

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

217/782-2113

CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT
and
TITLE I PERMIT¹

PERMITTEE

J.M. Huber Corporation - Engineered Minerals Division
Attn: Brian K. Cooley
3150 Gardener Expressway
Quincy, Illinois 62301

Application No.: 95070021 I.D. No.: 001815AAS
Applicant's Designation: Date Received: July 5, 1995
Operation of: Non-Metallic & Metallic Mineral Mining, Grinding & Processing
Date Issued: TO BE DETERMINED Expiration Date²: DATE
Source Location: 3150 Gardener Expressway, Quincy, Adams County
Responsible Official: Brian K. Cooley, Regional Environmental Coordinator

This permit is hereby granted to the above-designated Permittee to OPERATE a Non-Metallic and Metallic Mineral Mining, Grinding and Processing 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 2
USEPA

¹ 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.

² 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	15
	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	21
7.0	UNIT SPECIFIC CONDITIONS	22
	7.1 Unit 01 Primary crushing and transfer	
	7.2 Unit 02 Impact mill & Screen grade circuit	
	7.3 Unit 03 Ball, Roller & TRZK mills	
	7.4 Unit 04 Ultra fine circuit	
	7.5 Unit 05 Ball mills, Roller mills & Pin mixers	
	7.6 Unit 06 Non-metallic mineral packaging & bulk load-out	
	7.7 Unit 07 Trace mineral grinding & processing	
	7.8 Unit 08 Trace minerals mixing	
	7.9 Unit 09 Co-Generation System	

		<u>PAGE</u>
7.10	Unit 10 Storage tank	
7.11	Unit 11 Fugitive emissions	
8.0	GENERAL PERMIT CONDITIONS	93
8.1	Permit Shield	
8.2	Applicability of Title IV Requirements	
8.3	Emissions Trading Programs	
8.4	Operational Flexibility/Anticipated Operating Scenarios	
8.5	Testing Procedures	
8.6	Reporting Requirements	
8.7	Obligation to Comply with Title I Requirements	
9.0	STANDARD PERMIT CONDITIONS	99
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 - Applicable New Source Performance Standards (NSPS)	1-1
10.2	Attachment 2 - Particulate Matter Emission Table New Process Emission Units	2-1
10.3	Attachment 3 - State Construction and Operating Permits	3-1
10.4	Attachment 4 - Example Certification by a Responsible Official	4-1
10.5	Attachment 5 - Guidance on Revising This Permit	5-1
10.6	Attachment 6 - Form 199-CAAPP, Application For Construction Permit (For CAAPP Sources Only)	6-1
10.7	Attachment 7 - Guidance on Renewing This Permit	7-1

1.0 SOURCE IDENTIFICATION

1.1 Source

J.M. Huber Corporation - Engineered Minerals Division
3150 Gardener Expressway
Quincy, Illinois 62301
217/224-8737, EXT 3304

I.D. No.: 001815AAS
Standard Industrial Classification: 1422, Non-Metallic Minerals,
Except Fuels, Crushed and
Broken Limestone

1.2 Owner/Parent Company

J.M. Huber Corporation - Engineered Minerals Division
3150 Gardener Expressway
Quincy, Illinois 62301

1.3 Operator

J.M. Huber Corporation - Engineered Minerals Division
3150 Gardener Expressway
Quincy, Illinois 62301

Brian K. Cooley-Environmental Coordinator
217/224-8737, EXT 3304

1.4 General Source Description

The source is located in Adams County near Quincy. The source consists of an underground calcium carbonate mine, non-metallic minerals processing plant, and a trace minerals processing plant. The initial step in the grinding operations is primary crushing using jaw crusher, vibratory screen, hammermill and belt conveyors system connecting it to storage silos. The next step in the non-metallic mineral processing involves a variety of grinding mills which continually reduce the particle size of the product. The grinding operations are conducted by a variety of equipment including cage mills, hammermills, roller mills, ball mills, and wet and dry media mills. All of the mills are equipped with air classifiers, cyclones, or sifters which separate particle sizes into a variety of products. The source is major for particulate matter emissions.

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 ³	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 _x	Nitrogen Oxides
NSPS	New Source Performance Standards
OM	Organic Material
PM	Particulate Matter

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

PM ₁₀	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 ₂	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:

- 3 Portable heating units (Fuel oil 0.5 mmBtu/hr)
- 4 Portable heating units (Fuel oil 0.15 mmBtu/hr)
- 5 Space heaters (Natural Gas 0.25 to 0.082 mmBtu/hr)
- 1 Crusher #3 (Mill 32) Material storage pile

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:

- 1 Underground mining operations with barriers restricting airflow.

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:

Direct combustion units designed and used for comfort heating purposes and fuel combustion emission units as follows: (A) Units with a rated heat input capacity of less than 2.5 mmBtu/hr that fire only natural gas, propane, or liquefied petroleum gas; (B) Units with a rated heat input capacity of less than 1.0 mmBtu/hr that fire only oil or oil in combination with only natural gas, propane, or liquefied petroleum gas; and (C) Units with a rated heat input capacity of less than 200,000 Btu/hr which never burn refuse, or treated or chemically contaminated wood [35 IAC 201.210(a)(4)].

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, 218.301, or 219.301, 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	Mill #	Equipment	Date of Construction/Modification
01	Primary crushing and transfer	Mill #31	Jaw crusher, Hammer mill, 2 Vibratory screens, 3 Main silos, 2 Side tanks, 5 Belt conveyors, Dust collector/Baghouse, Wet spray bars	6/74 2/92 (addition of baghouse)
		Mill #32	Jaw crusher, Vibratory screen, Cone crusher, 5 Belt conveyors, Wet spray bars	5/74
02	Non-metallic mineral processing (Impact mill & Screen grade circuit)	Mill #1	Rock hopper, 4 Bucket elevators, Rotary screen, Mill feed tank, Vibratory feeder, Mill furnace/dryer, Cage mill, 2 Vibratory screens, 2 Finished product tanks, 3 Dust collectors/Baghouses	1973 1989 (addition of bin vent dust collector)
		Mill #11	Rock hopper, Bucket elevator, Rotary screen, Mill feed tank, Vibratory feeder, Impact mill, 3 Air classifiers-Sifters, 4 Finished product tanks, 3 Dust free load-outs, 3 Belt conveyors, 6 Dust collectors/Baghouses	1989/ 1990 (addition of bin vent dust collector)
		Mill #12	Mill feed tank, Vibratory feeder, Air classifier-Sifter, Finished product tank, 3 Dust free load-outs, 3 Belt conveyors, 2 Dust collectors/Baghouses	1990
		Mill #18	Rock hopper, Bucket elevator, Rotary screen, Mill feed tank, Vibratory feeder, Mill furnace, Impact mill, 5 Air classifiers-Sifters, Belt conveyor, Dust collector/Baghouse	1990

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

Emission Unit	Description	Mill #	Equipment	Date of Construction/Modification
02 (Cont.)	Non-metallic mineral processing (Impact mill & Screen grade circuit)	Mill #19	<p>Rock hopper, Mill feed tank, Mill furnace/ dryer, Air classifier-Sifter, 5 Bucket elevators, Vibratory feed tank, 9 Vibratory screens, Cage mill, Air classifier-Sifter, 7 Finished product tanks, 2 Bagging stations, 6 Dust free load-outs, 4 Belt conveyors, 10 Dust collectors/Baghouses</p> <p>Belt apron, Belt conveyor, 3 Bucket elevators, Vibratory screen, Cage mill, Finished product tank</p>	<p>1990/ 1991 (addition of bin vent dust collector)</p> <p>1996</p>
03	Non-metallic mineral dry grinding (Ball, Roller & TRZK mills)	Mill #3	<p>Rock hopper, Bucket elevator, Miss run feed tank (Q60 recycle), Mill feed tank, Vibratory feeder, Mill furnace, Roller mill, 6 Air classifiers-Sifters, 3 Finished product tanks, Bagging station, 3 Dust collectors/Baghouses</p>	<p>1972/ 1991 (Addition of silo with dust collector)</p>
		Mill #4	<p>Mill feed tank, Vibratory feeder, Mill furnace, Roller mill, 6 Air classifiers-Sifters, Pressure pipe blower/Diverter valve, 6 Finished product tanks, Bagging station, 7 Dust free load-outs, Belt conveyor, 6 Dust collectors/Baghouses</p>	<p>1972/ 1991 (addition of silo with dust collector)</p>

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

Emission Unit	Description	Mill #	Equipment	Date of Construction/Modification
03 (Cont.)	Non-metallic mineral dry grinding (Ball, Roller & TRZK mills)	Mill #5	Rock hopper, Bucket elevator, Lump crusher, Miss run feed tank, Mill feed tank, Mill furnace, Roller mill, 4 Air classifiers-Sifters, 3 Finished product tanks, 3 Dust free load-outs, 3 Dust collectors/Baghouses	1972/ 1991 (addition of silo with dust collector)
		Mill #6	Rock hopper, 2 Vibratory feeders, Bucket elevator, Mill feed tank, Mill furnace, Roller mill, 4 Air classifiers-Sifters, 3 Finished product tanks, 3 Dust free load-outs, 3 Dust collectors/Baghouses	1976
		Mill #8	Rock hopper, 2 Vibratory feeders, Bucket elevator, Mill feed tank, Mill furnace, Roller mill, 6 Air classifiers-Sifters, Miss run tank, Finished product tank, 2 Dust collectors/Baghouses	1975
		Mill #9	Mill feed tank, Mill furnace, Roller mill, 4 Air classifiers-Sifters to #6,#8,#33 FPT, 3 Finished product tanks, 2 Belt conveyors, Dust collector/Baghouse	1992
		Mill #10	Mill feed tank, Mill furnace, Roller mill, 7 Air classifiers-Sifters to #6,#8,#30,#33 FPT, 2 Belt conveyors, Dust collector/Baghouse	1985
		Mill #13	Rock hopper, Feed tank, Vibratory feeder, Mill furnace, Roller mill, 6 Air classifiers-Sifters, 4 Finished product tanks, 4 Dust free load-outs, 2 Belt conveyors, 4 Dust collectors/Baghouses	1990

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

Emission Unit	Description	Mill #	Equipment	Date of Construction/Modification
03 (Cont.)	Non-metallic mineral dry grinding (Ball, Roller & TRZK mills)	Mill #17	2 Mill feed tanks, Bucket elevator, 2 Air classifiers-Sifters, TRZK mill, Vibratory feeder, 2 Vibratory screens, Air classifier-Sifter, Finished product tank, Bagging station, 4 Dust collectors/Baghouses	1986
		Mill #28	Mill feed tank, Ball mill, Bucket elevator, 7 Air classifiers-Sifters, Dust collector/Baghouse	1991
04	Non-metallic mineral wet grinding (Ultra fine circuit)	Mill #14	Mill feed tank, Bucket elevator, Make down tank, Drais mill, Vibratory screen, Transfer tank, 4 Finished product tanks, Dust collector/Baghouse	1982
		Mill #15	Furnace, Spray dryer, Bucket elevator, Roto sieve to vertical mill feed tank, Dust collector/Baghouse	1979
05	Non-metallic mineral dry grinding & component blending (Ball mills, Roller mills & Pin mixers)	Mill #2	Miss run feed tank, 2 Vibratory feeders, Rock hopper, Bucket elevator, Mill feed tank, Mill furnace, Roller mill, 6 Air classifiers-Sifters, Rotary pin mixer, 2 Finished product tanks, 2 Bagging stations, 3 Belt conveyors, 3 Dust collectors/Baghouses	1972
		Mill #7	Conveyor (Mill #1 FPT to Mill #7), Ball mill, Bucket elevator, 9 Air classifiers-Sifters, Pneumatic transfer system, Furnace, Rotary pin mixer, 2 Finished product tanks, 2 Bagging stations	1973/ 1990 (addition of Pin mixer)

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

Emission Unit	Description	Mill #	Equipment	Date of Construction/Modification
05 (Cont.)	Non-metallic mineral dry grinding & component blending (Ball mills, Roller mills & Pin mixers)	Mill #16	2 Mill feed tanks, Screw feeder, Vertical impact mill, Conveyance system, Rotary pin mixer, 2 Finished product tanks, Bagging station, 2 Dust collectors/Baghouses	1985/ 1986
		Mill #27	Conveyor (Mill #1 FPT to Mill #27), Ball mill, Bucket elevator, 10 Air classifiers-Sifters, Pneumatic transfer system, Furnace, Rotary pin mixer, Finished product tank, 3 Bagging stations	1979
		Mill #29	Feed tank, 2 Mixers, Air classifier-Sifter, Rotary pin mill, Finished product tank, 2 Bagging stations, Dust collector/Baghouse	1991/ 1992
06	Non-metallic mineral packaging & bulk load-out	Mill #26	10 Finished product silos, 3 Finished product baggers, 8 Dust free load-outs Feed tank, 2 Mixers, Air classifier-Sifter, Rotary pin mill, Finished product tank, 2 Bagging stations, 10 Dust collectors/Baghouses	1992
		Mill #30	9 Finished product silos, Bagger (Manual cart), Bagger (automatic cart), Super stacker, Finished product conveyor, 10 Dust collectors/Baghouses	1982
		Mill #33	Finished product silo, 2 Dust free load-outs rails and truck	1994

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

Emission Unit	Description	Mill #	Equipment	Date of Construction/Modification
07	Trace mineral grinding & processing (Rotary dryer & Roller mill)	Mill #20	Wet rock hopper, main mill furnace, Rotary dryer, Air classifier, 3 Bucket elevators, Vibratory screen, Hammer mill (Full circle pulverator), 4 Finished product tanks, Bagging station, 2 Dust collectors/Baghouses	1982
		Mill #21	Rock hopper, Mill furnace, Rotary mill, Air classifier/Sifter, Dust collector/Baghouse	1982
		Mill #24	Full circle pulverator, Mill feed tank, Weigh belt feeder, Product pan granulator, Fluid bed dryer, Main mill furnace, Flow dryer, Metal screw conveyor, Vibratory screen, Finished product tank, Finished product bagger, Super sack bagger, Dust collector/Baghouse	1996
08	Trace minerals mixing	Mill #22	2 Rock hoppers, Super sack hopper, Hand dump hopper/flowveyor, 19 Mill feed tanks, Weigh vessel, Single roll crusher, mixer, Flowveyor, Finished product tank, 3 Finished product baggers, Super sack bagger, Hopper/Flowveyor (selenium production), Mixer, Bagger, 14 Dust collectors/Baghouses	1985/ 1992 (addition of 3 silos with dust control)
09	Co-Generation System	2 General Motors Engines		1985
10	Storage Tanks	2 Diesel fuel Storage Tanks		1985
11	Fugitive Emissions	Unpaved Haul Roads		-

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 emissions.

