levels of emissions during yellow alerts, red alerts, and emergencies, consistent with safe operating procedures. The plan shall contain the information specified in 35 IAC 244.144.

- b. The Permittee shall immediately implement the appropriate steps described in this plan should an air pollution alert or emergency be declared.
- c. If a change occurs at the source which requires a revision of the plan (e.g., operational change, change in the source contact person), a copy of the revised plan shall be submitted to the Illinois EPA for review within 30 days of the change. Such plans shall be further revised if disapproved by the Illinois EPA.
- d. For sources required to have a plan pursuant to 35 IAC 244.142, a copy of the original plan and any subsequent revisions shall be sent to:
  - i. Illinois EPA, Compliance Section; and
  - ii. For sources located in Cook County and outside of the city of Chicago: Cook County Department of Environmental Control; or
  - iii. For sources located within the city of Chicago: Chicago Department of Environmental Control.

#### 5.2.7 CAM Plan

This stationary source has a pollutant-specific emissions unit that is subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources. The source must submit a CAM plan for each affected pollutant-specific emissions unit upon application for renewal of the initial CAAPP permit, or upon a significant modification to the CAAPP permit for the construction or modification of a large pollutant-specific emissions unit which has the potential post-control device emissions of the applicable regulated air pollutant that equals or exceeds major source threshold levels.

5.3 Non-Applicability of Regulations of Concern

None

5.4 Source-Wide Operational and Production Limits and Work Practices

In addition to the source-wide requirements in the Standard Permit Conditions in Section 9, the Permittee shall fulfill the following source-wide operational and production limitations and/or work practice requirements:

None

5.5 Source-Wide Emission Limitations

5.5.1 Permitted Emissions for Fees

The annual emissions from the source, not considering insignificant activities as addressed by Section 3.0 of this permit, shall not exceed the following limitations. The overall source emissions shall be determined by adding emissions from all emission units. Compliance with these limits shall be determined on a calendar year basis. These limitations (Condition 5.5.1) are set for the purpose of establishing fees and are not federally enforceable.

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	35.0
Sulfur Dioxide (SO <sub>2</sub> )	70.0
Particulate Matter (PM)	90.0
Nitrogen Oxides (NO <sub>x</sub> )	12.0
HAP, not included in VOM or PM	---
Total	207.0

5.5.2 Emissions of Hazardous Air Pollutants

Source-wide emission limitations for HAPs as listed in Section 112(b) of the CAA are not set. This source is considered to be a major source of HAPs.

5.5.3 Other Source-Wide Emission Limitations

The annual emissions from the source shall not exceed the following limitations:

Pollutant	Emissions (Tons/Year)	Underlying Rules
PM	90	40 CFR 52.21
SO <sub>2</sub>	70	40 CFR 52.21
VOM	35	40 CFR 52.21

The above limitations are being established in this permit pursuant to Title I of the CAA, specifically 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The source has requested that the Illinois EPA establish emission limitations and other appropriate terms and conditions in this permit that limit the above emissions from the affected source below the levels that would trigger the applicability of these rules, consistent with the information provided in the CAAPP application [T1N].

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1N].

5.6 General Recordkeeping Requirements

5.6.1 Emission Records

The Permittee shall maintain records of the following items for the source to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

Total annual emissions on a calendar year basis for the emission units covered by Section 7 (Unit Specific Conditions) of this permit.

5.6.2 Records for Operating Scenarios

N/A

5.6.3 Retention and Availability of Records

- a. All records and logs required by this permit shall be retained for at least five years from the date of entry (unless a longer retention period is specified by the particular recordkeeping provision herein), shall be kept at a location at the source that is readily accessible to the Illinois EPA or USEPA, and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request.

- b. The Permittee shall retrieve and print, on paper during normal source office hours, any records retained in an electronic format (e.g., computer) in response to an Illinois EPA or USEPA request for records during the course of a source inspection.

5.7 General Reporting Requirements

5.7.1 General Source-Wide Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the source with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

5.7.2 Annual Emissions Report

The annual emissions report required pursuant to Condition 9.7 shall contain emissions information for the previous calendar year.

5.8 General Operational Flexibility/Anticipated Operating Scenarios

N/A

5.9 General Compliance Procedures

5.9.1 General Procedures for Calculating Emissions

Compliance with the source-wide emission limits specified in Condition 5.5 shall be based on the recordkeeping and reporting requirements of Conditions 5.6 and 5.7, and compliance procedures in Section 7 (Unit Specific Conditions) of this permit.

FINAL DRAFT/PROPOSED CAAPP PERMIT  
American Minerals, Inc.  
I.D. No.: 069015AAI  
Application No.: 96030121  
January 9, 2003

6.0 NOT APPLICABLE TO THIS PERMIT

7.0 UNIT SPECIFIC CONDITIONS

7.1 Unit 01: Process emission units

7.1.1 Description

Grinding Circuit No. 1:

The grinding circuit produces a variety of finely metallic mineral products. Pre-crushed ores are introduced to grinding circuit through feed hoppers, which transfer the ore to a bucket elevator that feeds a natural gas-fired rotary dryer. The dryer discharges into another bucket elevator that transfers the ore into a storage bin that feeds a ball mill. The ball mill typically grinds the ore to less than 325 mesh screen size. Material from the ball mill discharges to another bucket elevator that feeds an air classifier. The air classifier separates the material at approximately a 325 mesh size, with the oversize material routed back to the ball mill for further grinding and the properly sized material is transferred to finished product storage bins via a pneumatic conveyance system with a portion also transferred to the Granusol processing plant pneumatically. Finished product is shipped via bulk trucks, with the majority of the load-outs controlled by bin vent filters on the finished product silos. Some product is also packaged in 50- and 100-pound bags or in 2,000-pound supersacks.

Particulate emissions are controlled by two baghouses and four bin vent filters. The rotary dryer and ball mill feed system are ducted to one baghouse, and the air classifier and ball mill discharge bucket elevator are ducted to a second baghouse. Bin vent filters are located on each of the finished product storage bins that are loaded with pneumatic conveyance system.

Grinding Circuit No. 2:

Grinding Circuit No. 2 is very similar to Grinding Circuit No. 1. The feed system to the rotary dryer is slightly different in that it includes a shaker screen system between the bucket elevator and rotary dryer feed screw. In addition, the Grinding Circuit No. 2 rotary dryer combusts natural gas.

All products from the air classifier is moved to the finished product bins via a pneumatic conveyance system. Finished product shipped from Grinding Circuit No. 2 is

also packaged in 50- or 100-pound bags, 2,000-pound supersacks, or into bulk trucks with a dust-free pneumatic loading system.

Control of particulate emissions is virtually identical to Grinding Circuit No. 1 with baghouse controlling the rotary dryer/ball mill feed system, and the air classifier/ball mill discharge bucket elevator. All of the finished product bins are equipped with bin vent filters.

Granusol Mixing Circuit:

Granusol mixing serves Granusol Lines No. 1 and 2, which product a palletized mineral that is used as a micro-nutrient in the fertilizer industry. The mixing circuit is fed pneumatically with ground ore from Grinding Circuit No. 2 or with pre-crushed ore through feed hopper and bucket elevator system. These feed systems transfer different materials into three feed bins which then meter the appropriate ratio of each ore onto a belt conveyor. This conveyor discharges to a second bucket elevator that serves the dual purpose of feeding Mixer No. 2 and transferring product discharged from both mixers into the pneumatic conveyor system feed bin. This conveyor feeds the Granusol plant pelletizer systems. Mixer No. 1 is exclusively fed by a hopper and screw conveyor system. Both mixers discharge to a single screw conveyor that transfers material to the dual-purpose bucket elevator. This screw conveyor can also transfer material into a mobile product bin by turning in the reverse direction.

Particulate emissions from the Granusol Mixing Circuit are controlled by four baghouses. One baghouse controls the transfer points into both bucket elevators, and the other two baghouses control emissions from the mixers. A final baghouse controls particulate emissions from the feed bin system that meters ore to Mixer No. 2.

Granusol Line No. 1:

Granusol Line No. 1 pelletizes ground ore mixtures to produce a micro-nutrient used in the fertilizer industry. Material is fed to this process via the pneumatic conveyor from the Granusol mixing circuit, or can be introduced directly into a feed hopper. This feed hopper discharges to a bucket elevator which transfers material into the Pelletier feed bins. Material fed with the pneumatic system is deposited in the pelletizer plant crude bins and

then pneumatically conveyed into the pelletizer feed bins. The pelletizer feed bins meter a pre-determined rate of ground ore into the pelletizers through a screw conveyor feed system.

The pelletizer is a mixer that introduce a binder that agglomerates the ore into small pellets. These pellets are discharged through a belt conveyor system into a dryer where excess moisture is driven off and the material is set in its final pelletized state. The dryer discharges through a bucket elevator to a screen system. Oversized material from the screen is routed to a crusher, then back to the bucket elevator, and is recycled to the screening system. Fines are discharged through a screw conveyor to the pelletizer bucket elevator feed system for re-pelletizing. Properly sized material discharges into one of two finished product bins from the screen. Finished product is packaged in 50-pound bags, 2,000-pound supersacks, and occasionally shipped out as bulk.