5.1.2 This permit is issued based on the source not being a major source of HAPs.

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)	17.2
Sulfur Dioxide (SO ₂)	63.8
Particulate Matter (PM)	267.4
Nitrogen Oxides (NO _x)	69.4
HAP, not included in VOM or PM	9.6
Total	427.4

5.5.2 Emissions of Hazardous Air Pollutants

This permit is issued based on the emissions of HAPs as listed in Section 112(b) of the CAA not being equal to or exceeding 10 tons per year of a single HAP or 25 tons per year of any combination of such HAPs, so that this source is considered a minor source for HAPs.

5.5.3 Other Source-Wide Emission Limitations

- a. The annual emissions from the source shall not exceed the limitations established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 4).

5.5.3 Other Source-Wide Emission Limitations

- a. The annual emissions from the source shall not exceed the limitations established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 4).
- b. The limitations in the State Construction and Operating Permits were established pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permits do not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].
- c. 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) [T1].

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.

5.6.5 Records for Operating Scenarios

N/A

5.6.6 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
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

6.0 NOT APPLICABLE TO THIS PERMIT

7.0 UNIT SPECIFIC CONDITIONS

7.1 Unit 01: Primary crushing and transfer

7.1.1 Description

Huber operates a subsurface calcium carbonate mine on its property east of Highway 57. The mining operation follows a repetitive set of steps to extract calcium carbonate from the Dolbee Creek deposit. The first operation is drilling the active face to place explosive charges. Once the rock is exploded, front-end loaders and haul trucks remove the rock from the face and haul it out of the mine to the primary crusher. After the exploded rock is cleared, a scaling device is used to scrape the edges, sides, and top of the active face to remove any loose stone. The front end loader and haul trucks then move this rock to the crusher and the cycle is repeated.

The mine is ventilated by a system that includes six fans that are located along the bluff on the east side of Highway 57. This ventilation system does not generate visible emissions (except for a water vapor plume in the winter months) because of: (1) the substantial distance from the active mining face to the ventilation points, (2) wet conditions in the mine, and (3) the use of an air curtain system. Nearly all of the fugitive dust generated at the active face drops out in the mine before reaching the ventilation fans. For this reason, Huber is classifying the mining operation as an insignificant activity in this permit application.

The initial step in the grinding operations is primary crushing and transfer to a raw materials storage system. Particulate matter (potentially including PM-10) is the only emission from this process. The primary crushing is conducted at Mill 31, which includes a jaw crusher, vibratory screen, hammer mill, and belt conveyor system connecting it to three raw material storage silos. Each of these units is positioned within a partial or full enclosure, which reduces fugitive emissions. In addition to enclosures, a wet suppression spry system is located at the initial transfer to the jaw crusher, which further reduces fugitive particulate emissions. The vibratory screen and hammer mill are also controlled by baghouse dust collector. Particulate emissions from the baghouse are considered to be entirely PM-10.

The raw materials storage system consists of three concrete silos, which load haul trucks that transport crushed stone to other mills for further processing. Each of the silos is equipped with a vibratory screen that is housed inside a total enclosure. One of the silos is also equipped with a belt conveyor system that transfers crushed stone to the granular plant (Mill 19) and to Roller Mill 2. The facility also operates a back-up crusher (Mill 32), which consists of a jaw crusher, vibratory screen, cone crusher, and storage silo system. This mill is equipped with a wet suppression spray system to control fugitive particulate emissions. Crushed stone from this mill is exclusively loaded into haul trucks for transfer to other mills for further processing.

7.1.2 List of Emission Units and Pollution Control Equipment

Description	Mill #	Equipment	Emission Control Equipment
Primary crushing and transfer	Mill #31	Jaw crusher, Hammer mill, 2 Vibratory screens, 3 Main silos, 2 Side tanks, 5 Belt conveyors	Dust collector/ Baghouse, Wet spray bars
	Mill #32	Jaw crusher, Vibratory screen, Cone crusher, 5 Belt conveyors	Wet spray bars

7.1.3 Applicability Provisions and Applicable Regulations

- a. An "affected Mill #31 and Mill #32" for the purpose of these unit-specific conditions is an emission unit described in conditions 7.1.1 and 7.1.2.
- b. The "affected Mill #31 and Mill #32" are subject to the NSPS for Non-Metallic Mineral Processing Plant, 40 CFR 60 Subparts A and OOO, because the plant commenced construction or modification after August 31, 1983. The Illinois EPA is administering NSPS in Illinois on behalf of the USEPA under a delegation agreement. This regulation is attached hereto and incorporated herein by reference (see Attachment 1).
- c. The affected Mill #31 and Mill #32 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 2) [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 Mill #31 and Mill #32 are subject to the emission limits identified in Condition 5.2.2.

7.1.4 Non-Applicability of Regulations of Concern

- a. The affected Mill #31 and Mill #32 are 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 PM₁₀, as identified in 35 IAC 212.324(a)(1).

7.1.5 Operational and Production Limits and Work Practices

- a. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate the affected Mill #31 and Mill #32 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance

procedures, and inspection of the source [40 CFR 60.11(d)].

- b. The Permittee shall follow good operating practices for the cyclones, and filters, including periodic inspection, routine maintenance and prompt repair of defects.

7.1.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected Mill #31 and Mill #32 are subject to the following:

- a. The affected emission units are subject to emission limitations established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).
- b. The limitations in the State Construction and Operating Permits were established pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permits do not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].
- c. 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) [T1].

7.1.7 Testing Requirements

- a. The affected Mill #31 and Mill #32 are subject to the applicable testing requirements in 40 CFR 60.675. This regulation is attached hereto and incorporated herein by reference (see Attachment 1).
- b. The affected Mill #31 and Mill #32 are subject to the applicable testing requirements established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).

7.1.8 Monitoring Requirements

A continuous monitoring system shall be installed, maintained, and operated in accordance with the provisions of 40 CFR 60.674 (see Attachment 1)

7.1.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected Mill #31 and Mill #32 to demonstrate compliance with Conditions 5.5.1, 7.1.3, and 7.1.6, pursuant to Section 39.5(7)(b) of the Act:

- a. Quantity of material processed (T/hr, T/yr), and/or Hours of operation of equipment (hr/day, hr/yr).
- b. The affected Mill #31 and Mill #32 are subject to the applicable recordkeeping requirements established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).
- c. Records addressing use of good operating practices for the cyclones, and filters:
 - i. Records for periodic inspection of the cyclones, filters, and scrubbers with date, individual performing the inspection, and nature of inspection; and
 - ii. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
- d. Monthly and aggregate annual PM emissions from the affected Mill #31 and Mill #32 shall be maintained, based throughput and the applicable emission factors, with supporting calculations.

7.1.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected Mill #31 and Mill #32 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. The affected Mill #31 and Mill #32 are subject to the applicable reporting requirements established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).
- b. Emissions of PM in excess of limits in Condition 7.1.6 within 30 days of such an occurrence.

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 & 7.1.3, 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 Conditions 5.5.1, 7.1.3 and 7.1.6 from the affected emission source shall be calculated based on the recordkeeping requirements in Condition 7.1.9 and the emission rates and formulas listed below:

Mill #	Description	PM Emission Factor lbs/T	% Control Efficiency
Mill #31	Jaw crusher	0.036	85
	Vibratory screen	0.15	85
Mill #32	Jaw crusher	0.036	50
	Vibratory screen	0.15	50
	Cone crusher	0.036	50

The emission factors are from the application based on AP-42 factor.

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

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

and

Emissions (T) = Emission Rates (lbs/hr) x Hours of
operation (hrs/yr) x 1/2000

- c. Compliance provisions addressing Conditions 7.1.3(d) and (e) are not set by this permit as compliance is assumed to be achieved by the kind of material usage in normal operation of the affected emission unit.

7.2 Unit 02: Non-metallic mineral processing (Impact mill & Screen grade circuit)

7.2.1 Description

The next step in the non-metallic mineral processing involves a variety of grinding mills which continually reduce the particle size of the product. In many cases the product from one mill will become the feed stock for another as the material is ground to particle sizes as low as one micron. These grinding mills process crushed stone from Huber's Quincy mine and other non-metallic minerals imported from locations worldwide. These minerals may contain very trace amounts of naturally occurring metallic minerals, some of which may be Hazardous Air Pollutants (HAPs). However, laboratory work on stone from the Quincy Mine has not detected any metallic HAPs. Therefore, the emission inventory does not include any metallic HAPs from the non-metallic mineral processing plant.

The grinding operations are conducted by a variety of equipment including cage mills, hammer mills, roller mills, ball mills, and wet or dry media mills. The grinding mills are typically fed by outside rock hoppers, belt conveyors, or pneumatic conveyors. The outside rock hopper truck unloading and belt conveyors are equipped with partial or full enclosures for control of fugitive particulate matter emissions. All pneumatic conveyors are controlled by dust collectors.

The coarser material is typically ground with impact mills, such as cage or hammer mills, which are also controlled by dust collectors. Fine materials are predominantly ground by roller mills and ball mills. Product from the roller mills is typically moved with a process air stream that flows to a main mill cyclone, then through a series of product diverters and additional air classifiers or sifters. Bleed air from this closed loop process always discharges through a duct collector. Product from the ball mills is typically removed by sealed bucket elevators, which feed various cyclones, sifters, and other air classifiers. The ball mill, bucket elevator, sifters, and air classifiers are all closed systems vented through dust collectors.

7.2.2 List of Emission Units and Pollution Control Equipment

Description	Mill #	Equipment	Emission Control Equipment
Non-metallic mineral processing (Impact mill & Screen grade circuit)	Mill #1	Rock hopper, 4 Bucket elevators, Rotary screen, Mill feed tank, Vibratory feeder, Mill furnace/dryer, Cage mill, 2 Vibratory screens, 2 Finished product tanks	3 Dust collectors /Baghouses
	Mill #11	Rock hopper, Bucket elevator, Rotary screen, Mill feed tank, Vibratory feeder, Impact mill, 3 Air classifiers-Sifters, 4 Finished product tanks, 3 Dust free load-outs, 3 Belt conveyors	6 Dust collectors /Baghouses
	Mill #12	Mill feed tank, Vibratory feeder, Air classifier-Sifter, Finished product tank, 3 Dust free load-outs, 3 Belt conveyors	2 Dust collectors /Baghouses
	Mill #18	Rock hopper, Bucket elevator, Rotary screen, Mill feed tank, Vibratory feeder, Mill furnace, Impact mill, 5 Air classifiers-Sifters, Belt conveyor	Dust collector/ Baghouse

Description	Mill #	Equipment	Emission Control Equipment
Non-metallic mineral processing (Impact mill & Screen grade circuit)	Mill #19	Rock hopper, Mill feed tank, Mill furnace/dryer, Air classifier-Sifter, 5 Bucket elevators, Vibratory feed tank, 9 Vibratory screens, Cage mill, Air classifier-Sifter, 7 Finished product tanks, 2 Bagging stations, 6 Dust free load-outs, 4 Belt conveyors, Belt apron, Belt conveyor, 3 Bucket elevators, Vibratory screen, Cage mill, Finished product tank	10 Dust collectors /Baghouses

7.2.3 Applicability Provisions and Applicable Regulations

- a. An "affected Mill #1, Mill #11, Mill #12, Mill #18 and Mill #19" for the purpose of these unit-specific conditions is an emission unit described in conditions 7.2.1 and 7.2.2.
- b. The "affected Mill #1, Mill #11, Mill #12, Mill #18 and Mill #19" are subject to the NSPS for Non-Metallic Mineral Processing Plant, 40 CFR 60 Subparts A and OOO, because the plant commenced construction or modification after August 31, 1983. The Illinois EPA is administering NSPS in Illinois on behalf of the USEPA under a delegation agreement. This regulation is attached hereto and incorporated herein by reference (see Attachment 1).
- c. The affected Mill #1, Mill #11, Mill #12, Mill #18 and Mill #19 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 2) [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 Mill #1, Mill #11, Mill #12, Mill #18 and Mill #19 are subject to the emission limits identified in Condition 5.2.2.

7.2.4 Non-Applicability of Regulations of Concern

- a. The affected Mill #1, Mill #11, Mill #12, Mill #18 and Mill #19 are 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 PM₁₀, as identified in 35 IAC 212.324(a)(1).

7.2.5 Operational and Production Limits and Work Practices

- a. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate the affected Mill #1, Mill #11, Mill #12, Mill #18 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source [40 CFR 60.11(d)].

- b. The Permittee shall follow good operating practices for the cyclones, and filters, including periodic inspection, routine maintenance and prompt repair of defects.

7.2.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected Mill #1, Mill #11, Mill #12, Mill #18 and Mill #19 are subject to the following:

- a. The affected emission units are subject to emission limitations established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).
- b. The limitations in the State Construction and Operating Permits were established pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permits do not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].
- c. 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) [T1].

7.2.7 Testing Requirements

- a. The affected Mill #1, Mill #11, Mill #12, Mill #18 and Mill #19 are subject to the applicable testing requirements in 40 CFR 60.675. This regulation is attached hereto and incorporated herein by reference (see Attachment 1).
- b. The affected Mill #1, Mill #11, Mill #12, Mill #18 and Mill #19 are subject to the applicable testing requirements established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).

7.2.8 Monitoring Requirements

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

A continuous monitoring system shall be installed, maintained, and operated in accordance with the provisions of 40 CFR 60.674 (see Attachment 1).

7.2.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected Mill #1, Mill #11, Mill #12, Mill #18 and Mill #19 to demonstrate compliance with Conditions 5.5.1, 7.1.3, and 7.1.6, pursuant to Section 39.5(7)(b) of the Act:

- a. Quantity of material processed (T/hr, T/yr), and/or Hours of operation of equipment (hr/day, hr/yr).
- b. Natural gas usage (mmcf/yr) and/or Distillate oil usage (gal/yr).
- c. The affected Mill #1, Mill #11, Mill #12, Mill #18 and Mill #19 are subject to the applicable recordkeeping requirements established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).
- d. Records addressing use of good operating practices for the cyclones, and filters:
 - i. Records for periodic inspection of the cyclones, filters, and scrubbers with date, individual performing the inspection, and nature of inspection; and
 - ii. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
- e. Monthly and aggregate annual PM emissions from the affected Mill #1, Mill #11, Mill #12, Mill #18 and Mill #19 shall be maintained, based throughput and

the applicable emission factors, with supporting calculations.