Particulate emissions are controlled by two baghouses and two bin vent filters. The largest baghouse controls emissions from the dryer and finished product storage bins. The smaller baghouse controls emissions from both pelletizers and their associated feed bin systems. Another bin vent filter controls emissions from the pneumatic conveyance of ground ore into the pelletizer crude bin.

#### Granusol Line No. 2:

Granusol Line No. 2 operates essentially the same as Line No. 1. Material is transferred into this pelletizer through a feed bin that is fed from the Granusol mixing pneumatic line or through a feed hopper, bucket elevator, and a screw conveyor system. The pelletizer operates the same as Granusol Line No. 1 except that it discharges through a sealed chute into the dryer. The dryer discharges to a bucket elevator that feeds a screens system. Oversized material from the screen is routed through a crusher, to the bucket elevator, and then back to the screening system. Properly sized material is fed to the finished product bins for re-processing. Product from the Granusol Line No. 2 is packaged in 50-pound bags, 2,000-pound supersacks, and is also occasionally shipped by bulk.

Particulate emissions from Granusol Line No. 2 are controlled by two baghouses and single bin vent filter.

The first baghouse controls emissions from the dryer, both bucket elevators, screen, and finished product storage bins. The pelletizer is controlled by its own baghouse. The bin vent filter controls emissions from the pelletizer feed bin which is typically fed through a pneumatic conveyance system.

Calcine Plant:

The calcining system is used to convert a manganese dioxide ore into a ground manganous oxide mineral that is used as a micro-nutrient in the animal feed industry. Manganese dioxide ore and a low sulfur coal are fed to the process through a common feed hopper, screening, and crushing system. Oversized material from the shaker screen passes through a crusher and then combines with the screened material in a common chute that feeds a bucket elevator. The bucket elevator transfers the ore and coal to a belt conveyor that deposits material into the calciner feed bin. The feed bin transfers material through a screw conveyor into the calciner where 12 separate natural gas burners indirectly heat the coal/ore mixture in the center tube of the unit.

The coal used in this process acts as a reducing agent by consuming oxygen and converting the manganese dioxide to a manganous oxide. The calciner discharges through a cooling tube which reduces the ore temperature prior to processing in a milling system. The cooling tube discharges to a bucket elevator that transfers ore to the mill feed bin. The mill grinds the manganous oxide ore into a consistency of approximately 200 mesh, and discharges to a bucket elevator that feeds an air classifier. Properly sized material from the air classifier drops through a sealed chute into a finished product bin, and the oversized material is routed through a screw conveyor to the mill feed system for further grinding. Finished product from the calcine plant is packaged in 50-pound bags, 25-kilogram bags, and 1,000-, 2,000-, 3,000-pound supersacks.

Particulate emissions from this plant are controlled by a single baghouse which handles the calciner, cooling tube, mill, and air classifier system. The natural gas fuel combustion emissions from the calciner discharge through a separate burner exhaust stack and the calciner screw feed conveyor transfer point is also vented through a separate uncontrolled stack. The calciner process also generates

products of combustion that are assumed to be unaffected by the baghouse controlling this exhaust stream.

Magnesium Oxide Plant:

This emission unit screens magnesium oxide ore to remove foreign material. The magnesium oxide product is used as a micro-nutrient for fertilizer and animal feed. The raw ore is stored on a partially enclosed concrete pad and fed to the process through a hopper. The feed hopper discharges through a screw conveyor, onto a belt conveyor that feeds a scalping screen that removes the foreign material. Screened product discharges to a bucket elevator that feeds a multi-compartment storage bin. The storage bin discharges to three separate bulk truck load-out systems and to a bagging station. Particulate emissions from this process are controlled by a single bin vent filter on the finished product storage bin system.

Oil Spray System:

The oil spray system was set-up to handle special orders where a dust-free material is required. Products are fed to this process through a hopper that discharge to a bucket elevator. A spray nozzle in the discharge chute of the bucket elevator applies mineral oil to treat the product. The bucket elevator chute discharges directly to a bulk truck load-out station. The mineral oil has negligible volatility and according the Material Safety Data Sheet, has zero volatile content. Because the product processed by this system is coated with mineral oil, no particulate controls are employed.

Plant Crusher:

This emission unit processes uncrushed ore. The majority of ore received by American Minerals is pre-crushed and does not require this primary crushing step. Uncrushed ore is loaded into a feed hopper which discharges to a jaw crusher, then onto belt conveyor to a shaker screen that feeds a cone crusher. The cone crusher discharges onto another belt conveyor that feeds the grinding plant using jaw crusher. It will only be used if ore is received that cannot be directly processed in the cone crusher. Because of the typical high-moisture content of ores that are processed through this system, no particulate control is employed.

FINAL DRAFT/PROPOSED CAAPP PERMIT  
American Minerals, Inc.  
I.D. No.: 069015AAI  
Application No.: 96030121  
January 9, 2003

7.1.2 List of Emission Units and Pollution Control Equipment

Description	Equipment	Date of Construction	Emission Control Equipment
Grinding Circuit No.1 (EU-2)	Feed Hoppers	1991	-
	Bucket Elevator	1991	-
	Feed Bin	1973	-
	Rotary Dryer	1993	Baghouse CD-03
	Ball Mill Feed System	1920	Baghouse CD-03
	Ball Mill	1920	Baghouse CD-04
	Air Classifier	1973	Baghouse CD-04
	Finished Product Bins	1973	Bin vent Filters
Grinding Circuit No.2 (EU-3)	Feed Hoppers	1993	-
	Bucket Elevators	1993	-
	Feed Bins	1973	-
	Shaker Screen	1991	-
	Rotary Dryer	1991	Baghouse CD-08
	Ball Mill Feed System	1920	Baghouse CD-08
	Ball Mill	1920	Baghouse CD-09
	Air Classifier	1941	Baghouse CD-09
Finished Product Bins	1990	Bin vent Filters	
Granusol Mixing Circuit (EU-4)	Feed Hopper	1993	-
	Bucket Elevator	1993	Baghouse CD-17
	Feed Bins	1993	Bin vent Filters
	Bucket Elevator	1993	Baghouse CD-17
	Mixer #1	1993	Baghouse CD-16
	Mixer #2	1993	Baghouse CD-15
Finished Product Bin	1993	-	
Granusol Line No. 1 (EU-5)	Crude Bin	1980	Bin vent Filter
	Finished Product Bins	1980	Baghouse CD-18
	Screen	1980	Baghouse CD-21
	Crusher	1980	-
	Bucket Elevator	1980	-
	Dryer	1980	Baghouse CD-18
	Feed Hoppers	1980	-
	Feed Bucket Elevator	1980	Baghouse CD-21
	Feed Bins	1980	Bin vent Filters
	Pelletizer	1980	Bin vent Filters
Binder Tanks	1980	-	
Granusol Line No. 2 (EU-6)	Finished Product Bins	1992	Baghouse CD-17
	Screen	1994	Baghouse CD-17
	Crusher	1993	Baghouse CD-17
	Bucket Elevators	1993	Baghouse CD-17
	Dryer	1993	Baghouse CD-17
	Feed Hoppers	1993	Baghouse CD-17
	Feed Bin	1993	Bin vent Filter
	Binder Tanks	1993	Baghouse CD-17
	Pelletizer	2002	Baghouse EP-1003

FINAL DRAFT/PROPOSED CAAPP PERMIT  
American Minerals, Inc.  
I.D. No.: 069015AAI  
Application No.: 96030121  
January 9, 2003

Description	Equipment	Date of Construction	Emission Control Equipment
Calcine Plant (EU-7)	Feed Hopper	1938	-
	Screen	1976	-
	Crusher	1976	-
	Bucket Elevators	1979	-
	Feed Bin	1976	-
	Calciner	1965	Baghouse CD-22
	Cooling Tube	1991	Baghouse CD-22
	Mill	1977	Baghouse CD-22
	Air Classifier	1976	Baghouse CD-22
Finished Product Bin	1973	-	
Magnesium Oxide Plant (EU-8)	Feed Hopper	1993	-
	Scalping Screen	1993	-
	Scrap Bin	1993	-
	Bucket Elevator	1993	-
	Finished Product Bin	1993	Bin vent Filter
Oil Spray System (EU-9)	Feed Hoppers	1993	
	Bucket Elevators	1993	
	Mineral Oil Reservoir	1993	
	Oil Sprayer	1993	
Plant Crusher (EU-10)	Feed Hoppers	1978	
	Jaw Crusher	1978	
	Shaker Screen	1978	
	Cone Crusher	1972	

7.1.3 Applicability Provisions and Applicable Regulations

a. An "affected process emission unit" for the purpose of these unit-specific conditions is an emission unit described in conditions 7.1.1 and 7.1.2.

b. Affected process emission units are subject to 35 IAC 212.322(a), which provides that:

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process emission unit for which construction or modification commenced prior to April 14, 1972, which, either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 (see also Attachment 2) [35 IAC 212.322(a)].

c. The affected process emission units are subject to 35 IAC 212.321, which provides that:

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 (see also Attachment 1) [35 IAC 212.321(a)].

- d. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from an affected process emission source, except as provided in Sections 215.302, 215.303, 215.304 of this Part and the following exception: If no odor nuisance exists the limitation of this Subpart shall apply only to photochemically reactive material [35 IAC 215.301].
- e. No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2000 ppm [35 IAC 214.301].
- f. The affected process emission units are subject to the emission limits identified in Condition 5.2.2.

#### 7.1.4 Non-Applicability of Regulations of Concern

- a. The affected process emission unit is not subject to 35 IAC 217.121 for emissions of nitrogen oxides from new fuel combustion emission sources, because the affected process emission unit is not by definition a fuel combustion emission unit.
- b. The affected process emission unit is not subject to 35 IAC 216.121, emissions of Carbon Monoxide from fuel combustion emission units, because the affected process emission unit is not by definition a fuel combustion emission unit.
- c. The affected process emission unit is not subject to 35 IAC 212.324, Process Emission Units In Certain Areas because the source is not located in a non-attainment area for PM<sub>10</sub>, as identified in 35 IAC 212.324(a)(1).

- d. This permit is issued based on the affected emission unit not being subject to the New Source Performance Standards (NSPS) for Metallic mineral processing plants, 40 CFR 60, Subpart LL, because the affected emission unit does not meet the 40CFR 60.381 definition for a metallic mineral processing plant which keys on production of a metallic mineral concentrate. Metallic mineral concentrate is defined as a material containing metallic compounds in a concentration higher than that in the ore that is processed. Since no concentration is occurring, this emission unit does not produce metallic mineral concentrates.
- e. This permit is issued based on the affected emission unit not being subject to the New Source Performance Standards (NSPS) for Non-metallic mineral processing plants, 40 CFR 60, Subpart 000, because the affected emission unit does not process any of the 18 categories of non-metallic minerals listed in 40 CFR 60.671 and, therefore, does not meet the definition of a non-metallic mineral processing plant.
- f. This permit is issued based on the affected emission unit not being subject to the New Source Performance Standards (NSPS) for calciners and dryers in mineral industries, 40 CFR 60, Subpart UUU, because the affected emission unit does not process any of the 17 categories of minerals listed under the definition for mineral processing plant in 40 CFR 60.731. Also, the calciner was installed before the April 23, 1986 effective date for application of this NSPS.

#### 7.1.5 Operational and Production Limits and Work Practices

The Permittee shall operate and maintain each baghouse and bin vent filter in a manner that assures compliance with the conditions of this section. Each baghouse and bin vent filter maximum air-to-cloth ratios will be maintained and available upon request.

#### 7.1.6 Emission Limitations

In addition to Conditions 5.2 2, 7.1.3 and the source-wide emission limitations in Condition 5.5, the sources listed below are subject to the following:

- a. Emissions of photochemically non-reactive VOM from the Granusol Line #2 shall not exceed 11.6 lbs/hr and

34.8 T/yr. This limit is based upon maximum production rate 4.5 T/hr and hours of operation 6000 hrs/yr indicated in the permit application [T1N].

- b. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1N].

Emission limitations that apply to the source as a whole are being established in the Condition 5.5.2. The source has requested that the Illinois EPA establish emission limitations and other appropriate terms and conditions in this permit that limit the emissions from the affected source below the levels that would trigger the applicability of Title I of the CAA, specifically 40 CFR 52.21, Prevention of Significant Deterioration (PSD), consistent with the information provided in the CAAPP application [T1N].

7.1.7 Testing Requirements

None

7.1.8 Monitoring Requirements

The Permittee shall monitor the differential pressure across each baghouse controlling an affected process emission source.

7.1.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records for the affected process emission source to demonstrate compliance with emission limits of the Conditions 5.5.1 and 7.2.3 pursuant to Section 39.5(7)(b) of the Act:

- a. Quantity of material processed (T/hr, T/yr) and hours of operation of the process (hr/mo, hr/yr);
- b. Natural gas usage for the dryers (mmcf/mo, mmcf/yr);  
and
- c. PM, SO<sub>2</sub>, VOM, NO<sub>x</sub> and HAP emissions (T/mo and T/yr) as calculated by Condition 7.1.12.

7.1.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected process emission source with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

- a. If there is a deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report within 30 days after the deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the deviation and efforts to reduce emissions and future occurrences.

7.1.11 Operational Flexibility/Anticipated Operating Scenarios

None

7.1.12 Compliance Procedures

- a. Compliance with the opacity limitations of Condition 5.2.2 & 7.2.3(f), the Permittee shall conduct a qualitative visible emissions observation once each day to observe for the presence of abnormal visible emissions.

If abnormal visible emissions are observed, the Permittee shall initiate corrective actions to eliminate the abnormal visible emissions. If the Permittee cannot eliminate the abnormal visible emissions within 24 hours, the Permittee shall conduct a Method 9 test within three days after the qualitative observation showing abnormal emissions.

- b. Compliance with the emission limits in Condition 5.5.1, 5.5.2 and 7.1.3(b) or 7.1.3(c) from the affected emission source shall be based on the recordkeeping requirements in Condition 7.1.9 and the emission rates and formulas listed below:

FINAL DRAFT/PROPOSED CAAPP PERMIT  
American Minerals, Inc.  
I.D. No.: 069015AAI  
Application No.: 96030121  
January 9, 2003

Operation	Uncontrolled PM Emission Factor lbs/T	Source of emission factor and Description
Impact mill, Roll crusher	2.70	AP-42 5th Ed., Table 11.24-2, Low moisture ore/Tertiary crushing
Cone crusher	0.05	AP-42 5th Ed., Table 11.24-2, High moisture ore/Secondary crushing
Jaw crusher	0.02	AP-42 5th Ed., Table 11.24-2, High moisture ore/Primary crushing
Dryer, Mixer, Pelletizer	19.7	AP-42 5th Ed., Table 11.24-2, Low or high moisture ore/Drying
Ball mill, Air classifier, and transfer	28.8	AP-42 5th Ed., Table 11.24-2, High moisture ore/Dry grinding w/air convey
Calciner	61	AP-42 5th Ed., Table 11.5-2, Rotary calciner w/moisture
Screening	0.3	AP-42 5th Ed., Table 11.19-2, Fines screening
Low moisture transfer point, Truck loadout	0.12	AP-42 5th Ed., Table 11.24-2, Low moisture ore/Material transfer & handling
High moisture transfer point	0.01	AP-42 5th Ed., Table 11.24-2, High moisture ore/Material transfer & handling
Pneumatic truck loadout	0.61	AP-42 5th Ed., Table 11.17-4, Enclosed truck
Truck loadout (open)	1.5	AP-42 5th Ed., Table 11.17-4, Open truck
Barge unloading, Truck unloading	0.2	AIRS SCC 3-05-016-08, Raw material unloading
Hopper fill (front end loader)	0.06	Crushed stone processing/Truck Loading/Front end loader
Packaging station	0.19	AIRS SCC 3-01-027-10, Bagging product

Control efficiency of the device (application)

Baghouse	99%
Wet suppression (Raw materials)	50%
Wet suppression (All others)	80%
Enclosure around transfer points	70%
Building enclosure	70%

Emissions (lbs) = Emission Factor (lbs/T) x Process weight rate (T/hr) x (1-Control Efficiency/100)

c. CO, VOM and SO<sub>2</sub> Emissions from calcining process:

Pollutant	Emission factor lb/T	Emission factor reference (From application)
CO	56.74	Portable analyzer test*
VOM	1.46	Method 25A & 18 Test*
SO <sub>2</sub>	38	AP-42 5th Ed., Table 1.1-1

\*Application indicates testing was done in 1996. NOx emissions from Calcining process considered to be negligible based on 1996 portable analyzer tests. SO<sub>2</sub> emission factor assumes all sulfur in coal (less than 1% by weight) that is mixed with raw MnO<sub>2</sub> ore is converted to SO<sub>2</sub> as in boiler combustion.

d. VOM emissions from Granusol Line #2 process:

Pollutant	Emission factor lb/T	Emission factor reference (From application)
VOM	2.57	Portable analyzer test*

e. Compliance with the emission limits in Condition 5.5.1, 5.5.2 and 7.1.3 from natural gas combustion shall be based on the recordkeeping requirements in Condition 7.1.9 and the emission factors and formulas listed below:

Pollutant	Emission Factor lbs/10 <sup>6</sup> scf
NO <sub>x</sub>	140
PM	7.6
VOM	5.5
SO <sub>2</sub>	0.6
CO	35

FINAL DRAFT/PROPOSED CAAPP PERMIT  
American Minerals, Inc.  
I.D. No.: 069015AAI  
Application No.: 96030121  
January 9, 2003

The emission factors for natural gas fired units are from Tables 1.4-1 and 1.4-2, AP-42 Fifth Edition, Volume 1, Supplement D, March, 1998.