- f. Monthly and aggregate annual NO_x, PM, SO₂, and VOM emissions from the dryers associated with the affected Mill #1 shall be maintained, based on fuel usage and the applicable emission factors, with supporting calculations.

7.2.10 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.

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

None

7.2.12 Compliance Procedures

- a. Compliance with the opacity limitations of Condition 5.2.2 & 7.2.3, 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, 7.2.3 and 7.2.6 from the affected emission

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

source shall be based on the recordkeeping requirements in Condition 7.2.9 and the emission rates and formulas listed below:

Mill #	Description	PM Emission Factor lbs/T	% Control Efficiency
1	Raw material unloading	0.0003	70
1	Screening	0.045	70
11	Raw material unloading	0.0003	70
11	Raw material transfer	0.026	70
11	Raw material transfer	0.026	70
12	Raw material transfer	0.026	70
18	Raw material unloading	0.0003	70
19	Raw material unloading	0.0003	70
19	Raw material transfer	0.026	70
19	Raw material unloading	0.0003	70

The emission factors are from the application based on AP-42 factor.

$$\text{Emissions (lbs/hr)} = \text{Emission Factor (lbs/T)} \times \text{Process weight rate (T/hr)} \times (1 - \text{Control Efficiency}/100)$$

and

$$\text{Emissions (T)} = \text{Emission Rates (lbs/hr)} \times \text{Hours of operation (hrs/yr)} \times 1/2000$$

- c. Compliance with the emission limits in Condition 5.5.1 and 7.2.3 from each affected mill furnace shall be based on the recordkeeping requirements in Condition 7.2.9 and the emission factors and formulas listed below:
 - i. Emissions from the affected mill furnace/dryer burning natural gas shall be calculated based on the following emission factors:

Pollutant	Emission Factor lbs/10 ⁶ scf
NO _x	140
PM	7.6
VOM	5.5
SO ₂	0.6
CO	35

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

- ii. Emissions from the affected mill furnace/dryer burning distillate fuel oil shall be calculated based on the following emission factors:

<u>Pollutant</u>	<u>Emission Factors (lb/10³ gallon)</u>
PM	2
NO _x	20
SO ₂	142%S
VOM	0.6
CO	5

These are the emission factors for uncontrolled distillate fuel oil combustion in commercial/institutional/residential combustors, Tables 1.3-1, 1.3-3 and 1.3-7, AP-42, Volume I, Fifth Edition, September 1998. "%S" indicates that the weight % of sulfur in the oil should be multiplied by the value given.

Emissions (ton) = distillate fuel oil consumed (gallons) multiplied by the appropriate emission factor/2000.

- iii. Total emissions for each pollutant are to be determined by combining the results of Conditions 7.2.12.

7.3 Unit 03: Non-metallic mineral dry grinding (Ball, Roller & TRZK mills)

7.3.1 Description

Ball, Roller & TRZK mills, conducts similar process described in Section 7.2.1.

7.3.2 List of Emission Units and Pollution Control Equipment

Description	Mill #	Equipment	Emission Control Equipment
Non-metallic mineral dry grinding (Ball, Roller & TRZK mills)	Mill #3	Rock hopper, Bucket elevator, Miss run feed tank (Q60 recycle), Mill feed tank, Vibratory feeder, Mill furnace, Roller mill, 6 Air classifiers-Sifters, 3 Finished product tanks, Bagging station	3 Dust collectors /Baghouses
	Mill #4	Mill feed tank, Vibratory feeder, Mill furnace, Roller mill, 6 Air classifiers-Sifters, Pressure pipe blower/Diverter valve, 6 Finished product tanks, Bagging station, 7 Dust free load-outs, Belt conveyor	6 Dust collectors /Baghouses
	Mill #5	Rock hopper, Bucket elevator, Lump crusher, Miss run feed tank, Mill feed tank, Mill furnace, Roller mill, 4 Air classifiers-Sifters, 3 Finished product tanks, 3 Dust free load-outs	3 Dust collectors /Baghouses

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

Description	Mill #	Equipment	Emission Control Equipment
Non-metallic mineral dry grinding (Ball, Roller & TRZK mills)	Mill #6	Rock hopper, 2 Vibratory feeders, Bucket elevator, Mill feed tank, Mill furnace, Roller mill, 4 Air classifiers-Sifters, 3 Finished product tanks, 3 Dust free load-outs	3 Dust collectors /Baghouses
	Mill #8	Rock hopper, 2 Vibratory feeders, Bucket elevator, Mill feed tank, Mill furnace, Roller mill, 6 Air classifiers-Sifters, Miss run tank, Finished product tank	2 Dust collectors /Baghouses
	Mill #9	Mill feed tank, Mill furnace, Roller mill, 4 Air classifiers-Sifters to #6,#8,#33 FPT, 3 Finished product tanks, 2 Belt conveyors	Dust collector/ Baghouse
	Mill #10	Mill feed tank, Mill furnace, Roller mill, 7 Air classifiers-Sifters to #6,#8,#30,#33 FPT, 2 Belt conveyors	Dust collector/ Baghouse
	Mill #13	Rock hopper, Feed tank, Vibratory feeder, Mill furnace, Roller mill, 6 Air classifiers-Sifters, 4 Finished product tanks, 4 Dust free load-outs, 2 Belt conveyors	4 Dust collectors /Baghouses

Description	Mill #	Equipment	Emission Control Equipment
Non-metallic mineral dry grinding (Ball, Roller & TRZK mills)	Mill #17	2 Mill feed tanks, Bucket elevator, 2 Air classifiers-Sifters, TRZK mill, Vibratory feeder, 2 Vibratory screens, Air classifier-Sifter, Finished product tank, Bagging station	4 Dust collectors /Baghouses
	Mill #28	Mill feed tank, Ball mill, Bucket elevator, 7 Air classifiers-Sifters	Dust collector/ Baghouse

7.3.3 Applicability Provisions and Applicable Regulations

- a. An "affected Mill #3, Mill #4, Mill #5, Mill #6, Mill #8, Mill #9, Mill #10, Mill #13, Mill #17 and Mill #28" for the purpose of these unit-specific conditions is an emission unit described in conditions 7.3.1 and 7.3.2.
- b. The "affected Mill #3, Mill #4, Mill #5, Mill #6, Mill #8, Mill #9, Mill #10, Mill #13, Mill #17 and Mill #28" are subject to the NSPS for Non-Metallic Mineral Processing Plant, 40 CFR 60 Subparts A and OOO, because the plant commenced construction or modification after August 31, 1983. The Illinois EPA is administering NSPS in Illinois on behalf of the USEPA under a delegation agreement. This regulation is attached hereto and incorporated herein by reference (see Attachment 1).
- c. The affected Mill #3, Mill #4, Mill #5, Mill #6, Mill #8, Mill #9, Mill #10, Mill #13, Mill #17 and Mill #28 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 2) [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 Mill #3, Mill #4, Mill #5, Mill #6, Mill #8, Mill #9, Mill #10, Mill #13, Mill #17 and Mill #28 are subject to the emission limits identified in Condition 5.2.2.

7.3.4 Non-Applicability of Regulations of Concern

- a. The affected Mill #3, Mill #4, Mill #5, Mill #6, Mill #8, Mill #9, Mill #10, Mill #13, Mill #17 and Mill #28 are 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 PM₁₀, as identified in 35 IAC 212.324(a)(1).

7.3.5 Operational and Production Limits and Work Practices

- a. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate the affected Mill #3, Mill #4, Mill #5, Mill #6, Mill #8, Mill #9, Mill #10, Mill #13, Mill #17 and Mill #28 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source [40 CFR 60.11(d)].

- b. The Permittee shall follow good operating practices for the cyclones, and filters, including periodic inspection, routine maintenance and prompt repair of defects.

7.3.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected Mill #3, Mill #4, Mill #5, Mill #6, Mill #8, Mill #9, Mill #10, Mill #13, Mill #17 and Mill #28 are subject to the following:

- a. The affected emission units are subject to emission limitations established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).
- b. The limitations in the State Construction and Operating Permits were established pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permits do not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].
- c. 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) [T1].

7.3.7 Testing Requirements

- a. The affected Mill #3, Mill #4, Mill #5, Mill #6, Mill #8, Mill #9, Mill #10, Mill #13, Mill #17 and Mill #28 are subject to the applicable testing requirements in 40 CFR 60.675. This regulation is attached hereto and incorporated herein by reference (see Attachment 1).
- b. The affected Mill #3, Mill #4, Mill #5, Mill #6, Mill #8, Mill #9, Mill #10, Mill #13, Mill #17 and Mill #28 are subject to the applicable testing requirements established in State Construction and Operating Permits, which have been attached hereto

and incorporated herein by reference (see Attachment 3).

7.3.8 Monitoring Requirements

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

A continuous monitoring system shall be installed, maintained, and operated in accordance with the provisions of 40 CFR 60.674 (see Attachment 1).

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 Mill #3, Mill #4, Mill #5, Mill #6, Mill #8, Mill #9, Mill #10, Mill #13, Mill #17 and Mill #28 to demonstrate compliance with Conditions 5.5.1, 7.1.3, and 7.1.6, pursuant to Section 39.5(7)(b) of the Act:

- a. Quantity of material processed (T/hr, T/yr), and/or Hours of operation of equipment (hr/day, hr/yr).
- b. Natural gas usage (mmcf/yr) and/or Distillate oil usage (gal/yr).
- c. The affected Mill #3, Mill #4, Mill #5, Mill #6, Mill #8, Mill #9, Mill #10, Mill #13, Mill #17 and Mill #28 are subject to the applicable recordkeeping requirements established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).
- d. Records addressing use of good operating practices for the cyclones, and filters:
 - i. Records for periodic inspection of the cyclones, filters, and scrubbers with date, individual performing the inspection, and nature of inspection; and
 - ii. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.

- e. Monthly and aggregate annual PM emissions from the affected Mill #3, Mill #4, Mill #5, Mill #6, Mill #8, Mill #9, Mill #10, Mill #13, Mill #17 and Mill #28 shall be maintained, based throughput and the applicable emission factors, with supporting calculations.
- f. Monthly and aggregate annual NO_x, PM, SO₂, and VOM emissions from the mill furnaces associated with the affected Mills shall be maintained, based on fuel usage and the applicable emission factors, with supporting calculations.

7.3.10 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.

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

None

7.3.12 Compliance Procedures

- a. Compliance with the opacity limitations of Condition 5.2.2 & 7.3.3, 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

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

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, 7.3.3 and 7.3.6 from the affected emission sources shall be based on the recordkeeping requirements in Condition 7.3.9 and the emission rates and formulas listed below:

Mill #	Description	PM Emission Factor lb/ton	% Control Efficiency
3	Raw material unloading	0.0003	70
5	Raw material unloading	0.0003	70
6	Raw material unloading	0.0003	70
6	Screening (Vibratory feeder)	0.0045	70
8	Raw material unloading	0.0003	70
8	Screening (Vibratory feeder)	0.0045	70
13	Raw material unloading	0.0003	70

The emission factors are from the application based on AP-42 factor.

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

and

Emissions (T) = Emission Rates (lbs/hr) x Hours of operation (hrs/yr) x 1/2000

- c. Compliance with the emission limits in Condition 5.5.1 and 7.2.3 from each affected mill furnace/dryer shall be based on the recordkeeping requirements in Condition 7.2.9 and the emission factors and formulas listed below:

- i. Emissions from the affected mill furnace/dryer burning natural gas shall be calculated based on the following emission factors:

Pollutant	Emission Factor lbs/10 ⁶ scf
NO _x	140
PM	7.6
VOM	5.5
SO ₂	0.6
CO	35

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

- ii. Emissions from the affected mill furnace burning distillate fuel oil shall be calculated based on the following emission factors:

<u>Pollutant</u>	<u>Emission Factors (lb/10³ gallon)</u>
PM	2
NO _x	20
SO ₂	142%S
VOM	0.6
CO	5

These are the emission factors for uncontrolled distillate fuel oil combustion in commercial/institutional/residential combustors, Tables 1.3-1, 1.3-3 and 1.3-7, AP-42, Volume I, Fifth Edition, September 1998. "%S" indicates that the weight % of sulfur in the oil should be multiplied by the value given.

Emissions (ton) = distillate fuel oil consumed (gallons) multiplied by the appropriate emission factor/2000.

- iii. Total emissions for each pollutant are to be determined by combining the results of Conditions 7.3.12.

7.4 Unit 04: Non-metallic mineral wet grinding (Ultra fine circuit)

7.4.1 Description

The ultra-fine grinding circuit is a wet process where the non-metallic minerals are slurried and fed into a stirred media (Drais) mill filled with small ceramic grinding balls. The Drais mill is fed by a tank that is loaded pneumatically from Mill 13 or from bulk tank trucks. The feed tank empties to a sealed bucket elevator which transfers the material to the slurry tanks. The feed tank and bucket elevator are vented through a dust collector. Once the product is slurried, no additional venting is required and particulate emissions are negligible. After the product is wet ground, it is pumped to finished product slurry tanks which feed the Mill 15 spray dryer. The spray dryer is also vented to a dust collector.

The facility may also process Kaolin clays in the ultra-fine grinding operations. This could include the use of an organic chemical (silane) that liberates methanol as it hydrolyzes. The methanol would be driven off in the Mill 15 spray drier as a VOC and HAP emission. The facility is proposing a methanol emission limit of 19,000 lbs/year to avoid major source status under the Title III Hazardous Air Pollutant Rules. Based on the operating parameters of this potential process, the total VOM emission will not exceed the 8 lbs/hour limit listed in 35 IAC 215, Subpart K.

All of the mills are equipped with air classifiers, cyclones, or sifters which separate particle sizes into a variety of products. The process air streams from the grinding mill air classifiers and pneumatic transfer to storage tanks are always vented through dust collectors. The mills are typically equipped with a furnace to heat make-up air that is introduced into the process air system. These furnaces are primarily fired with natural gas, but No. 2 fuel oil may be used as a back-up fuel if the availability or cost of natural gas becomes a problem. The facility is accepting a No. 2 fuel oil usage limit of 1,000,000 gallons per year to maintain allowable particulate emissions below the PSD major source trigger to 250 tons per year. The products of combustion (primarily NO_x) are vented through the dust collectors that control the process air discharges.