Emissions (T/yr) = (natural gas usage, mmcf/yr) x  
(the applicable emission factor, lb/mmcf) x (T/2000  
lb)

Total emissions for each pollutant are to be determined by combining the results of Conditions 7.1.12.

7.2 Unit 02: Calcine Plant- Fuel combustion

7.2.1 Description

The Calciner is heated with 12 separate natural gas fired burners.

7.2.2 List of emission equipment and pollution control equipment

Description	Heat input	Date Constructed
Calciner burners	6.63 mmBtu/hr	1976

7.2.3 Applicable Regulations

- a. The "affected Calciner burner" for the purpose of these unit specific conditions is heat-generating unit fired with natural gas described in conditions 7.2.1 and 7.2.2.
- b. The affected Calciner burner is subject to the emission limits identified in Condition 5.2.2(b).

7.2.4 Non-Applicability of Regulations of Concern

- a. The New Source Performance Standard for Small - Industrial - Commercial - Institutional Steam Generating Units, 40 CFR 60, Subpart Dc, applies to steam generating units. The Calciner burners are not steam generators; therefore, these rules do not apply.
- b. Pursuant to 35 IAC 215.303, fuel combustion emission units are not subject to 35 IAC 215.301, "Use of Organic Material".

7.2.5 Operational and Production Limits and Work Practices

Each affected Calciner burner shall only be fired with natural gas as the fuel.

7.2.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide limitations in Condition 5.5, the affected Calciner burner is subject to the following:

N/A

Note: Emission limitations that apply to the source as a whole are being established in the Condition 5.5.2. The source has requested that the Illinois EPA establish emission limitations and other appropriate terms and conditions in this permit that limit the emissions from the affected source below the levels that would trigger the applicability of Title I of the CAA, specifically 40 CFR 52.21, Prevention of Significant Deterioration (PSD), consistent with the information provided in the CAAPP application [T1N].

7.2.7 Testing Requirements

None

7.2.8 Monitoring Requirements

None

7.2.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items, which allow to demonstrate compliance with Condition 5.5.1 and 7.3.5 pursuant to Section 39.5 (7) (b) of the Act:

- a. Natural gas usage for the Calciner burners (mmcf/mo, mmcf/yr); and
- b. PM, SO<sub>2</sub>, VOM, NO<sub>x</sub> and HAP emissions (T/mo and T/yr) as calculated by Condition 7.2.12.

7.2.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of deviations of the Calciner burners with applicable requirements within 30 days pursuant to Section 39.5 (7) (f) (ii) of the Act:

- a. Notification within 60 days of operation of an affected Calciner burners that may not have been in compliance with the opacity limitations in condition 5.2.2(b), with a copy of such record for each incident.

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.2.12 Compliance Procedures

- a. Compliance provisions addressing Condition 7.2.3 are not set by this permit as compliance is assumed to be achieved by the normal work-practices and maintenance activities inherent in operation of natural gas fired Calciner burners.
- b. Compliance with the emission limits in Condition 5.5 from the affected Calciner burners shall be based on the recordkeeping requirements in Condition 7.2.9 and the emission factors and formulas listed below:

<u>Pollutant</u>	<u>Emission Factor</u> <u>(lb/10<sup>6</sup> ft<sup>3</sup>)</u>
NO <sub>x</sub>	100.0
PM	7.6
VOM	5.5
SO <sub>2</sub>	0.6
CO	84.0

These are the emission factors for uncontrolled natural gas combustion in boilers (<100 mmBtu/hr), Tables 1.4.1 and 1.4.2, AP-42, Volume I, Supplement D, March, 1998.

Fuel Combustion Emissions (ton) = Natural Gas Consumed Multiplied by the Appropriate Emission Factor/2000.

7.3 Unit 3 - Fugitive emissions

7.3.1 Description

Fugitive emissions are defined as those emissions, which would not reasonably pass through a stack, vent or other functionally equivalent opening.

Fugitive dusts are generated by three primary activities at the plant:

(1) bulk receiving of ore; (2) truck transfer to stockpiles; and (3) wind erosion of stockpiles. Ore is received via barge or bulk trucks, and the unloading of this material generates fugitive emissions. However, most of this material (with the exception of the magnesium oxide) is a high-moisture ore which significantly reduces dust emissions. Ore that is received via barges is loaded into trucks which transfer the material to stockpiles located in the processing area. The transfer into the trucks, travel on an unpaved haul road, and dumping onto the stockpiles generates additional fugitive emissions. Wind erosion from the stockpiles also generates fugitive emissions. However, the low-moisture ore (magnesium oxide and the manganese dioxide ore for the calciner) are stored on partially enclosed concrete pads which essentially eliminates wind erosion loss. Only high-moisture ores are stored in the exterior stockpiles.

7.3.2 List of Emission Units and Pollution Control Equipment

PM Emission Sources	Emission Control
Unpaved haul road	Water spray,
Storage piles	Material moisture
Barge unloading and truck transfers	

7.3.3 Applicability Provisions and Applicable Regulations

- a. The "affected fugitive emission sources" for the purpose of these unit-specific conditions, are emission sources described in Conditions 7.3.1 and 7.3.2.
- b. The affected PM fugitive emission sources are subject to regulations cited in condition 5.2.2.
- c. The affected fugitive emission sources are subject to the emission limits identified in Condition 5.5.

7.3.4 Non-Applicability of Regulations of Concern

- a. The affected fugitive emission sources of PM are not subject to the requirements of 35 IAC 212.321, Emissions of Particulate Matter from Process Emission Units, because due to the unique nature of this process, such rules cannot reasonably be applied.

7.3.5 Operational and Production Limits and Work Practices

None

7.3.6 Emission Limitations

None

7.3.7 Testing Requirements

None

7.3.8 Inspection Requirements

None

7.3.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected fugitive emission sources to demonstrate compliance with Conditions 5.5.1 and 7.3.7, pursuant to Section 39.5(7)(b) of the Act:

- a. Quantity of material throughput (tons/year); and
- b. Pm and HAP emissions (T/yr)

7.3.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the affected fugitive emission sources with the permit requirements as follows, pursuant to Section 39.5(7)(f)(iii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

None

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.3.12 Compliance Procedures

Compliance with the limits in Conditions 5.5 shall be based on the recordkeeping requirements in Condition 7.3.9 and the emission factors (from the application) listed below:

a. Unpaved haul road:

Maximum PM emissions 14.43 tons/year from haul road based upon maximum 9600 vehicle miles traveled (VMT); 50% control with wet suppression and using AP-42 factor.

b. Barge unloading & Truck transfer:

Barge unloading 0.20lb/T (uncontrolled)  
Truck transfer 0.20lb/T (uncontrolled)

50% control with wet suppression.

c. Storage piles:

Maximum PM emissions from wind erosion 5.34 tons/year based on AP-42 formula and 50% control with Wet suppression or building enclosure.

## 8.0 GENERAL PERMIT CONDITIONS

### 8.1 Permit Shield

Pursuant to Section 39.5(7)(j) of the Act, the Permittee has requested and has been granted a permit shield. This permit shield provides that compliance with the conditions of this permit shall be deemed compliance with applicable requirements which were applicable as of the date the proposed permit for this source was issued, provided that either the applicable requirements are specifically identified within this permit, or the Illinois EPA, in acting on this permit application, has determined that other requirements specifically identified are not applicable to this source and this determination (or a concise summary thereof) is included in this permit.

This permit shield does not extend to applicable requirements which are promulgated after \_\_\_\_\_ **{insert public notice start date}** (the date of issuance of the draft permit) unless this permit has been modified to reflect such new requirements.

### 8.2 Applicability of Title IV Requirements (Acid Deposition Control)

This source is not an affected source under Title IV of the CAA and is not subject to requirements pursuant to Title IV of the CAA.

### 8.3 Emissions Trading Programs

No permit revision shall be required for increases in emissions allowed under any USEPA approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for elsewhere in this permit and that are authorized by the applicable requirement [Section 39.5(7)(o)(vii) of the Act].

As of the date of issuance of this permit, there are no such economic incentive, marketable permit or emission trading programs that have been approved by USEPA.

### 8.4 Operational Flexibility/Anticipated Operating Scenarios

#### 8.4.1 Changes Specifically Addressed by Permit

Physical or operational changes specifically addressed by the Conditions of this permit that have been identified as not requiring Illinois EPA notification may be implemented without prior notice to the Illinois EPA.