7.4.2 List of Emission Units and Pollution Control Equipment

Description	Mill #	Equipment	Emission Control Equipment
Non-metallic mineral wet grinding (Ultra fine circuit)	Mill #14	Mill feed tank, Bucket elevator, Make down tank, Drais mill, Vibratory screen, Transfer tank, 4 Finished product tanks	Dust collector/ Baghouse
	Mill #15	Furnace, Spray dryer, Bucket elevator, Roto sieve to vertical mill feed tank	Dust collector/ Baghouse

7.4.3 Applicability Provisions and Applicable Regulations

- a. An "affected Mill #14 and Mill #15" for the purpose of these unit-specific conditions is an emission unit described in conditions 7.4.1 and 7.4.2.
- b. The affected Mill #14 and Mill #15 are subject to the NSPS for Non-Metallic Mineral Processing Plant, 40 CFR 60 Subparts A and OOO, because the plant commenced construction or modification after August 31, 1983. The Illinois EPA is administering NSPS in Illinois on behalf of the USEPA under a delegation agreement. This regulation is attached hereto and incorporated herein by reference (see Attachment 1).
- c. The affected Mill #14 and Mill #15 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 Mill #14 and Mill #15 are subject to the emission limits identified in Condition 5.2.2.

7.4.4 Non-Applicability of Regulations of Concern

- a. The affected Mill #14 and Mill #15 are 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 PM₁₀, as identified in 35 IAC 212.324(a)(1).

7.4.5 Operational and Production Limits and Work Practices

- a. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate the affected Mill #14 and Mill #15 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source [40 CFR 60.11(d)].
- b. The Permittee shall follow good operating practices for the cyclones, and filters, including periodic inspection, routine maintenance and prompt repair of defects.

7.4.5 Operational and Production Limits and Work Practices

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

7.4.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected Mill #14 and Mill #15 are subject to the following:

- a. The affected emission units are subject to emission limitations established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).
- b. The limitations in the State Construction and Operating Permits were established pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permits do not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].
- c. 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) [T1].

7.4.7 Testing Requirements

- a. The affected Mill #14 and Mill #15 are subject to the applicable testing requirements in 40 CFR 60.675. This regulation is attached hereto and incorporated herein by reference (see Attachment 1).
- b. The affected Mill #14 and Mill #15 are subject to the applicable testing requirements established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).

7.4.8 Monitoring Requirements

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

A continuous monitoring system shall be installed, maintained, and operated in accordance with the provisions of 40 CFR 60.674 (see Attachment 1).

7.4.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected Mill #14 and Mill #15 to demonstrate compliance with Conditions 5.5.1, 7.1.3, and 7.1.6, pursuant to Section 39.5(7)(b) of the Act:

- a. Quantity of material processed (T/hr, T/yr), and/or Hours of operation of equipment (hr/day, hr/yr).
- b. Natural gas usage (mmcf/yr) and/or Distillate oil usage (gal/yr).
- c. The affected Mill #14 and Mill #15 are subject to the applicable recordkeeping requirements established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).
- d. Records addressing use of good operating practices for the cyclones, and filters:
 - i. Records for periodic inspection of the cyclones, filters, and scrubbers with date, individual performing the inspection, and nature of inspection; and
 - ii. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
- e. Monthly and aggregate annual PM emissions from the affected Mill #14 and Mill #15 shall be maintained, based on throughput and the applicable emission factors, with supporting calculations.
- f. Monthly and aggregate annual NO_x, PM, SO₂, and VOM emissions from the dryers associated with the affected Mill #14 and Mill #15 shall be maintained, based on fuel usage and the applicable emission factors, with supporting calculations.

7.4.10 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.

7.4.11 Operational Flexibility/Anticipated Operating Scenarios

None

7.4.12 Compliance Procedures

- a. Compliance with the opacity limitations of Condition 5.2.2 & 7.4.3, 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, 7.4.3 and 7.4.6 from the affected emission sources shall be based on the recordkeeping requirements in Condition 7.4.9 and the emission rates and formulas listed below:

Description	Dust collector	PM Emission Limit gr/scf	PM Emission rate lbs/hr
Mill #14	14MDC001	0.022	0.39
Mill #15	15MDC001	0.022	5.26

The emission rates are based on the NSPS and maximum airflow (2,091 scfm dust collector 14MDC001 & 27,883 scfm dust collector 15MDC001) as indicated in the application.

The emission factors are from the application based on AP-42 factor.

$$\text{Emissions (lbs/hr)} = \text{Emission Factor (lbs/T)} \times \text{Process weight rate (T/hr)} \times (1 - \text{Control Efficiency}/100)$$

and

$$\text{Emissions (T)} = \text{Emission Rates (lbs/hr)} \times \text{Hours of operation (hrs/yr)} \times 1/2000$$

- c. Compliance with the emission limits in Condition 5.5.1 and 7.4.3 from each affected mill furnace shall be based on the recordkeeping requirements in Condition 7.4.9 and the emission factors and formulas listed below:

- i. Emissions from the affected mill furnace/dryer burning natural gas shall be calculated based on the following emission factors:

Pollutant	Emission Factor lbs/10 ⁶ scf
NO _x	140
PM	7.6
VOM	5.5
SO ₂	0.6
CO	35

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.

$$\text{Emissions (ton/yr)} = (\text{natural gas usage, mmcf/yr}) \times (\text{the applicable emission factor, lb/mmcf}) \times (\text{ton}/2000 \text{ lb})$$

- ii. Emissions from the affected mill furnace/dryer burning distillate fuel oil shall be calculated based on the following emission factors:

<u>Pollutant</u>	<u>Emission Factors (lb/10³ gallon)</u>
PM	2
NO _x	20
SO ₂	142%S
VOM	0.6
CO	5

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

These are the emission factors for uncontrolled distillate fuel oil combustion in commercial/institutional/residential combustors, Tables 1.3-1, 1.3-3 and 1.3-7, AP-42, Volume I, Fifth Edition, September 1998. "%S" indicates that the weight % of sulfur in the oil should be multiplied by the value given.

Emissions (ton) = distillate fuel oil consumed (gallons) multiplied by the appropriate emission factor/2000.

- iii. Total emissions for each pollutant are to be determined by combining the results of Conditions 7.4.12.

7.5 Unit 05: Non-metallic mineral dry grinding & component blending (Ball mills, Roller mills & Pin mixers)

7.5.1 Description

The final stages of the grinding/processing include component blending in rotary pin mixers. Only a portion of the product passes through this component blending circuit. Typically, a non-volatile organic material is added to prevent clumping or agglomeration of the product and improve its material handling characteristics. The only organic material added that has any volatility is propylene glycol. The extremely low vapor pressure of propylene glycol (less than 0.1 mm mercury at ambient temperature) results in very low emission rates. Based on conversations with Huber's propylene glycol supplier, the worst-case volatilization rate for typical conditions in the Pin Mixer system is estimated to be a 1% loss.

7.5.2 List of Emission Units and Pollution Control Equipment

Description	Mill #	Equipment	Emission Control Equipment
Non-metallic mineral dry grinding & component blending (Ball mills, Roller mills & Pin mixers)	Mill #2	Miss run feed tank, 2 Vibratory feeders, Rock hopper, Bucket elevator, Mill feed tank, Mill furnace, Roller mill, 6 Air classifiers-Sifters, Rotary pin mixer, 2 Finished product tanks, 2 Bagging stations, 3 Belt conveyors	3 Dust collectors /Baghouses
	Mill #7	Conveyor (Mill #1 FPT to Mill #7), Ball mill, Bucket elevator, 9 Air classifiers-Sifters, Pneumatic transfer system, Furnace, Rotary pin mixer, 2 Finished product tanks, 2 Bagging stations	4 Dust collectors /Baghouses

Description	Mill #	Equipment	Emission Control Equipment
Non-metallic mineral dry grinding & component blending (Ball mills, Roller mills & Pin mixers)	Mill #16	2 Mill feed tanks, Screw feeder, Vertical impact mill, Conveyance system, Rotary pin mixer, 2 Finished product tanks, Bagging station	2 Dust collectors /Baghouses
	Mill #27	Conveyor (Mill #1 FPT to Mill #27), Ball mill, Bucket elevator, 10 Air classifiers-Sifters, Pneumatic transfer system, Furnace, Rotary pin mixer, Finished product tank, 2 Bagging stations	3 Dust collectors /Baghouses
	Mill #29	Feed tank, 2 Mixers, Air classifier-Sifter, Rotary pin mill, Finished product tank, 2 Bagging stations	Dust collector/ Baghouse

7.5.3 Applicability Provisions and Applicable Regulations

- a. An "affected Mill #2, Mill #7, Mill #16, Mill #19, Mill #27 and Mill #29" for the purpose of these unit-specific conditions is an emission unit described in conditions 7.5.1 and 7.5.2.
- b. The affected Mill #2, Mill #7, Mill #16, Mill #19, Mill #27 and Mill #29 are subject to the NSPS for Non-Metallic Mineral Processing Plant, 40 CFR 60 Subparts A and OOO, because the plant commenced construction or modification after August 31, 1983. The Illinois EPA is administering NSPS in Illinois on behalf of the USEPA under a delegation agreement. This regulation is attached hereto and incorporated herein by reference (see Attachment 1).
- c. The affected Mill #2, Mill #7, Mill #16, Mill #19, Mill #27 and Mill #29 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 Mill #2, Mill #7, Mill #16, Mill #19, Mill #27 and Mill #29 are subject to the emission limits identified in Condition 5.2.2.

7.5.4 Non-Applicability of Regulations of Concern

- a. The affected Mill #2, Mill #7, Mill #16, Mill #19, Mill #27 and Mill #29 are 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 PM₁₀, as identified in 35 IAC 212.324(a)(1).

7.5.5 Operational and Production Limits and Work Practices

- a. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate the affected Mill #2, Mill #7, Mill #16, Mill #19, Mill #27 and Mill #29 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating

and maintenance procedures, and inspection of the source [40 CFR 60.11(d)].

- b. The Permittee shall follow good operating practices for the cyclones, and filters, including periodic inspection, routine maintenance and prompt repair of defects.

7.5.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected Mill #14 and Mill #15 are subject to the following:

- a. The affected emission units are subject to emission limitations established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).
- b. The limitations in the State Construction and Operating Permits were established pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permits do not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].
- c. 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) [T1].

7.5.7 Testing Requirements

- a. The affected Mill #2, Mill #7, Mill #16, Mill #19, Mill #27 and Mill #29 are subject to the applicable testing requirements in 40 CFR 60.675. This regulation is attached hereto and incorporated herein by reference (see Attachment 1).
- b. The affected Mill #2, Mill #7, Mill #16, Mill #19, Mill #27 and Mill #29 are subject to the applicable testing requirements established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).

7.5.8 Monitoring Requirements

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

A continuous monitoring system shall be installed, maintained, and operated in accordance with the provisions of 40 CFR 60.674 (see Attachment 1).

7.5.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected Mill #2, Mill #7, Mill #16, Mill #19, Mill #27 and Mill #29 to demonstrate compliance with Conditions 5.5.1, 7.5.3, and 7.5.6, pursuant to Section 39.5(7)(b) of the Act:

- a. Quantity of material processed (T/hr, T/yr), and/or Hours of operation of equipment (hr/day, hr/yr).
- b. Natural gas usage (mmcf/yr) and/or Distillate oil usage (gal/yr).
- c. The affected Mill #2, Mill #7, Mill #16, Mill #19, Mill #27 and Mill #29 are subject to the applicable recordkeeping requirements established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).
- d. Records addressing use of good operating practices for the cyclones, and filters:
 - i. Records for periodic inspection of the cyclones, filters, and scrubbers with date, individual performing the inspection, and nature of inspection; and
 - ii. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
- e. Monthly and aggregate annual PM emissions from the affected Mill #2, Mill #7, Mill #16, Mill #19, Mill #27 and Mill #29 shall be maintained, based

throughput and the applicable emission factors, with supporting calculations.

- f. Monthly and aggregate annual NO_x, PM, SO₂, and VOM emissions from the dryers associated with the affected Mill #2, Mill #7, Mill #16, Mill #19, Mill #27 and Mill #29 shall be maintained, based on fuel usage and the applicable emission factors, with supporting calculations.

7.5.10 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.

7.5.11 Operational Flexibility/Anticipated Operating Scenarios

None

7.5.12 Compliance Procedures

- a. Compliance with the opacity limitations of Condition 5.2.2 & 7.5.3, 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, 7.5.3 and 7.5.6 from the affected emission sources shall be based on the recordkeeping requirements in Condition 7.5.9 and the emission rates and formulas listed below:

Mill #	Dust collector	Airflow SCFM	PM Emission rate lbs/hr
2	02MDC001	11328	0.97
	02MDC002	2614	0.22
	02MDC003	1452	0.12
7	07MDC001	13554	1.16
	07MDC002	4124	0.35
	07MDC003	523	0.04
	07MDC004	523	0.04
16	16MDC001	2178	0.19
	16MDC002	5882	0.50
27	27MDC001	10456	0.90
	27MDC002	4647	0.40
	27MDC003	2430	0.21
29	29MDC001	11192	0.96

The emission rates are from the application, derived from PM Emission factor 0.01 gr/scf and airflow rate shown in the above table.

Emissions (T) = Emission Rates (lbs/hr) x Hours of operation (hrs/yr)/2000.

- c. Compliance with the emission limits in Condition 5.5.1, 7.5.3 and 7.5.6 from each affected mill furnace shall be based on the recordkeeping requirements in Condition 7.5.9 and the emission factors and formulas listed below:

- i. Emissions from the affected mill furnace/dryer burning natural gas shall be calculated based on the following emission factors:

Pollutant	Emission Factor lbs/10 ⁶ scf
NO _x	140
PM	7.6
VOM	5.5
SO ₂	0.6
CO	35

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

- ii. Emissions from the affected mill furnace/dryer burning distillate fuel oil shall be calculated based on the following emission factors:

<u>Pollutant</u>	<u>Emission Factors (lb/10³ gallon)</u>
PM	2
NO _x	20
SO ₂	142%S
VOM	0.6
CO	5

These are the emission factors for uncontrolled distillate fuel oil combustion in commercial/institutional/residential combustors, Tables 1.3-1, 1.3-3 and 1.3-7, AP-42, Volume I, Fifth Edition, September 1998. "%S" indicates that the weight % of sulfur in the oil should be multiplied by the value given.

Emissions (ton) = distillate fuel oil consumed (gallons) multiplied by the appropriate emission factor/2000.

- iii. Total emissions for each pollutant are to be determined by combining the results of Conditions 7.5.12.