8.4.2 Changes Requiring Prior Notification

The Permittee is authorized to make physical or operational changes that contravene express permit terms without applying for or obtaining an amendment to this permit, provided that [Section 39.5(12)(a)(i) of the Act]:

- a. The changes do not violate applicable requirements;
- b. The changes do not contravene federally enforceable permit terms or conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements;
- c. The changes do not constitute a modification under Title I of the CAA;
- d. Emissions will not exceed the emissions allowed under this permit following implementation of the physical or operational change; and
- e. The Permittee provides written notice to the Illinois EPA, Division of Air Pollution Control, Permit Section, at least 7 days before commencement of the change. This notice shall:
  - i. Describe the physical or operational change;
  - ii. Identify the schedule for implementing the physical or operational change;
  - iii. Provide a statement of whether or not any New Source Performance Standard (NSPS) is applicable to the physical or operational change and the reason why the NSPS does or does not apply;
  - iv. Provide emission calculations which demonstrate that the physical or operational change will not result in a modification; and
  - v. Provide a certification that the physical or operational change will not result in emissions greater than authorized under the Conditions of this permit.

8.5 Testing Procedures

Tests conducted to measure composition of materials, efficiency of pollution control devices, emissions from process or control equipment, or other parameters shall be conducted using standard test methods. Documentation of the test date, conditions, methodologies, calculations, and test results shall be retained pursuant to the recordkeeping procedures of this permit. Reports of any tests conducted as required by this permit or as the result of a request by the Illinois EPA shall be submitted as specified in Condition 8.6.

8.6 Reporting Requirements

8.6.1 Monitoring Reports

If monitoring is required by any applicable requirements or conditions of this permit, a report summarizing the required monitoring results, as specified in the conditions of this permit, shall be submitted to the Air Compliance Section of the Illinois EPA every six months as follows [Section 39.5(7)(f) of the Act]:

<u>Monitoring Period</u>	<u>Report Due Date</u>
January - June	September 1
July - December	March 1

All instances of deviations from permit requirements must be clearly identified in such reports. All such reports shall be certified in accordance with Condition 9.9.

8.6.2 Test Notifications

Unless otherwise specified elsewhere in this permit, a written test plan for any test required by this permit shall be submitted to the Illinois EPA for review at least 60 days prior to the testing pursuant to Section 39.5(7)(a) of the Act. The notification shall include at a minimum:

- a. The name and identification of the affected unit(s);
- b. The person(s) who will be performing sampling and analysis and their experience with similar tests;
- c. The specific conditions under which testing will be performed, including a discussion of why these

conditions will be representative of maximum emissions and the means by which the operating parameters for the source and any control equipment will be determined;

- d. The specific determination of emissions and operation which are intended to be made, including sampling and monitoring locations;
- e. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods;
- f. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification; and
- g. Any proposed use of an alternative test method, with detailed justification.

#### 8.6.3 Test Reports

Unless otherwise specified elsewhere in this permit, the results of any test required by this permit shall be submitted to the Illinois EPA within 60 days of completion of the testing. The test report shall include at a minimum [Section 39.5(7)(e)(i) of the Act]:

- a. The name and identification of the affected unit(s);
- b. The date and time of the sampling or measurements;
- c. The date any analyses were performed;
- d. The name of the company that performed the tests and/or analyses;
- e. The test and analytical methodologies used;
- f. The results of the tests including raw data, and/or analyses including sample calculations;
- g. The operating conditions at the time of the sampling or measurements; and
- h. The name of any relevant observers present including the testing company's representatives, any Illinois EPA or USEPA representatives, and the representatives of the source.

#### 8.6.4 Reporting Addresses

- a. The following addresses should be utilized for the submittal of reports, notifications, and renewals:
- i. Illinois EPA - Air Compliance Section  
  
Illinois Environmental Protection Agency  
Bureau of Air  
Compliance Section (MC 40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276
  - ii. Illinois EPA - Air Regional Field Office  
  
Illinois Environmental Protection Agency  
Division of Air Pollution Control  
2009 Mall Street  
Collinsville, Illinois 62234
  - iii. Illinois EPA - Air Permit Section  
  
Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Permit Section (MC 11)  
P.O. Box 19506  
Springfield, Illinois 62794-9506
  - iv. USEPA Region 5 - Air Branch  
  
USEPA (AE - 17J)  
Air & Radiation Division  
77 West Jackson Boulevard  
Chicago, Illinois 60604
- b. Unless otherwise specified in the particular provision of this permit, reports shall be sent to the Illinois EPA - Air Compliance Section with a copy sent to the Illinois EPA - Air Regional Field Office.

#### 8.7 Obligation to Comply with Title I Requirements

Any term, condition, or requirement identified in this permit by T1, T1R, or T1N is established or revised pursuant to 35 IAC Part 203 or 40 CFR 52.21 ("Title I provisions") and incorporated into this permit pursuant to both Section 39.5 and Title I provisions. Notwithstanding the expiration date on the first page of this permit, the Title I conditions remain in effect pursuant to Title

FINAL DRAFT/PROPOSED CAAPP PERMIT  
American Minerals, Inc.  
I.D. No.: 069015AAI  
Application No.: 96030121  
January 9, 2003

I provisions until the Illinois EPA deletes or revises them in  
accordance with Title I procedures.

## 9.0 STANDARD PERMIT CONDITIONS

### 9.1 Effect of Permit

9.1.1 The issuance of this permit does not release the Permittee from compliance with State and Federal regulations which are part of the Illinois State Implementation Plan, as well as with other applicable statutes and regulations of the United States or the State of Illinois or applicable ordinances, except as specifically stated in this permit and as allowed by law and rule [Section 39.5(7)(j)(iv) of the Act].

9.1.2 In particular, this permit does not alter or affect the following:

- a. The provisions of Section 303 (emergency powers) of the CAA, including USEPA's authority under that Section;
- b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
- c. The applicable requirements of the acid rain program consistent with Section 408(a) of the CAA; and
- d. The ability of USEPA to obtain information from a source pursuant to Section 114 (inspections, monitoring, and entry) of the CAA.

9.1.3 Notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

### 9.2 General Obligations of Permittee

#### 9.2.1 Duty to Comply

The Permittee must comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the CAA and the Act, and is grounds for any or all of the following: enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application [Section 39.5(7)(o)(i) of the Act].

The Permittee shall meet applicable requirements that become effective during the permit term in a timely manner unless an alternate schedule for compliance with the applicable requirement is established.

9.2.2 Duty to Maintain Equipment

The Permittee shall maintain all equipment covered under this permit in such a manner that the performance or operation of such equipment shall not cause a violation of applicable requirements.

9.2.3 Duty to Cease Operation

No person shall cause, threaten or allow the continued operation of any emission unit during malfunction or breakdown of the emission unit or related air pollution control equipment if such operation would cause a violation of an applicable emission standard, regulatory requirement, ambient air quality standard or permit limitation unless such malfunction or breakdown is allowed by a permit condition [Section 39.5(6)(c) of the Act].

9.2.4 Disposal Operations

The source shall be operated in such a manner that the disposal of air contaminants collected by the equipment operations, or activities shall not cause a violation of the Act or regulations promulgated thereunder.

9.2.5 Duty to Pay Fees

The Permittee must pay fees to the Illinois EPA consistent with the fee schedule approved pursuant to Section 39.5(18) of the Act, and submit any information relevant thereto [Section 39.5(7)(o)(vi) of the Act]. The check should be payable to "Treasurer, State of Illinois" and sent to: Fiscal Services Section, Illinois Environmental Protection Agency, P.O. Box 19276, Springfield, Illinois 62794-9276.

9.3 Obligation to Allow Illinois EPA Surveillance

Upon presentation of proper credentials and other documents, the Permittee shall allow the Illinois EPA, or an authorized representative to perform the following [Section 39.5(7)(a) and (p)(ii) of the Act and 415 ILCS 5/4]:

- a. Enter upon the Permittee's premises where an actual or potential emission unit is located; where any regulated equipment, operation, or activity is located or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect during hours of operation any sources, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- d. Sample or monitor any substances or parameters at any location:
  - i. At reasonable times, for the purposes of assuring permit compliance; or
  - ii. As otherwise authorized by the CAA, or the Act.
- e. Obtain and remove samples of any discharge or emission of pollutants authorized by this permit; and
- f. Enter and utilize any photographic, recording, testing, monitoring, or other equipment for the purposes of preserving, testing, monitoring, or recording any activity, discharge or emission at the source authorized by this permit.

#### 9.4 Obligation to Comply with Other Requirements

The issuance of this permit does not release the Permittee from applicable State and Federal laws and regulations, and applicable local ordinances addressing subjects other than air pollution control.

#### 9.5 Liability

##### 9.5.1 Title

This permit shall not be considered as in any manner affecting the title of the premises upon which the permitted source is located.

##### 9.5.2 Liability of Permittee

This permit does not release the Permittee from any liability for damage to person or property caused by or

resulting from the construction, maintenance, or operation of the sources.

9.5.3 Structural Stability

This permit does not take into consideration or attest to the structural stability of any unit or part of the source.

9.5.4 Illinois EPA Liability

This permit in no manner implies or suggests that the Illinois EPA (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the source.

9.5.5 Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege [Section 39.5(7)(o)(iv) of the Act].

9.6 Recordkeeping

9.6.1 Control Equipment Maintenance Records

A maintenance record shall be kept on the premises for each item of air pollution control equipment. As a minimum, this record shall show the dates of performance and nature of preventative maintenance activities.

9.6.2 Records of Changes in Operation

A record shall be kept describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes [Section 39.5(12)(b)(iv) of the Act].

9.6.3 Retention of Records

- a. Records of all monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, original strip-chart recordings for

continuous monitoring instrumentation, and copies of all reports required by this permit [Section 39.5(7)(e)(ii) of the Act].

- b. Other records required by this permit shall be retained for a period of at least 5 years from the date of entry unless a longer period is specified by a particular permit provision.

9.7 Annual Emissions Report

The Permittee shall submit an annual emissions report to the Illinois EPA, Compliance Section no later than May 1 of the following year, as required by 35 IAC Part 254.

9.8 Requirements for Compliance Certification

Pursuant to Section 39.5(7)(p)(v) of the Act, the Permittee shall submit annual compliance certifications. The compliance certifications shall be submitted no later than May 1 or more frequently as specified in the applicable requirements or by permit condition. The compliance certifications shall be submitted to the Air Compliance Section, Air Regional Field Office, and USEPA Region 5 - Air Branch. The addresses for the submittal of the compliance certifications are provided in Condition 8.6.4 of this permit.

- a. The certification shall include the identification of each term or condition of this permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, both currently and over the reporting period consistent with the conditions of this permit.
- b. All compliance certifications shall be submitted to USEPA Region 5 in Chicago as well as to the Illinois EPA.
- c. All compliance reports required to be submitted shall include a certification in accordance with Condition 9.9.

9.9 Certification

Any document (including reports) required to be submitted by this permit shall contain a certification by a responsible official of the Permittee that meets the requirements of Section 39.5(5) of the Act [Section 39.5(7)(p)(i) of the Act]. An example Certification by a Responsible Official is included as an attachment to this permit.

9.10 Defense to Enforcement Actions

9.10.1 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit [Section 39.5(7)(o)(ii) of the Act].

9.10.2 Emergency Provision

- a. An emergency shall be an affirmative defense to an action brought for noncompliance with the technology-based emission limitations under this permit if the following conditions are met through properly signed, contemporaneous operating logs, or other relevant evidence:
  - i. An emergency occurred as provided in Section 39.5(7)(k) of the Act and the Permittee can identify the cause(s) of the emergency. Normally, an act of God such as lightning or flood is considered an emergency;
  - ii. The permitted source was at the time being properly operated;
  - iii. The Permittee submitted notice of the emergency to the Illinois EPA within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken; and
  - iv. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission limitations, standards, or regulations in this permit.
- b. This provision is in addition to any emergency or upset provision contained in any applicable requirement. This provision does not relieve a Permittee of any reporting obligations under existing federal or state laws or regulations.

9.11 Permanent Shutdown

This permit only covers emission units and control equipment while physically present at the indicated source location(s). Unless this permit specifically provides for equipment relocation, this permit is void for the operation or activity of any item of equipment on the date it is removed from the permitted location(s) or permanently shut down. This permit expires if all equipment is removed from the permitted location(s), notwithstanding the expiration date specified on this permit.

9.12 Reopening and Reissuing Permit for Cause

9.12.1 Permit Actions

This permit may be modified, reopened, and reissued, for cause pursuant to Section 39.5(15) of the Act. The filing of a request by the Permittee for a permit modification, revocation, and reissuance, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition [Section 39.5(7)(o)(iii) of the Act].

9.12.2 Reopening and Revision

This permit must be reopened and revised if any of the following occur [Section 39.5(15)(a) of the Act]:

- a. Additional requirements become applicable to the equipment covered by this permit and three or more years remain before expiration of this permit;
- b. Additional requirements become applicable to an affected source for acid deposition under the acid rain program;
- c. The Illinois EPA or USEPA determines that this permit contains a material mistake or inaccurate statement when establishing the emission standards or limitations, or other terms or conditions of this permit; and
- d. The Illinois EPA or USEPA determines that this permit must be revised to ensure compliance with the applicable requirements of the Act.

9.12.3 Inaccurate Application

The Illinois EPA has issued this permit based upon the information submitted by the Permittee in the permit application. Any misinformation, false statement or misrepresentation in the application shall be grounds for revocation under Section 39.5(15)(b) of the Act.

9.12.4 Duty to Provide Information

The Permittee shall furnish to the Illinois EPA, within a reasonable time specified by the Illinois EPA any information that the Illinois EPA may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to the Illinois EPA copies of records required to be kept by this permit, or for information claimed to be confidential, the Permittee may furnish such records directly to USEPA along with a claim of confidentiality [Section 39.5(7)(o)(v) of the Act].

9.13 Severability Clause

The provisions of this permit are severable, and should any one or more be determined to be illegal or unenforceable, the validity of the other provisions shall not be affected. The rights and obligations of the Permittee shall be construed and enforced as if this permit did not contain the particular provisions held to be invalid and the applicable requirements underlying these provisions shall remain in force [Section 39.5(7)(i) of the Act].

9.14 Permit Expiration and Renewal

The right to operate terminates on the expiration date unless the Permittee has submitted a timely and complete renewal application. For a renewal to be timely it must be submitted no later than 9 and no sooner than 12 months prior to expiration. The equipment may continue to operate during the renewal period until final action is taken by the Illinois EPA, in accordance with the original permit conditions [Section 39.5(5)(1), (n), and (o) of the Act].

10.0 ATTACHMENTS

10.1 Attachment 1 Emissions of Particulate Matter from New Process Emission Units

10.1.1 Process Emission Units for Which Construction or Modification Commenced On or After April 14, 1972

- a. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 [35 IAC 212.321(a)].
- b. Interpolated and extrapolated values of the data in subsection (c) of 35 IAC 212.321 shall be determined by using the equation [35 IAC 212.321(b)]:

$$E = A(P)^B$$

Where:

P = Process weight rate; and  
 E = Allowable emission rate; and,

- i. Up to process weight rates of 408 Mg/hr (450 ton/hr):

	Metric	English
P	Mg/hr	Ton/hr
E	kg/hr	Lb/hr
A	1.214	2.54
B	0.534	0.534

- ii. For process weight rate greater than or equal to 408 Mg/hr (450 ton/hr):

	Metric	English
P	Mg/hr	Ton/hr
E	kg/hr	Lb/hr
A	11.42	24.8
B	0.16	0.16

FINAL DRAFT/PROPOSED CAAPP PERMIT  
 American Minerals, Inc.  
 I.D. No.: 069015AAI  
 Application No.: 96030121  
 January 9, 2003

c. Limits for Process Emission Units For Which  
 Construction or Modification Commenced On or After  
 April 19, 1972 [35 IAC 212.321(c)]:

Metric		English	
P	E	P	E
Mg/hr	kg/hr	ton/hr	lb/hr
0.05	0.25	0.05	0.55
0.1	0.29	0.10	0.77
0.2	0.42	0.2	1.10
0.3	0.64	0.30	1.35
0.4	0.74	0.40	1.58
0.5	0.84	0.50	1.75
0.7	1.00	0.75	2.40
0.9	1.15	1.00	2.60
1.8	1.66	2.00	3.70
2.7	2.1	3.00	4.60
3.6	2.4	4.00	5.35
4.5	2.7	5.00	6.00
9.0	3.9	10.00	8.70
13.0	4.8	15.00	10.80
18.0	5.7	20.00	12.50
23.0	6.5	25.00	14.00
27.0	7.2	30.00	15.60
32.0	7.7	35.00	17.00
36.0	8.2	40.00	18.20
41.0	8.8	45.00	19.20
45.0	9.3	50.00	20.50
90.0	13.4	100.00	29.50
140.0	17.0	150.00	37.00
180.0	19.4	200.00	43.00
230.0	22.0	250.00	48.50
270.0	24.0	300.00	53.00
320.0	26.0	350.00	58.00
360.0	28.0	400.00	62.00
408.0	30.1	450.00	66.00
454.0	30.4	500.00	67.00

Where:

P = Process weight rate in Mg/hr or T/hr; and  
 E = Allowable emission rate in Kg/hr or lbs/hr

10.2 Attachment 2 Emissions of Particulate Matter from Existing Process Emission Units

10.2.1 Process Emission Units for Which Construction or Modification Commenced Prior to April 14, 1972

- a. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process emission unit for which construction or modification commenced prior to April 14, 1972, which, either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.322 [35 IAC 212.322(a)].
- b. Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation [35 IAC 212.322(b)]:

$$E = C + A(P)^B$$

Where:

P = Process weight rate; and,  
 E = Allowable emission rate; and,

- i. For process weight rates up to 27.2 Mg/hr (30 T/hr):

	Metric	English
P	Mg/hr	ton/hr
E	kg/hr	lb/hr
A	1.985	4.10
B	0.67	0.67

- ii. For process weight rates in excess or 27.2 Mg/hr (30 T/hr):

	Metric	English
P	Mg/hr	ton/hr
E	kg/hr	lb/hr
A	25.21	55.0
B	0.11	0.11
C	-18.4	-40.0