- d. VOC emissions from component blending:

VOC emissions = Propylene glycol usage (gallons) x 8.989 lbs/gallon x 0.01 (1% loss)

7.6 Unit 06: Non-metallic mineral packaging & bulk load-out

7.6.1 Description

Most of the grinding/processing mills include finished product storage tank which are typically loaded via a pneumatic transfer system. Venting from all of the finished product storage tank is controlled by a dust collector. These tanks can then transfer materials to other mills or to one of three central packaging systems (Mill 26, 30 or 33). Mill 26 consists of a series of silos that re each equipped with a dust-free load-out for bulk tank trucks or railcars, and also can direct product to a series of bagging stations. Mill 30 consists of a series of silo that are connected to the primary bagging stations in the finished product warehouse. These include a manual bagger, automatic bagger, and a super sack (1,000 pound) bagging cart. All of the product bagging stations are vented through dust collections. In addition to Mill 26 and 30, several other mills have finished product tanks that are equipped with dust-free load-outs for tank trucks or railcars or individual manual bagging stations. Mill 33 is a bulk load-out silo equipped dust-free load-outs for trucks and railcars.

7.6.2 List of Emission Units and Pollution Control Equipment

Description	Mill #	Equipment	Emission Control Equipment
Non-metallic mineral packaging & bulk load-out	Mill #26	10 Finished product silos, 3 Finished product baggers, 8 Dust free load-outs Feed tank, 2 Mixers, Air classifier-Sifter, Rotary pin mill, Finished product tank, 2 Bagging stations	10 Dust collectors /Baghouses
	Mill #30	9 Finished product silos, Bagger (Manual cart), Bagger (automatic cart), Super stacker, Finished product conveyor	10 Dust collectors /Baghouses
	Mill #33	Finished product silo, 2 Dust free load-outs rails and truck	2 Dust collectors /Baghouses

7.6.3 Applicability Provisions and Applicable Regulations

- a. An "affected Mill #26, Mill #30 and Mill #33" for the purpose of these unit-specific conditions is an emission unit described in conditions 7.6.1 and 7.6.2.
- b. The affected Mill #26, Mill #30 and Mill #33 are subject to the NSPS for Non-Metallic Mineral Processing Plant, 40 CFR 60 Subparts A and 000, because the plant commenced construction or modification after August 31, 1983. The Illinois EPA is administering NSPS in Illinois on behalf of the USEPA under a delegation agreement. This regulation is attached hereto and incorporated herein by reference (see Attachment 1).
- c. The affected Mill #26, Mill #30 and Mill #33 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 2) [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 Mill #26, Mill #30 and Mill #33 are subject to the emission limits identified in Condition 5.2.2.

7.6.4 Non-Applicability of Regulations of Concern

- a. The affected Mill #26, Mill #30 and Mill #33 are 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 PM₁₀, as identified in 35 IAC 212.324(a)(1).

7.6.5 Operational and Production Limits and Work Practices

- a. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate the affected Mill #26, Mill #30 and Mill #33 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source [40 CFR 60.11(d)].
- b. The Permittee shall follow good operating practices for the cyclones, and filters, including periodic inspection, routine maintenance and prompt repair of defects.

7.6.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected Mill #26, Mill 30 and Mill #33 are subject to the following:

- a. The affected emission units are subject to emission limitations established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).
- b. The limitations in the State Construction and Operating Permits were established pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permits do not constitute a new major source or major modification pursuant to Title I of the CAA,

specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].

- c. 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) [T1].

7.6.7 Testing Requirements

- a. The affected Mill #26, Mill 30 and Mill #33 are subject to the applicable testing requirements in 40 CFR 60.675. This regulation is attached hereto and incorporated herein by reference (see Attachment 1).
- b. The affected Mill #26, Mill 30 and Mill #33 are subject to the applicable testing requirements established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).

7.6.8 Monitoring Requirements

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

A continuous monitoring system shall be installed, maintained, and operated in accordance with the provisions of 40 CFR 60.674 (see Attachment 1).

7.6.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected Mill #26, Mill #30 and Mill #33 to demonstrate compliance with Conditions 5.5.1, 7.1.3, and 7.1.6, pursuant to Section 39.5(7)(b) of the Act:

- a. Quantity of material processed (T/hr, T/yr), and/or Hours of operation of equipment (hr/day, hr/yr).
- b. The affected Mill #26, Mill #30 and Mill #33 are subject to the applicable recordkeeping requirements established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).

FINAL DRAFT/PROPOSED CAAPP PERMIT

J.M. Huber Corporation

I.D. No.: 001815AAS

Application No.: 95070021

September 3, 2002

- c. Records addressing use of good operating practices for the cyclones, and filters:
 - i. Records for periodic inspection of the cyclones, filters, and scrubbers with date, individual performing the inspection, and nature of inspection; and
 - ii. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
- d. Monthly and aggregate annual PM emissions from the affected Mill #26, Mill #30 and Mill #33 shall be maintained, based throughput and the applicable emission factors, with supporting calculations.

7.6.10 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.

7.6.11 Operational Flexibility/Anticipated Operating Scenarios

None

7.6.12 Compliance Procedures

- a. Compliance with the opacity limitations of Condition 5.2.2 & 7.6.3, the Permittee shall conduct a qualitative visible emissions observation once each day to observe for the presence of abnormal visible emissions.

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

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, 7.6.3 and 7.6.6 from the affected emission sources shall be based on the recordkeeping requirements in Condition 7.6.9 and the emission rates and formulas listed below:

Mill #	Dust collector	Airflow SCFM	PM Emission rate lbs/hr
26	26MDC001	2430	0.21
	26MDC002	2430	0.21
	26MDC003	2430	0.21
	26MDC004	2430	0.21
	26MDC005	2430	0.21
	26MDC006	2430	0.21
	26MDC007	2430	0.21
	26MDC008	2430	0.21
	26MDC009	2430	0.21
	26MDC010	5400	0.46
30	30MDC001	5228	0.45
	30MDC002	5228	0.45
	30MDC003	5228	0.45
	30MDC004	5228	0.45
	30MDC005	5228	0.45
	30MDC006	5228	0.45
	30MDC007	5228	0.45
	30MDC008	5228	0.45
	30MDC009	5228	0.45
	30MDC010	2430	0.21
33	33MDC001	4320	0.37
	33MDC002	762	0.07
	33MDC003	762	0.07

The emission rates are from the application, derived from PM Emission factor 0.01 gr/scf and airflow rate shown in the above table.

Emissions (T) = Emission Rates (lbs/hr) x Hours of operation (hrs/yr)/2000.

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

- c. Compliance provisions addressing Conditions 7.6.3(d) and (e) are note set by this permit as compliance is assumed to be achieved by the kind of material usage in normal operation of the affected emission unit.

7.7 Unit 07: Trace mineral grinding & processing (Rotary dryer & Roller mill)

7.7.1 Description

The initial step in this process is the truck unloading of metallic minerals into outside rock hoppers. Depending on the type of mineral and moisture content, the material is either fed to a rotary dryer or directly to a roller mill for grinding. The rotary dryer is primarily fired with natural gas, but may also burn No. 2 fuel oil as a back-up fuel. The rotary dryer (Mill 20) discharges to a cyclone and then a vibratory screen where the fines fraction is separated out as a finished product. The coarse fraction fines fraction is separated out as a finished product. The coarse fraction from the screen is directed to a hammer mill and then recycled back to the dryer for further processing. All of the process air vented from the main mill cyclone, vibratory screen and hammer mill is directed through a baghouse. This baghouse functions as another product separation step, and is subject to one of the highest particulate inlet loadings of any dust collector at the facility. The Mill 20 baghouse was stack tested in June of 1993, and showed an outlet concentration of 0.0155 gr/dscf, which is below the concentration standard set in the NSPS standard for non-metallic mineral processing (0.022 gr/dscf). This test on a worst-case dust collector indicates that all of the dust collectors subject to the NSPS limit are complying with the outlet concentration standard. The remaining pneumatic transfers of material to the finished product storage tanks, as well as the dust-free railcar and bulk truck load-outs are also controlled by dust collectors.

Mill 21 is a roller mill that discharges to a cyclone which separates out the appropriate size particles as finished product. The remaining fraction is fed back into the roller mill for further processing. Mill 21 discharges to a series of finished product tanks that provide feed stock to Mill 22 (trace minerals production plant) or feed a bagging station. The roller mill and main mill cyclone, pneumatic transfer to the finished product storage tanks, and bagging station are controlled by dust collectors. The only emissions not controlled by a dust collector re from the initial loading of the outside rock hopper, which is equipped with a partial enclosure.

7.7.2 List of Emission Units and Pollution Control Equipment

Description	Mill #	Equipment	Emission Control Equipment
Trace mineral grinding & processing (Rotary dryer & Roller mill)	Mill #20	Wet rock hopper, main mill furnace, Rotary dryer, Air classifier, 3 Bucket elevators, Vibratory screen, Hammer mill (Full circle pulverator), 4 Finished product tanks, Bagging station	6 Dust collectors /Baghouses
	Mill #21	Rock hopper, Mill furnace, Rotary mill, Air classifier/Sifter	Dust collector/ Baghouse
	Mill #24	Full circle pulverator, Mill feed tank, Weigh belt feeder, Product pan granulator, Fluid bed dryer, Main mill furnace, Flow dryer, Metal screw conveyor, Vibratory screen, Finished product tank, Finished product bagger, Super sack bagger	Dust collector/ Baghouse

7.7.3 Applicability Provisions and Applicable Regulations

- a. An "affected Mill #20, Mill #21 and Mill #24" for the purpose of these unit-specific conditions is an emission unit described in conditions 7.7.1 and 7.7.2.
- b. The affected Mill #20, Mill #21 and Mill #24 are subject to the NSPS for Non-Metallic Mineral Processing Plant, 40 CFR 60 Subparts A and 000, because the plant commenced construction or modification after August 31, 1983. The Illinois EPA is administering NSPS in Illinois on behalf of the USEPA under a delegation agreement. This regulation is attached hereto and incorporated herein by reference (see Attachment 1).

- c. The affected Mill #20, Mill #21 and Mill #24 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 2) [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 Mill #20, Mill #21 and Mill #24 are subject to the emission limits identified in Condition 5.2.2.

7.7.4 Non-Applicability of Regulations of Concern

- a. The affected Mill #20, Mill #21 and Mill #24 are 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 PM₁₀, as identified in 35 IAC 212.324(a)(1).

7.7.5 Operational and Production Limits and Work Practices

- a. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate the affected Mill #20, Mill #21 and Mill #24 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are

being used will be based on information available to the Illinois EPA or USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source [40 CFR 60.11(d)].

- b. The Permittee shall follow good operating practices for the cyclones, and filters, including periodic inspection, routine maintenance and prompt repair of defects.

7.7.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected Mill #20, Mill #21 and Mill #24 are subject to the following:

- a. The affected emission units are subject to emission limitations established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).
- b. The limitations in the State Construction and Operating Permits were established pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permits do not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].
- c. 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) [T1].

7.7.7 Testing Requirements

- a. The affected Mill #20, Mill #21 and Mill #24 are subject to the applicable testing requirements in 40 CFR 60.675. This regulation is attached hereto and incorporated herein by reference (see Attachment 1).
- b. The affected Mill #20, Mill #21 and Mill #24 are subject to the applicable testing requirements established in State Construction and Operating

Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).

7.7.8 Monitoring Requirements

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

A continuous monitoring system shall be installed, maintained, and operated in accordance with the provisions of 40 CFR 60.674 (see Attachment 1).

7.7.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected Mill #20, Mill #21 and Mill #24 to demonstrate compliance with Conditions 5.5.1, 7.7.3, and 7.7.6, pursuant to Section 39.5(7)(b) of the Act:

- a. Quantity of material processed (T/hr, T/yr), and/or Hours of operation of equipment (hr/day, hr/yr).
- b. Natural gas usage (mmcf/yr) and/or Distillate oil usage (gal/yr).
- c. The affected Mill #20, Mill #21 and Mill #24 are subject to the applicable recordkeeping requirements established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).
- d. Records addressing use of good operating practices for the cyclones, and filters:
 - i. Records for periodic inspection of the cyclones, filters, and scrubbers with date, individual performing the inspection, and nature of inspection; and
 - ii. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
- e. Monthly and aggregate annual PM emissions from the affected Mill #20, Mill #21 and Mill #24 shall be

maintained, based throughput and the applicable emission factors, with supporting calculations.

- f. Monthly and aggregate annual NO_x, PM, SO₂, and VOM emissions from the dryers associated with the affected Mill #20, Mill #21 and Mill #24 shall be maintained, based on fuel usage and the applicable emission factors, with supporting calculations.

7.7.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected Mill #20, Mill #21 and Mill #24 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.

7.7.11 Operational Flexibility/Anticipated Operating Scenarios

None

7.7.12 Compliance Procedures

- a. Compliance with the opacity limitations of Condition 5.2.2 & 7.7.3, 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, 7.7.3 and 7.7.6 from the affected emission sources shall be based on the recordkeeping requirements in Condition 7.7.9 and the emission rates and formulas listed below:

Mill #	Dust collector	Airflow SCFM	PM Emission rate lbs/hr
20	20MDC001	27157	3.61
	20MDC002	544	0.07
	20MDC003	544	0.07
	20MDC004	544	0.07
	20MDC005	544	0.07
	20MDC006	1512	0.20
21	21MDC001	3718	0.49
24	24MDC001	4000	0.53

The emission rates are from the application, derived from PM Emission factor 0.0155 gr/scf and airflow rate shown in the above table.

Emissions (T) = Emission Rates (lbs/hr) x Hours of operation (hrs/yr)/2000.

- c. Compliance with the emission limits in Condition 5.5.1 and 7.7.3 from each affected mill furnace shall be based on the recordkeeping requirements in Condition 7.2.9 and the emission factors and formulas listed below:
- i. Emissions from the affected mill furnace burning natural gas shall be calculated based on the following emission factors:

Pollutant	Emission Factor lbs/10 ⁶ scf
NO _x	140
PM	7.6
VOM	5.5
SO ₂	0.6
CO	35

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 (ton/yr) = (natural gas usage, mscf/yr) x (the applicable emission factor, lb/mscf) x (ton/2000 lb)

- ii. Emissions from the affected mill furnace burning distillate fuel oil shall be calculated based on the following emission factors:

<u>Pollutant</u>	<u>Emission Factors (lb/10³ gallon)</u>
PM	2
NO _x	20
SO ₂	142%S
VOM	0.6
CO	5

These are the emission factors for uncontrolled distillate fuel oil combustion in commercial/institutional/residential combustors, Tables 1.3-1, 1.3-3 and 1.3-7, AP-42, Volume I, Fifth Edition, September 1998. "%S" indicates that the weight % of sulfur in the oil should be multiplied by the value given.

Emissions (ton) = distillate fuel oil consumed (gallons) multiplied by the appropriate emission factor/2000.

- iii. Total emissions for each pollutant are to be determined by combining the results of Conditions 7.7.12.

7.8 Unit 08: Trace minerals mixing

7.8.1 Description

Feed stock for this operation is obtained from Mill 21 and from trace minerals purchased in bags, super sacks, or bulk shipments from a variety of suppliers. These minerals are conveyed to a series of product tanks which feed a weight vessel and mixing system. The mixer discharges to a finished product storage tank which is connected to various bagging stations. All of the process air discharge from Mill 22 is directed through dust collectors. Trace minerals mixing is the only current process that generates hazardous air pollutant (HAP) emissions at the facility. The HAP emissions consist of selenium and cobalt, which are both minerals processed as livestock feed additives. Because all of the process air from Mill 22 is controlled by dust collectors, the total HAP emissions are extremely low (less than 0.1 ton/yr).

7.8.2 List of Emission Units and Pollution Control Equipment

Description	Mill #	Equipment	Emission Control Equipment
Trace minerals mixing	Mill #22	2 Rock hoppers, Super sack hopper, Hand dump hopper/flowveyor, 19 Mill feed tanks, Weigh vessel, Single roll crusher, mixer, Flowveyor, Finished product tank, 3 Finished product baggers, Super sack bagger, Hopper/Flowveyor (selenium production), Mixer, Bagger	14 Dust collectors /Baghouses

7.8.3 Applicability Provisions and Applicable Regulations

- a. An "affected Mill #22" for the purpose of these unit-specific conditions is an emission unit described in conditions 7.8.1 and 7.8.2.
- b. The affected Mill #22 is subject to the NSPS for Non-Metallic Mineral Processing Plant, 40 CFR 60 Subparts A and 000, because the plant commenced construction

or modification after August 31, 1983. The Illinois EPA is administering NSPS in Illinois on behalf of the USEPA under a delegation agreement. This regulation is attached hereto and incorporated herein by reference (see Attachment 1).

- c. The affected Mill #22 is 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 2) [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 Mill #22 is subject to the emission limits identified in Condition 5.2.2.

7.8.4 Non-Applicability of Regulations of Concern

- a. The affected Mill #22 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 PM₁₀, as identified in 35 IAC 212.324(a)(1).

7.8.5 Operational and Production Limits and Work Practices

- a. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate the affected Mill #22 including associated air pollution control

equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source [40 CFR 60.11(d)].

- b. The Permittee shall follow good operating practices for the cyclones, and filters, including periodic inspection, routine maintenance and prompt repair of defects.

7.8.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected Mill #22 is subject to the following:

- a. The affected emission units are subject to emission limitations established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).
- b. The limitations in the State Construction and Operating Permits were established pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permits do not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].
- c. 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) [T1].

7.8.7 Testing Requirements

- a. The affected Mill #22 is subject to the applicable testing requirements in 40 CFR 60.675. This regulation is attached hereto and incorporated herein by reference (see Attachment 1).

- b. The affected Mill #22 is subject to the applicable testing requirements established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).

7.8.8 Monitoring Requirements

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

A continuous monitoring system shall be installed, maintained, and operated in accordance with the provisions of 40 CFR 60.674 (see Attachment 1).

7.8.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected Mill #22 to demonstrate compliance with Conditions 5.5.1, 7.8.3, and 7.8.6, pursuant to Section 39.5(7)(b) of the Act:

- a. Quantity of material processed (T/hr, T/yr), and/or Hours of operation of equipment (hr/day, hr/yr).
- b. The affected Mill #22 is subject to the applicable recordkeeping requirements established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).
- c. Records addressing use of good operating practices for the cyclones, and filters:
 - i. Records for periodic inspection of the cyclones, filters, and scrubbers with date, individual performing the inspection, and nature of inspection; and
 - ii. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
- d. Monthly and aggregate annual PM emissions from the affected Mill #22 shall be maintained, based

throughput and the applicable emission factors, with supporting calculations.

7.8.10 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.

7.8.11 Operational Flexibility/Anticipated Operating Scenarios

None

7.8.12 Compliance Procedures

- a. Compliance with the opacity limitations of Condition 5.2.2 & 7.8.3, 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, 7.8.3 and 7.8.6 from the affected emission sources shall be based on the recordkeeping requirements in Condition 7.8.9 and the emission rates and formulas listed below:

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

Mill #	Dust collector	Airflow SCFM	PM Emission rate lbs/hr
22	22MDC002	5882	0.76
	22MDC003	2430	0.31
	22MDC004	2430	0.31
	22MDC005	2430	0.31
	22MDC006	2430	0.31
	22MDC007	2430	0.31
	22MDC008	2430	0.31
	22MDC009	2430	0.31
	22MDC010	2430	0.31
	22MDC011	2430	0.31
	22MDC012	2430	0.31
	22MDC013	2430	0.31
	22MDC014	2430	0.31
	22MDC015	2430	0.31

The emission rates are from the application, derived from PM Emission factor 0.015 gr/scf and airflow rate shown in the above table.

Emissions (T) = Emission Rates (lbs/hr) x Hours of operation (hrs/yr)/2000.

- c. HAP Emissions from the Selenium mixing room shall be calculated from the following parameters:

Maximum airflow 6359 scfm; maximum outlet PM concentration 0.02 gr/scf; Selenium concentration 6.50%; Cobalt concentration 0.65%.

- d. Compliance provisions addressing Conditions 7.8.3(d) and (e) are not set by this permit as compliance is assumed to be achieved by the kind of material usage in normal operation of the affected emission unit.

7.9 Unit 09: Co-Generation System

7.9.1 Description

The Permittee operates 2, 1440 HP diesel power internal combustion engines to generate supplemental power during high electric demand days.

7.9.2 List of Emission Units and Pollution Control Equipment

Description	Capacity
2 General Motors Engines	3.7 mmBtu/hr/each

7.9.3 Applicability Provisions and Applicable Regulations

- a. The "affected engine" for the purpose of these unit-specific conditions, is distillate oil fired engine used to drive emergency power generator. The affected engine with actual heat input of less than 250 mmBtu/hr is located outside the Chicago, St. Louis (Illinois) or Peoria major metropolitan areas.
- b. No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2,000 ppm [35 IAC 214.301].
- c. 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 any emission unit, except as provided in 35 IAC 215.302, 215.303, or 215.304 and the following exemption: If no odor nuisance exists the limitation of 35 IAC 215 Subpart G shall only apply to photochemically reactive material [35 IAC 215.301].
- d. The affected engine is subject to the emission limits identified in Condition 5.2.2.

7.9.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected engine not being subject to the requirements of 35 IAC 212.322, emissions of particulate matter from process emission units, because due to the unique nature of this process, such rules cannot reasonably be applied.

- b. The affected engine is not subject to 35 IAC 216.121, emissions of carbon monoxide from fuel combustion emission unit, because the affected engine is not by definition a fuel combustion emission unit.
- c. The affected engine 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 PM₁₀, as identified in 35 IAC 212.324(a)(1).

7.9.5 Operational and Production Limits and Work Practices

- a. Distillate oil shall be the only fuel fired in the affected engine.

7.9.6 Emission Limitations

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

- a. The affected emission units are subject to emission limitations established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).
- b. The limitations in the State Construction and Operating Permits were established pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permits do not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].
- c. 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) [T1].

7.9.7 Testing Requirements

None

7.9.8 Monitoring Requirements

None

7.9.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected engine to demonstrate compliance with Conditions of Sections 5.5 and 7.9 pursuant to Section 39.5(7)(b) of the Act:

- a. The affected engine is subject to the applicable recordkeeping requirements established in State Construction and Operating Permits, which have been attached hereto and incorporated herein by reference (see Attachment 3).

7.9.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected engine 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.

7.9.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.9.12 Compliance Procedures

- a. Compliance provisions addressing Condition 7.9.3 (b) and (c) is not set by this permit as compliance is assumed to be achieved by the proper operation of an affected engine.
- b. Compliance with the emission limits in Conditions 5.5 shall be based on the recordkeeping requirements in Condition 7.9.9 and the emission factors and formulas listed below:

FINAL DRAFT/PROPOSED CAAPP PERMIT

J.M. Huber Corporation

I.D. No.: 001815AAS

Application No.: 95070021

September 3, 2002

Emissions from the affected engine burning distillate oil shall be calculated based on the following emission factors:

Pollutant	Emission Factor lb/mmBtu	Emission Factor lb/1000 gallons
VOM	0.09	11.7
SO ₂	0.0005	0.065
PM	0.0697	9.06
NO _x	3.1	403
CO	0.81	105.3

These are emission factors determined for the affected engines using standard AP-42 emission factors and typical heat content 130,000 Btu/gal.

Engine Emissions (lb) = Distillate oil Consumed, (gallons) x The Appropriate Emission Factor (lb/1000 gallons)

7.10 Unit 10: Diesel fuel Storage Tanks

7.10.1 Description

Two bulk tanks are used for storage of diesel fuel to supply the standby generators. The tanks are 10,000-gallon and 17,000 gallon capacity, are equipped with submerged loading pipes, and atmospheric vents.

7.10.2 List of Emission Equipment and Pollution Control Equipment

Description	Emission Control
2 Diesel fuel Storage Tanks	Submerged Loading

7.10.3 Applicability Provisions

- a. An "affected tank," for the purpose of these unit-specific conditions, is a storage tank that is only subject to 35 IAC 215.122(b). A storage tank is subject to the requirements of 35 IAC 215.122(b) if the tank has a capacity greater than 250 gallons and is used to store a volatile organic liquid with a vapor pressure of 2.5 psia or greater at 70°F.
- b. The affected tank is subject to the emission limits identified in Condition 5.2.2.

7.10.4 Non-Applicability of Regulations of Concern

None

7.10.5 Operational and Production Limits and Work Practices

None

7.10.6 Emission Limitations

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

Emission limit for OM is not set for the affected storage tank, as potential to emit in the absence of permit limit is less than the significant and major source thresholds for these pollutants pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21.

7.10.7 Testing Requirements

None

7.10.8 Inspection and Monitoring Requirements

None

7.10.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for each affected tank to demonstrate compliance with Condition 7.10.5 pursuant to Section 39.5(7) of the Act:

- a. Design information for the tank showing the presence of a submerged loading pipe or submerged fill;
- b. Maintenance and repair records for the tank, as related to the repair or replacement of the loading pipe, if applicable;
- c. If applicable, a written description of the practices used for submerged filling the tank(s); and
- d. A logbook that identifies each shipment of diesel fuel added to the tank, with date, an indication as to whether submerged fill was used, and the name of the responsible individual, and the annual aggregate diesel fuel throughput, gallons per year.

7.10.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with the control and operating requirements as follows pursuant to Section 39.5(7)(f)(ii) of the Act:

- a. Any loading of diesel fuel or other VOL into an affected tank that was not in compliance with Condition 7.10.5, e.g., no "submerged loading pipe or submerged fill" within five days of becoming aware of the noncompliance status. This notification shall include a description of the event, the cause for the noncompliance, actions taken to correct the noncompliance and the steps taken to avoid future noncompliance.

- b. Any storage of diesel fuel or other VOL in an affected tank that is out of compliance with the control requirements (Condition 7.10.5) due to damage, deterioration, or other condition of the loading pipe, within 30 days of becoming aware of the noncompliance status. This notification shall include a description of the event, the cause for the noncompliance, actions taken to correct the noncompliance, and the steps to be taken to avoid future noncompliance.

7.10.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to an affected tank without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

- a. Changes to components related to either the "submerged loading pipe or submerged fill", including addition of new components and repair and replacement of components.
- b. Changes in the material stored in a tank provided the tank continue to comply with the Conditions of Section 7.6.5 of this permit.

7.10.12 Compliance Procedures

Compliance with the emission limits in condition 5.5.1 shall be based on the recordkeeping requirements in Condition 7.10.9 and the emission factors and formulas listed below:

For the purpose of estimating VOM emissions from the affected storage tank, the current version 4.09 of the TANKS program is acceptable, or any subsequent program submitted by the Permittee and accepted by Illinois EPA.

7.11 Unit 11 - Fugitive Emissions

7.11.1 Description

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

7.11.2 List of Emission Units

Vehicular Mile Traveled (VMT) on Unpaved Haul Roads

7.11.3 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 7.11.1 and 7.11.2.

7.11.4 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.

7.11.5 Operational and Production Limits and Work Practices

None

7.11.6 Emission Limitations

In addition to Condition 5.2.2 and the source-wide emission limitations in Condition 5.5, the fugitive emission sources are subject to the following:

None

7.11.7 Testing Requirements

None

7.11.8 Inspection Requirements

None

7.11.9 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, pursuant to Section 39.5(7)(b) of the Act:

- a. Unpaved haul roads (VMT/yr).

7.11.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of deviations of the affected fugitive 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.

7.11.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.11.12 Compliance Procedures

Compliance with the limits in Conditions 5.5.1 shall be based on the recordkeeping requirements in Condition 7.11.9 and the emission factors listed below:

	Uncontrolled PM emission factor lb/VMT
Bulk trucks	3.8
Package trucks	3.8

PM Emissions from Vehicular Mile Traveled (VMT) on unpaved haul roads:

$$\text{PM Emissions T/yr} = \text{Emission factor (lb/VMT)} \times \text{VMT} \times (1 - \text{control \%}/100) \times 1/2000$$

The above emission factors are from the application. The application indicates the haul roads are sprayed with water when needed.

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
5415 North University
Peoria, Illinois 61614
 - 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
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

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].

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

10.0 ATTACHMENTS

The following permits and attachments contain applicable requirements to this source and are an integral part of this permit. The permit conditions contained in these attachments should be thoroughly reviewed and complied with, including all emission limitations, monitoring, record keeping and reporting. Any requirements these permits and attachments that conflict with those requirements found in Sections 3 through 9 are superseded by those found in Sections 3 through 9.