FINAL DRAFT/PROPOSED CAAPP PERMIT  
 American Minerals, Inc.  
 I.D. No.: 069015AAI  
 Application No.: 96030121  
 January 9, 2003

c. Limits for Process Emission Units For Which  
 Construction or Modification Commenced Prior to  
 April 14, 1972

P	Metric	English	E
	E	P	
Mg/hr	kg/hr	T/hr	lbs/hr
0.05	0.27	0.05	0.55
0.1	0.42	0.10	0.87
0.2	0.68	0.20	1.40
0.3	0.89	0.30	1.83
0.4	1.07	0.40	2.22
0.5	1.25	0.50	2.58
0.7	1.56	0.75	3.38
0.9	1.85	1.00	4.10
1.8	2.9	2.00	6.52
2.7	3.9	3.00	8.56
3.6	4.7	4.00	10.40
4.5	5.4	5.00	12.00
9.	8.7	10.00	19.20
13.	11.1	15.00	25.20
18.	13.8	20.00	30.50
23.	16.2	25.00	35.40
27.2	18.15	30.00	40.00
32.0	18.8	35.00	41.30
36.0	19.3	40.00	42.50
41.0	19.8	45.00	43.60
45.0	20.2	50.00	44.60
90.0	23.2	100.00	51.20
140.0	25.3	150.00	55.40
180.0	26.5	200.00	58.60
230.0	27.7	250.00	61.00
270.0	28.5	300.00	63.10
320.0	29.4	350.00	64.90
360.0	30.0	400.00	66.20
400.0	30.6	450.00	67.70
454.0	31.3	500.00	69.00

Where:

P = Process weight rate in Mg/hr or T/hr; and  
 E = Allowable emission rate in Kg/hr or lbs/hr

10.3 Attachment 3 - Example Certification by a Responsible Official

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Official Title: \_\_\_\_\_

Telephone No.: \_\_\_\_\_

Date Signed: \_\_\_\_\_

10.4 Attachment 4 - Guidance on Revising This Permit

The Permittee must submit an application to the Illinois EPA using the appropriate revision classification in accordance with Sections 39.5(13) and (14) of the Act and 35 IAC 270.302. Specifically, there are currently three classifications for revisions to a CAAPP permit. These are:

1. Administrative Permit Amendment;
2. Minor Permit Modification; and
3. Significant Permit Modification.

The Permittee must determine, request, and submit the necessary information to allow the Illinois EPA to use the appropriate procedure to revise the CAAPP permit. A brief explanation of each of these classifications follows.

1. Administrative Permit Amendment
  - Corrects typographical errors;
  - Identifies a change in the name, address, or phone number of any person identified in the permit, or provides a similar minor administrative change at the source;
  - Requires more frequent monitoring or reporting by the Permittee;
  - Allows for a change in ownership or operational control of the source where no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new Permittees has been submitted to the Illinois EPA;
  - Incorporates into the CAAPP permit a construction permit, provided the conditions of the construction permit meet the requirements for the issuance of CAAPP permits; or
  - Incorporates into the CAAPP permit revised limitations or other requirements resulting from the application of an approved economic incentives rule,

marketable permits rule, or generic emissions trading rule.

2. Minor Permit Modification

- Do not violate any applicable requirement;
- Do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;
- Do not require a case-by-case determination of an emission limitation or other standard, or a source-specific determination of ambient impacts, or a visibility or increment analysis;
- Do not seek to establish or change a permit term or condition for which there is no corresponding underlying requirement and which avoids an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
  - A federally enforceable emissions cap assumed to avoid classification as a modification under any provision of Title I of the CAA; and
  - An alternative emissions limit approved pursuant to regulations promulgated under Section 112(i)(5) of the CAA.
- Are not modifications under any provision of Title I of the CAA; and
- Are not required to be processed as a significant permit modification.

An application for a minor permit modification shall include the following:

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
- The source's suggested draft permit/conditions;
- Certification by a responsible official that the proposed modification meets the criteria for use of

minor permit modification procedures and a request that such procedures be used; and

- Information as contained on form 271-CAAPP for the Illinois EPA to use to notify USEPA and affected States.

3. Significant Permit Modification

- Applications that do not qualify as either minor permit modifications or as administrative permit amendments;
- Applications requesting a significant change in existing monitoring permit terms or conditions;
- Applications requesting a relaxation of reporting or recordkeeping requirements; and
- Cases in which, in the judgment of the Illinois EPA, action on an application for modification would require decisions to be made on technically complex issues.

An application for a significant permit modification shall include the following:

- A detailed description of the proposed change(s), including all physical changes to equipment, changes in the method of operation, changes in emissions of each pollutant, and any new applicable requirements which will apply as a result of the proposed change. Note that the Permittee need only submit revised forms for equipment and operations that will be modified.

The Illinois EPA requires the information on the following appropriate forms to be submitted in accordance with the proper classification:

- Form 273-CAAPP, REQUEST FOR ADMINISTRATIVE PERMIT AMENDMENT FOR CAAPP PERMIT; or
- Form 271-CAAPP, MINOR PERMIT MODIFICATION FOR CAAPP PERMIT; or
- Form 200-CAAPP, APPLICATION FOR CAAPP PERMIT (for significant modification).

FINAL DRAFT/PROPOSED CAAPP PERMIT  
American Minerals, Inc.  
I.D. No.: 069015AAI  
Application No.: 96030121  
January 9, 2003

Application forms can be obtained from the Illinois EPA website  
at <http://www.epa.state.il.us/air/forms>.

Note that the request to revise the permit must be certified for  
truth, accuracy, and completeness by a responsible official.

Note that failure to submit the required information may require  
the Illinois EPA to deny the application. The Illinois EPA  
reserves the right to require that additional information be  
submitted as needed to evaluate or take final action on  
applications pursuant to Section 39.5(5)(g) of the Act and 35 IAC  
270.305.



Illinois Environmental Protection Agency  
Division Of Air Pollution Control -- Permit Section  
P.O. Box 19506  
Springfield, Illinois 62794-9506

<b>Application For Construction Permit (For CAAPP Sources Only)</b>	<b>For Illinois EPA use only</b>
	I.D. number:
	Permit number:
	Date received:

This form is to be used by CAAPP sources to supply information necessary to obtain a construction permit. Please attach other necessary information and completed CAAPP forms regarding this construction/modification project.

<b>Source Information</b>		
1. Source name:		
2. Source street address:		
3. City:	4. Zip code:	
5. Is the source located within city limits? <input type="checkbox"/> Yes <input type="checkbox"/> No		
6. Township name:	7. County:	8. ID number:

<b>Owner Information</b>		
9. Name:		
10. Address:		
11. City:	12. State:	13. Zip code:

<b>Operator Information (if different from owner)</b>		
14. Name		
15. Address:		
16. City:	17. State:	18. Zip code:

<b>Applicant Information</b>		
19. Who is the applicant? <input type="checkbox"/> Owner <input type="checkbox"/> Operator	20. All correspondence to: (check one) <input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Source	
21. Attention name and/or title for written correspondence:		
22. Technical contact person for application:	23. Contact person's telephone number:	

This Agency is authorized to require and you must disclose this information under 415 ILCS 5/39. Failure to do so could result in the application being denied and penalties under 415 ILCS 5 et seq. It is not necessary to use this form in providing this information. This form has been approved by the forms management center.



10.6 Attachment 6 - Guidance on Renewing This Permit

Timeliness - Pursuant to Section 39.5(5)(n) of the Act and 35 IAC 270.301(d), a source must submit to the Illinois EPA a complete CAAPP application for the renewal of a CAAPP permit not later than 9 months before the date of permit expiration of the existing CAAPP permit in order for the submittal to be deemed timely. Note that the Illinois EPA typically sends out renewal notices approximately 18 months prior to the expiration of the CAAPP permit.

The CAAPP application must provide all of the following information in order for the renewal CAAPP application to be deemed complete by the Illinois EPA:

1. A completed renewal application form 200-CAAPP, APPLICATION FOR CAAPP PERMIT.
2. A completed compliance plan form 293-CAAPP, COMPLIANCE PLAN/SCHEDULE OF COMPLIANCE FOR CAAPP PERMIT.
3. A completed compliance certification form 296-CAAPP, COMPLIANCE CERTIFICATION, signed by the responsible official.
4. Any applicable requirements that became effective during the term of the permit and that were not included in the permit as a reopening or permit revision.
5. If this is the first time this permit is being renewed and this source has not yet addressed CAM, the application should contain the information on form 464-CAAPP, COMPLIANCE ASSURANCE MONITORING (CAM) PLAN.
6. Information addressing any outstanding transfer agreement pursuant to the ERMS.
7. a. If operations of an emission unit or group of emission units remain unchanged and are accurately depicted in previous submittals, the application may contain a letter signed by a responsible official that requests incorporation by reference of existing information previously submitted and on file with the Illinois EPA. This letter must also include a statement that information incorporated by reference is also being certified for truth and accuracy by the responsible official's signing of the form 200-CAAPP, APPLICATION FOR CAAPP PERMIT and the form 296-CAAPP, COMPLIANCE CERTIFICATION. The boxes should be marked

yes on form 200-CAAPP, APPLICATION FOR CAAPP PERMIT, as existing information is being incorporated by reference.