10.1 Attachment 1 - Applicable New Source Performance Standards (NSPS)

40 CFR 60 Subpart 000--Standards of Performance
for Nonmetallic Mineral Processing Plants

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

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

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

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

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

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

10.3 Attachment 3 - State Construction and Operating Permits

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

217/782-2113

OPERATING PERMIT/NSPS SOURCES

PERMITTEE

J.M. Huber Corporation
Attn: Tom Newman
3150 Gardner Expressway
Quincy, Illinois 62301

Application No.: 92120070 I.D. No.: 001815AAS
Applicant's Designation: MILL 9 Date Received: November 28, 1994
Subject: Mill 9
Date Issued: February 22, 1995 Expiration Date: February 22, 1998
Location: 3150 Gardner Expressway, Quincy

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of a roller mill with a baghouse (8,000 cfm), a cyclone separator, a classifier, a new limestone storage silo (800T) with a new baghouse (4,000 cfm), two existing silo (150T each) each with a new baghouse (4,000 cfm), an existing silo (150T) with a new baghouse (2,500 cfm) and two rail bulk loadouts each with a baghouse (1,500 cfm), as described in the above referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. This lime mill is subject to New Source Performance Standards (NSPS), 40 CFR 60, Subparts A and OOO. The Illinois EPA is administering these standards in Illinois on behalf of the United States EPA under a delegation agreement.
2. Particulate matter emissions from vents or stacks shall not exceed 0.05 gm/dscm (0.022 gr/dscf) and 7 percent opacity (40 CFR 60.672(a)).
3. Fugitive emissions of particulate matter from grinding mills, screens (except from truck dumping), bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck or railcar loading operations shall not exceed 10 percent opacity, (40 CFR 60.672(b) and (d)).
4. At all times the Permittee shall also, to the extent practicable, maintain and operate these sources, including

associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.

5. The Permittee shall maintain records of the occurrence and duration of any malfunction of equipment which results in emissions in excess of applicable standards, pursuant to 40 CFR 60.7(b).
6. Emissions and operation of equipment shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Gas Flow Rate (cfm)</u>	<u>Controlled Particulate Matter Emissions (Lb/Hr)</u>	<u>Emissions (Ton/Yr)</u>
Roller Mill and Air Classifier w/Baghouse	8,000	1.50	6.60
800T Silo w/Baghouse	4,000	0.75	3.30
Two 150T Silos each w/Baghouse	4,000	0.75 (each)	3.30 (each)
150T Silo w/Baghouse	2,500	0.47	2.06
Two Rail Loadouts each w/Baghouse	1,500	0.28 (each)	1.23 (each)
	Total		21.02

These limits are based on the allowable emission rate (0.022 grains/dscf) and the maximum gas flow rates indicated in the application. The annual limit is the product of the hourly limit and the maximum hours of operation (8760 hr/yr) indicated in the application. Compliance with annual limits shall be determined from a running total of 12 months of data.

7. No person shall cause or allow any visible emissions of the fugitive particulate matter from any process, including any material handling or storage activity beyond the property line of the emission source, pursuant to 35 Ill. Adm. Code 212.301.

If you have any questions on this, please call Manish Patel at 217/782-2113.

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

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

DES:MNP:lat/sp/174Y,4-5

cc: IEPA, FOS Region 2
IEPA, FOS - CMU
USEPA

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

217/782-2113

OPERATING PERMIT - REVISED

PERMITTEE

J.M. Huber Corp. - Engineered Minerals Div.
Attn: Environmental Coordinator
3150 Gardner Expressway
Quincy, IL 62305-4005

Application No.: 72090220 I.D. No.: 001815AAS
Applicant's Designation: Date Received: April 10, 1996
Subject: Mills 6, 7, 7R, 7 Granular and 28 (designated as Mill 26)
Date Issued: June 10, 1996 Expiration Date: January 31, 1997
Location: 3150 Gardner Expressway, Quincy, Milrose Township,
Adams County

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of (A) existing sources: a Raymond mill, fluid bed dryer, storage tanks, pebble mill, bagpacker, Raymond mill plant, blow packer, pulverisor, pebble tube mill, pin mill bulk loading with spouts and baghouses, (B) mill #28: one truck hopper, bucket elevator, one IMP mill, one ball mill, one treating system, two air classifiers, three cartridge dust collectors, one bin vent filter, three feed tanks, three storage tanks with bin vent baghouses, and (C) 3 baggers and 35 ton finished product storage tank all controlled by a dust collector (26-MDC-010) as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. The new mill #28 is subject to New Source Performance Standards (NSPS), 40 CFR 60, Subparts A and 000. The Illinois EPA is administering these standards in Illinois on behalf of the United States EPA under a delegation agreement.
- b. Particulate matter emissions from vents or stacks shall not exceed 0.05 gm/dscm (0.022 gr/dscf) and 7% opacity (40 CFR 60.672(a)).
- c. Emissions and operation of equipment shall not exceed the following limits:

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

<u>Item of Equipment</u>	<u>Gas Flow Rate (cfm)</u>	<u>Particulate Matter (lb/hr) (ton/yr)</u>	
IMP Mill and Air Classifier w/Cartridge Dust Collector	8,000	1.50	6.60
Feed Tank w/Bin Vent Filter	1,000	0.19	0.80
Ball Mill, Air Classifier, & Feed Tank w/Cartridge Dust Collector	8,000	1.50	6.60
Treating System and Feed Tank w/Cartridge Dust Collector	3,000	0.57	2.50
Storage Tank #6 w/bin vent baghouse	2,100	0.40	1.75
Storage Tank #7 w/bin vent baghouse	2,100	0.40	1.75
Storage Tank #8 w/bin vent baghouse	2,100	0.40	1.75
Finished Product Storage Tank (35 ton) w/Main Dust Collector (26-MDC-010)	5,400	1.02	4.46

These limits are based on the allowable emission rate (0.022 grains/dscf) and the maximum gas flow rates indicated in the application. The annual limit is the product of the hourly limit and the maximum hours of operation (8736 hr/yr) indicated in the application. Compliance with annual limits shall be determined from a running total of 12 months of data.

2. No person shall cause or allow any visible emissions of fugitive particulate matter from any process, including any material handling or storage activity beyond the property line of the emission source, pursuant to 35 Ill. Adm. Code 212.301.

3. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the pollution control equipment covered under this permit such that the pollution control equipment be kept in proper working condition and not cause a violation of the Environmental Protection Act or regulations promulgated therein.

It should be noted that this permit has been revised to show replacement of bucket elevator as described in construction

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

permit #96040042, without any increase in emissions of
particulate matter into the atmosphere.

If you have any questions on this, please call Manish N. Patel at
217/782-2113.

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

DES:MNP:drk

cc: Region 2

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

217/782-2113

"REVISED"
OPERATING PERMIT - NSPS

PERMITTEE

Sem Minerals, L.P.
Attn: Paul Shelton
3806 Gardner Expressway
Quincy, Illinois 62301

Application No.: 72101037 I.D. No.: 001815AAS
Applicant's Designation: MILLS2345 Date Received: April 8, 1994
Subject: Raymond Mill 2, 3, 4 & 5
Date Issued: June 21, 1994 Expiration Date: April 8, 1999
Location: 3150 Gardner Expressway, Quincy

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of four Raymond Mills with baggers controlled with baghouses, classifiers, bulk loadout controlled with baghouses and IMP mill with dust collector, a limestone storage tank with dust collector, and a ground Limestone storage silo with a dust collector (Q60-Q200) as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. Emissions and operation of equipment shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Operating Hours (Hour/Year)</u>	<u>Particulate Matter Emissions Lb/Hour</u>	<u>Ton/Yr</u>
IMP Mill with dust collector	4,160	6.0	12.5

These limits are based on the information provided in the permit application. Compliance with annual limits shall be determined from a running total of 12 months of data.

2. This permit is issued based upon a minimal hourly emission rate and negligible annual emissions (less than 0.1 ton/year) of particulate matter from limestone storage tank.

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

3. The limestone storage silo is subject to New Source Performance Standards (NSPS), 40 CFR 60, Subparts A and 000. The Illinois EPA is administering these standards in Illinois on behalf of the United States EPA under a delegation agreement.
4. Particulate matter emissions from vents or stacks shall not exceed 0.05 gm/dscm (0.022 gr/dscf) and 7 percent opacity (40 CFR 60.672(a)).
5. Emissions and operation of equipment shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Operating Hours (Hour/Year)</u>	<u>Particulate Matter Emissions Lb/Hour</u>	<u>Ton/Yr</u>
Silo with dust collector	2,500	0.47	2.10

These limits are based on the allowable emission rate (0.022 grains/dscf) and the maximum gas flow rate indicated in the application. The annual limit is the product of the hourly limit and the maximum hours of operation (8736 hr/yr) indicated in the application. Compliance with annual limits shall be determined from a running total of 12 months of data.

6. No person shall cause or allow any visible emissions of fugitive particulate matter from any process, including any material handling or storage activity beyond the property line of the emission source, pursuant to 35 Ill. Adm. Code 212.301.

If you have any questions on this, please call Mangu Patel at 217/782-2113.

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

DES:MJP:TJM:psj

cc: Region 2

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

217/782-2113

"REVISED"
OPERATING PERMIT

PERMITTEE

Sem Minerals, L.P.
Attn: Paul Shelton
3806 Gardner Expressway
Quincy, Illinois 62301

Application No.: 75080054 I.D. No.: 001815AAS
Applicant's Designation: CRUSHER #1 Date Received: March 9, 1994
Subject: Crushing Plant #1
Date Issued: May 23, 1994 Expiration Date: May 23, 1999
Location: 3150 Gardner Expressway, Quincy

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of a hopper with water misters, 30 x 42 Pioneer primary jaw crusher, two enclosed 6' x 14' screens and enclosed Williams #20 slugger secondary hammermill crusher controlled by baghouse, three storage silos, and conveyors as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. This permit is issued based upon replacement of an existing baghouse with a new baghouse without any increase in emissions above those previously allowed.
2. No person shall cause or allow any visible emissions of fugitive particulate matter from any process, including any material handling or storage activity beyond the property line of the emission source, pursuant to 35 Ill. Adm. Code 212.301.

If you have any questions on this, please call Bill Marr at 217/782-2113.

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

DES:WDM:TJM:psj

cc: Region 2

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

217/782-2113

"REVISED"
OPERATING PERMIT

PERMITTEE

SEM Minerals, L.P.
Attn: Paul Shelton
3806 Gardner Expressway
Quincy, Illinois 62305

Application No.: 79070043 I.D. No.: 001815AAS
Applicant's Designation: MILL-15 Date Received: December 21, 1994
Subject: Ultra-Fine Limestone Grinding - Mill 15
Date Issued: March 22, 1995 Expiration Date: June 23, 1998
Location: 3150 Gardner Expressway, Quincy

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of a Raymond roller mill with Micro-Pulsaire dust collector (#1215-10-20), a Proctor and Schwartz spray dryer with Micro-Pulsaire dust collector (#384-KTRH-10-20), a St. Regis force flow packer with Micro-Pulsaire dust collector (#815-8-20) and a micro pulverizer with Micro-Pulsaire dust collector (#221TRH-8-35C) as described in the above-referenced application. This Permit is subject to standard conditions attached hereto.

It should be noted that this permit has been revised to include production of magnesium hydroxide and alumina trihydrate without any increase in particulate matter emissions above these previously allowed.

If you have any questions on this, please call Mangu Patel at 217/782-2113.

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

DES:MJP:jar

cc: Region 2

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

217/782-2113

OPERATING PERMIT - NSPS SOURCE - REVISED

PERMITTEE

SEM Minerals, L.P.
Attn: Paul Shelton
3806 Gardner Expressway
Quincy, Illinois 62301

Application No.: 90020001 I.D. No.: 001815AAS
Applicant's Designation: MILL 19 Date Received: April 28, 1997
Subject: Granular Mill (19)
Date Issued: July 7, 1997 Expiration Date: May 7, 2002
Location: 3150 Gardner Expressway, Quincy, Melrose Township,
Adams County

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of Mill 19 which involves equipment listed in Attachment A as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. The Mill 19 and associated operation listed in Attachment A are subject to New Source Performance Standards (NSPS) 40 CFR 60, Subparts A and 000. The Illinois EPA is administering these standards in Illinois on behalf of the United States EPA under a delegation agreement.
- b. Particulate matter emissions from vents or stacks shall not exceed 0.05 gm/dscm (0.022 gr/dscf) and 7 percent opacity (40 CFR 60.672(a)).
- c. At all times the Permittee shall also, to the extent practicable, maintain and operate these sources, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.
2. Emissions and operation of equipment shall not exceed the limits specified in Attachment A of this permit.
3. The Permittee shall not cause or allow any visible emissions of fugitive particulate matter from any process, including any material handling or storage activity beyond

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

the property line of the emission source, pursuant to 35
Ill. Adm. Code 212.301.

- 4a. The Permittee shall maintain records of the following
items, and such other items as may be appropriate to allow
the Illinois EPA to review compliance with the limits in
Condition 2.

Material processed from each operation (tons/hr and
tons/day).

- b. These records shall be retained for three years and shall
be available for inspection and copying by the Illinois
EPA.

It should be noted that this permit has been revised to
incorporate operation of equipment permitted in construction
permit 96010084 and 97040114. It should also be noted that all
the equipment and operation permitted in this permit are subject
to NSPS, 40 CFR 60, Subparts A and OOO. This permit has been
revised to indicate the applicability of the NSPS and also to
incorporate limitations and changes requested by the applicant.

If you have any questions on this, please call Manish N. Patel at
217/782-2113.