- b. If portions of current operations are not as described in previous submittals, then in addition to the information above for operations that remain unchanged, the application must contain the necessary information on all changes, e.g., discussion of changes, new or revised CAAPP forms, and a revised fee form 292-CAAPP, FEE DETERMINATION FOR CAAPP PERMIT, if necessary.
8. Information about all off-permit changes that were not prohibited or addressed by the permit to occur without a permit revision and the information must be sufficient to identify all applicable requirements, including monitoring, recordkeeping, and reporting requirements, for such changes.
9. Information about all changes made under 40 CFR 70.4(b)(12)(i) and (ii) that require a 7-day notification prior to the change without requiring a permit revision.

The Illinois EPA will review all applications for completeness and timeliness. If the renewal application is deemed both timely and complete, the source shall continue to operate in accordance with the terms and conditions of its CAAPP permit until final action is taken on the renewal application.

Notwithstanding the completeness determination, the Illinois EPA may request additional information necessary to evaluate or take final action on the CAAPP renewal application. If such additional information affects your allowable emission limits, a revised form 292-CAAPP, FEE DETERMINATION FOR CAAPP PERMIT must be submitted with the requested information. The failure to submit to the Illinois EPA the requested information within the time frame specified by the Illinois EPA, may force the Illinois EPA to deny your CAAPP renewal application pursuant to Section 39.5 of the Act.

Application forms may be obtained from the Illinois EPA website at <http://www.epa.state.il.us/air/forms.html>.

If you have any questions regarding this matter, please contact a permit analyst at 217/782-2113.

FINAL DRAFT/PROPOSED CAAPP PERMIT  
American Minerals, Inc.  
I.D. No.: 069015AAI  
Application No.: 96030121  
January 9, 2003

Mail renewal applications to:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Permit Section (MC 11)  
P.O. Box 19506  
Springfield, Illinois 62794-9506

MJP:psj

I. INTRODUCTION

This source has applied for a Clean Air Act Permit Program (CAAPP) operating permit for its existing operation. The CAAPP is the program established in Illinois for the operating permits for significant stationary sources required by the federal Clean Air Act, as amended in 1990. The conditions in a CAAPP permit are enforceable by both the Illinois Environmental Protection Agency (Illinois EPA) and the USEPA.

The source is located in Hardin County in Rosiclare. The following is a general process description of the operations at American Minerals, Inc., located in Rosiclare, Hardin County. The facility produces a variety of mineral products, and consists of four major processing plants that contain one or more of the emission units. Individual operations at the facility are typical of mineral processing plants and include components such as belt conveyors, screw conveyors, bucket elevators, storage bins, screening equipment, dryers, a calciner, roll crushers, cone crushers, ball mills, mixers, pelletizers, bagging stations, and bulk truck load-outs. Those operations that generate significant particulate emissions are controlled by fabric filter dust collectors (baghouses or storage bin vent filters).

II. EMISSION UNITS

Significant emission units at this source are as follows:

Emission Unit	Description	Equipment	Emission Control Equipment
01	Grinding Circuit No.1 (EU-2)	Feed Hoppers Bucket Elevator Feed Bin Rotary Dryer Ball Mill Feed System Ball Mill Air Classifier Finished Product Bins	- - - Baghouse CD-03 Baghouse CD-03 Baghouse CD-04 Baghouse CD-04 Bin vent Filters
	Grinding Circuit No.2 (EU-3)	Feed Hoppers Bucket Elevators Feed Bins Shaker Screen Rotary Dryer Ball Mill Feed System Ball Mill Air Classifier Finished Product Bins	- - - - Baghouse CD-08 Baghouse CD-08 Baghouse CD-09 Baghouse CD-09 Bin vent Filters
	Granusol Mixing Circuit (EU-4)	Feed Hopper Bucket Elevator Feed Bins Bucket Elevator Mixer #1 Mixer #2 Finished Product Bin	- Baghouse CD-17 Bin vent Filters Baghouse CD-17 Baghouse CD-16 Baghouse CD-15

Emission Unit	Description	Equipment	Emission Control Equipment
01 (Cont.)	Granusol Line No.1 (EU-5)	Crude Bin Finished Product Bins Screen Crusher Bucket Elevator Dryer Feed Hoppers Feed Bucket Elevator Feed Bins Pelletizer Binder Tanks	Bin vent Filter Baghouse CD-18 Baghouse CD-21 - - Baghouse CD-18 - Baghouse CD-21 Bin vent Filters Bin vent Filters -
	Granusol Line No.2 (EU-6)	Finished Product Bins Screen Crusher Bucket Elevators Dryer Feed Hoppers Feed Bin Binder Tanks Pelletizer	Baghouse CD-17 Baghouse CD-17 Baghouse CD-17 Baghouse CD-17 Baghouse CD-17 Baghouse CD-17 Bin vent Filter Baghouse CD-17 Baghouse EP-1003
	Calcine Plant (Process) (EU-7)	Feed Hopper Screen Crusher Bucket Elevators Feed Bin Calciner Cooling Tube Mill Air Classifier Finished Product Bin	- - - - - Baghouse CD-22 Baghouse CD-22 Baghouse CD-22 Baghouse CD-22 -
	Magnesium Oxide Plant (EU-8)	Feed Hopper Scalping Screen Scrap Bin Bucket Elevator Finished Product Bin	- - - - Bin vent Filter
	Oil Spray System (EU-9)	Feed Hoppers Bucket Elevators Mineral Oil Reservoir Oil Sprayer	
	Plant Crusher (EU-10)	Feed Hoppers Jaw Crusher Shaker Screen Cone Crusher	
	02	Calcine Plant (Fuel combustion)	Natural gas burners
03	Fugitive	Unpaved haul road, Storage piles, Barge unloading and truck transfers	Water spray, Material moisture

III. EMISSIONS

This source is required to have a CAAPP permit since it is a major source of emissions.

For purposes of fees, the source is allowed the following emissions:

Pollutant	Tons/Year
Volatile Organic Material (VOM)	35.0
Sulfur Dioxide (SO <sub>2</sub> )	70.0
Particulate Matter (PM)	90.0
Nitrogen Oxides (NO <sub>x</sub> )	12.0
HAP, not included in VOM or PM	---
Total	207.0

This permit is a combined Title I/CAAPP permit that may contain terms and conditions which address the applicability, and compliance if determined applicable, of Title I of the Clean Air Act and regulations promulgated thereunder, including 40 CFR 52.21 - federal Prevention of Significant Deterioration (PSD) and 35 IAC Part 203 - Major Stationary Sources Construction and Modification. Any such terms and conditions are identified within the permit by T1, T1R, or T1N. The source has requested that the Illinois EPA establish or revise such conditions in a Title I permit, consistent with the information provided in the CAAPP application. Any conditions established in a construction permit pursuant to Title I and not revised or deleted in this permit, remain in effect pursuant to Title I provisions until such time that the Illinois EPA revises or deletes them.

IV. APPLICABLE EMISSION STANDARDS

All emission sources in Illinois must comply with the Illinois Pollution Control Board's emission standards. The Board's emission standards represent the basic requirements for sources in Illinois.

All emission sources in Illinois must comply with the federal New Source Performance Standards (NSPS). The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement.

All emission sources in Illinois must comply with the federal National Emission Standards for Hazardous Air Pollutants (NESHAP). The Illinois EPA is administering NESHAP in Illinois on behalf of the United States EPA under a delegation agreement.

V. PROPOSED PERMIT

CAAPP

A CAAPP permit contains all conditions that apply to a source and a listing of the applicable state and federal air pollution control

regulations that are the origin of the conditions. The permit also contains emission limits and appropriate compliance procedures. The appropriate compliance procedures may include inspections, work practices, monitoring, record keeping, and reporting to show compliance with these requirements. The Permittee must carry out these procedures on an on-going basis.

Title I

A combined Title I/CAAPP permit contains terms and conditions established by the Illinois EPA pursuant to authority found in Title I provisions, e.g., 40 CFR 52.21 - federal Prevention of Significant Deterioration (PSD) and 35 IAC Part 203 - Major Stationary Sources Construction and Modification. Notwithstanding the expiration date on the first page of the permit, the Title I conditions remain in effect pursuant to Title I provisions until the Illinois EPA deletes or revises them in accordance with Title I procedures.

VI. REQUEST FOR COMMENTS

It is the Illinois EPA's preliminary determination that this source's permit application meets the standards for issuance of a CAAPP permit. The Illinois EPA is therefore proposing to issue a CAAPP permit, subject to the conditions proposed in the draft permit.

Comments are requested on this proposed action by the Illinois EPA and the proposed conditions on the draft permit. If substantial public interest is shown in this matter, the Illinois EPA will consider holding a public hearing in accordance with 35 Ill. Adm. Code Part 166.