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

DES:MNP:jar

Region 3

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

Permit #: 90020001
 Mill #19

Attachment A

<u>Item of Equipment</u>	<u>Process Air Process Flow (scfm)</u>	<u>Process Wt. Rate (Ton/Hr)</u>	<u>Particulate Matter Emissions</u>	
			<u>(Lb/Hr)</u>	<u>(Ton/Yr)</u>
Furnace (19MMF001), Feed Tank (19IFT001), Rotary Dryer (19PRD001), Bucket Elevator (19BEL001), Controlled by Main Mill Cyclone (19MMC001) and Dust Collector (19MDC001)	16,338	30	1.12	4.91
Finished Product Storage Tank (19FPT006), Bagger (19FPB002), Surge Bin (19PSB002), Sitter (19FAS001), Cage Mill (19SCM001), Vibratory Screens (9) (19PVS001-009) all Controlled by Dust Collector (19MDC002)	16,338	30	1.12	4.91
Finished Product Storage Tank (19FPT003) and Dust Free Load-Out (19DFL003) Controlled by Dust Collector (19MDC003)	2,430	30	0.17	0.74
Finished Product Storage Tank (19FPT001), Bucket Elevator (19BEL004), both Controlled by Dust Collector (19MDC004)	4,860	30	0.33	1.45
Bucket Elevator (19BEL003) and Finished Product Storage Tank (19FPT002) Controlled by Dust Collector (19MDC005)	4,860	30	0.33	1.45
Bucket Elevator (19BEL005), and Dust Free Load-Out (19DFL002) Controlled by Dust Collector (19MDC007)	762	30	0.05	0.23

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

Permit #: 90020001
 Mill #19

Attachment A

<u>Item of Equipment</u>	<u>Process Air Process Flow (scfm)</u>	<u>Wt. Rate (Ton/Hr)</u>	<u>Particulate Matter Emissions</u>	
			<u>(Lb/Hr)</u>	<u>(Ton/Yr)</u>
Bucket Elevator (19BEL002), Feed Tank With Vibratory Bin Bottom (19IFT002) and Surge Bin (19PSB001) Controlled by Dust Collector (19MDC008)	2,430	30	0.17	0.74
Finished Product Storage Tank (19FPT004) and Supersack Bagger (19SSB001) both Controlled by Dust Collector (19MDC009)	2,430	30	0.17	0.74
Bucket Elevator (19BEL006) and Two Finished Product Storage Tanks (19FPT005 and 008) Controlled by Dust Collector (19MDC010)	2,430	30	0.17	0.74
Dust Free Load-Out (12DFL004) Controlled by Dust Collector (19MDC011)	762	30	0.05	0.23
Surge Bin (19PSB001), Finished Product Tank (19FPT009) and Bucket Elevator (19BEL008) Controlled by Dust Collector (19MDC012)	6,750	30	0.46	2.03
Crusher (19HMM001), Screen (19PVS010), Bucket Elevator (19BEL007), Controlled by Dust Collector (19MDC013) and Belt Conveyor (19RBC003)	4,000	30	0.27	1.20
Dust Free Load-Out (19DFL001) Dust Free Articulating Load-Outs (2) (19ALO001-002) Controlled by a Cyclone (19MMC002) and Dust Collector (19MDC014)	2,000	30	0.14	0.61

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

Permit #: 90020001
 Mill #19

Attachment A

<u>Item of Equipment</u>	<u>Process Air Process Flow (scfm)</u>	<u>Wt. Rate (Ton/Hr)</u>	<u>Particulate Matter Emissions (Lb/Hr) (Ton/Yr)</u>	
Two (2) Rock Hoppers (19ORH001 and 002)	-----	35	0.01	0.44 (x 2)

These limits are based on 0.008 gr/dscf PM emission limit, as requested by the applicant, 8,760 hours/year operating hours and information provided in the application. Compliance with annual limits shall be determined from a running total of 12 months of data.

MNP:jar

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

217/782-2113

"REVISED"
 OPERATING PERMIT

PERMITTEE

SEM Minerals, L.P.
 Attn: Paul Shelton
 3806 Gardner Expressway
 Quincy, Illinois 62301

Application No.: 95060235 I.D. No.: 001815AAS
Applicant's Designation: PORTABLE Date Received: June 29, 1995
Subject: Portable Screening and Loading System
Date Issued: July 26, 1995 Expiration Date: July 26, 2000
Location: 3150 Gardner Expressway, Quincy, Burton Township,
 Adams County

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of portable screening and loading system which includes a hopper, a feeder belt, a conveyor belt, and a 4' x 8' single deck screen as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. The portable screening system is subject to New Source Performance Standards (NSPS), 40 CFR 60, Subpart A and 000. The Illinois EPA is administering these standards in Illinois on behalf of the United States EPA under a delegation agreement.
 - b. i. Emissions of particulate matter from screening and transfer points on belt conveyors shall not exceed 10 percent opacity, (40 CFR 60.672(b) and (d)).
 - ii. At all times the Permittee shall also maintain and operate this equipment in a manner consistent with good air pollution control practice for minimizing emissions.
2. Emissions and operation of equipment shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Operating Hours</u> (Hr/Yr)	<u>Operating Rate</u> (Lb/Hr)	<u>Particulate Matter</u>	
			(Lb/Hr)	(Ton/Yr)
Portable Screening and Loading System	480	6,600	0.87	0.21

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

These limits are based on standard emission factors and information provided in the application. Compliance with annual limits shall be determined from a running total of 12 months of data.

3. No person shall cause or allow any visible emissions of fugitive particulate matter from any process, including any material handling or storage activity beyond the property line of the emission source, pursuant to 35 Ill. Adm. Code 212.301.

If you have any questions on this, please call Manish N. Patel at 217/782-2113.

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

DES:MNP:jar

cc: Region 2

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

217/782-2113

CONSTRUCTION PERMIT

PERMITTEE

J. M. Huber Corporation
Attn: Environmental Coordinator
3150 Gardner Expressway
Quincy, Illinois 62301

Application No.: 96030291 I.D. No.: 001815AAS
Applicant's Designation: 20FCP002 Date Received: March 25, 1996
Subject: Modification to Mill-20
Date Issued: April 24, 1996
Location: 3150 Gardner Expressway, Quincy

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of hammer mill (20FCP002) as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the pollution control equipment covered under this permit such that the pollution control equipment be kept in proper working condition and not cause a violation of the Environmental Protection Act or regulations promulgated therein.

It should be noted that this permit has been issued to add hammer mill to Mill-20, without any increase in emissions of PM into the atmosphere as indicated in the application.

If you have any questions on this, please call Manish Patel at 217/782-2113.

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

DES:MNP:jar

cc: Region 2

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

217/782-2113

CONSTRUCTION PERMIT

PERMITTEE

J.M. Huber Corp. - Engineered Minerals Div.
Attn: Environmental Coordinator
3150 Gardner Expressway
Quincy, Illinois 62305-4005

Application No.: 96040042 I.D. No.: 001815AAS
Applicant's Designation: 28BEL001 Date Received: April 10, 1996
Subject: Mill-28 Bucket Elevator Replacement
Date Issued: June 10, 1996
Location: 3150 Gardner Expressway, Quincy, Milrose Township,
Adams County

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of new bucket elevator (28BEL001) as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. This permit is issued based upon the replacement of existing bucket elevator with new like kind enclosed bucket elevator (28BEL001) as indicated in the application, without any increase in emissions of particulate matter into the atmosphere.

If you have any questions on this, please call Manish N. Patel at 217/782-2113.

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

DES:MNP:sad

cc: Region 2

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

217/782-2113

CONSTRUCTION PERMIT

PERMITTEE

J. M. Huber Corporation
Attn: Rick Parise
3806 Gardner Expressway
Quincy, Illinois 62301

Application No.: 96080105 I.D. No.: 001815AAS
Applicant's Designation: Date Received: August 27, 1996
Subject: Mill-24 Iron Sulfate Pelletizer Plant
Date Issued: November 14, 1996
Location: 3806 Gardner Expressway, Quincy, Melrose Township,
Adams County

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of main mill furnace (24MMF001) and full circle pulverator (24FCP001) controlled by an existing dust collector (24MDC001) as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. Emissions of particulate matter from the iron sulfate pelletizer mill/baghouse shall not exceed nominal rates of 0.1 lb/hr and 0.44 ton/yr. This limit is based on the emission estimate provided in the permit application.
2. The Permittee shall operate the dust collector control equipment at all the time when Mill 24 is in operation.

It should be noted that this permit has been issued considering no increase in the PM emissions from the existing dust collector.

If you have any questions on this, please call Manish Patel at 217/782-2113.

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

DES:MNP:jar

cc: Region 2

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

217/782-2113

CONSTRUCTION PERMIT - NSPS SOURCE

PERMITTEE

J. M. Huber Corporation
Attn: Brian K. Cooley
3150 Gardner Expressway
Quincy, Illinois 62305-4005

Application No.: 97040114 I.D. No.: 001815AAS
Applicant's Designation: 19MMC002 Date Received: April 28, 1997
Subject: Mill (19) Modification
Date Issued: June 9, 1997
Location: 3150 Gardner Expressway, Quincy, Melrose Township,
Adams County

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of a new cyclone (19MMC002) and new dust collector (19MDC014) on existing dust-free loadout (19DFL001) and two (2) dust-free articulating loadouts (19ALO 001-002) as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. The above listed sources are subject to New Source Performance Standards (NSPS) 40 CFR 60, Subparts A and 000. The Illinois EPA is administering these standards in Illinois on behalf of the United States EPA under a delegation agreement.
 - b. Particulate matter emissions from vents or stacks shall not exceed 0.05 gm/dscm (0.022 gr/dscf) and 7 percent opacity (40 CFR 60.672(a)).
 - c. At all times the Permittee shall also, to the extent practicable, maintain and operate these sources, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.
2. Operation of equipment shall not exceed the following limits:

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

<u>Item of Equipment</u>	<u>Process Air Flow (scfm)</u>	<u>Process Weight Rate (Ton/Hr)</u>
Cyclone (19MMC002) and Dust Collector (19MDC014) on Existing Operating Line of Dust-Free Loadout (19DFL001) and Dust-Free Articulating Loadouts (2) (19ALO 001-002)	2,000	30

3. The Permittee shall not cause or allow any visible emissions of fugitive particulate matter from any process, including any material handling or storage activity beyond the property line of the emission source, pursuant to 35 Ill. Adm. Code 212.301.

If you have any questions on this, please call Manish N. Patel at 217/782-2113.

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

DES:MNP:jar

Region 3

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

217/782-2113

"REVISED"
 JOINT CONSTRUCTION AND OPERATING PERMIT

PERMITTEE

SEM Minerals, L.P.
 Attn: Paul Shelton
 3806 Gardner Expressway
 Quincy, Illinois 62301

Application No.: 97080049
Applicant's Designation: DIESELGENER
Subject: 1,750 KW Diesel Generator
Date Issued: November 18, 1997

I.D. No.: 001815AAS
Date Received: August 18, 1997
Operating Permit Expiration
Date: November 18, 2002

Location: 3150 Gardner Expressway, Quincy

Permit is hereby granted to the above-designated Permittee to CONSTRUCT and OPERATE emission source(s) and/or air pollution control equipment consisting of one 1,750 kW diesel generator, as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. Emissions and operation of the diesel generator shall not exceed the following limits:

<u>Air Pollutant</u>	<u>Emission Factor</u> (Lb/mmBtu)	<u>E M I S S I O N S</u>	
		(Lb/Hr)	(Ton/Yr)
NO _x	3.1	49.17	4.13
CO	0.81	12.85	1.08
SO ₂	0.055	0.87	0.07
VOC	0.09	1.43	0.12
PM	0.07	1.11	0.09

These limits are based on 168 hr/yr operation, a maximum heat input of 15.86 mmBtu/hr, and standard AP-42 emission factors. Compliance with annual limits shall be determined from a running total of 12 months of data.

- b. The diesel generator shall not operate for more than 168 hours per year.
- c. The annual throughput of diesel fuel for the diesel generator shall not exceed 20,496 gallons per year. This limit is based on the heat input of the generator (15.86

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

mmBtu/hr), heat content of diesel fuel (130,000 Btu/gal),
and annual operating hours of 168 hours per year.

- d. At the above location, the Permittee shall not keep, store,
or utilize:
 - i. Distillate fuel oil (Grades No. 1 and 2) with a
sulfur content greater than the larger of the
following two values:
 - A. 0.28 weight percent, or
 - B. the wt. percent given by the formula:
$$\text{Maximum Wt. Percent Sulfur} = (0.000015) \times$$

(Gross Heating Value of Oil, Btu/lb)
 - e. The Illinois EPA shall be allowed to sample all fuels
stored at the above location.
2. The Permittee shall maintain records of the following
items, and such other items as may be appropriate to allow
the Illinois EPA to review compliance with the limits in
this permit.
- a. Operating hours of the generator (hr/yr).
 - b. Fuel consumption by the generator (gal/yr).

If you have any questions concerning this letter, please contact
Brian Rodely at 217/782-2113.

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

DES:BER:jar

cc: Region 2

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

shall not exceed 10 percent opacity, (40 CFR 60.672(b) and (d)).

- e. Fugitive emissions of particulate matter from the crushers (except from truck dumping), shall not exceed 15 percent opacity, (40 CFR 60.672(c) and (d)).
 - f. Particulate matter emissions shall not exceed 0.05 gm/dscm (0.022 gr/dscf) and there shall be no visible emissions from the buildings enclosing affected belt conveyors and mills (40 CFR 60.672(e)).
2. The Permittee shall notify the Illinois EPA as required by 40 CFR 60.7, including:
 - a. Commencement of construction
 - b. Anticipated date of initial startup
 - c. Actual date of initial startup
 - d. Expected date of commencing monitoring system performance demonstration
 3. These sources may be operated for 180 days under this construction permit.
 4. Performance tests shall be conducted within 60 days after each source achieves maximum production, but not later than 180 days after initial startup, using the methods specified in 40 CFR 60.675.
 5. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
1021 N Grand Ave. East
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
5415 North University
Peoria, Illinois 61614

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

6. Emissions and operation of equipment shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Maximum Throughput (lb/hr)</u>	<u>Particulate Matter Emissions</u>	
		<u>(lb/hr)</u>	<u>(ton/yr)</u>
Belt Conveyor	60,000	0.27	1.18

These limits are established to ensure that 40 CFR 52, prevention of significant deterioration (PSD) rules are not triggered based on maximum throughput and associated emissions of the belt conveyor as described in the permit application.

The OPERATING permit application is DENIED because the Illinois Environmental Protection Act, Section 9, and 35 Ill. Adm. Code 201.160 might be violated.

Pursuant to Section 201.160, an operating permit may not be issued until the equipment has been constructed or modified in accordance with applicable conditions in this construction permit. The Illinois EPA suggests that you reapply for the operating permit after the construction is completed in accordance with the construction permit. This information must be submitted in duplicate and should reference the application and I.D. numbers assigned above.

If you have any questions on this, please call Brian Rodely at 217/782-2113.

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

DES:BER:psj

cc: Illinois EPA, FOS Region 2
USEPA

the mixer (GRNPMX002). Then it is conveyed to the finished product bagger (GRNFPP002). The mixer and bagger are controlled by the dust collector (GRNMDC001).

Two different grade granular minerals will be unloaded via super sack unloaders onto circular disc conveyors (GRNCDC003 and 004). They material will be conveyed into the mixer (GRNPMX003) and then to the finished product bagger (GRNFPP003).

2.1.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
GRNCDC001	Disc Conveyor	None
GRNCDC002	Disc Conveyor	None
GRNCDC003	Disc Conveyor	None
GRNCDC004	Disc Conveyor	None
GRNFPT001	Finished Product Storage	Baghouse (GRNBVN001)
GRNFPT002	Finished Product Storage	Baghouse (GRNBVN002)
GRNPMX001	Mixer	Baghouse (GRNMDC001)
GRNPMX002	Mixer	Baghouse (GRNMDC001)
GRNPMX003	Mixer	Baghouse (GRNMDC001)
GRNFPP001	Finished Product Bagger	Baghouse (GRNMDC001)
GRNFPP002	Finished Product Bagger	Baghouse (GRNMDC001)
GRNFPP003	Finished Product Bagger	Baghouse (GRNMDC001)

2.1.3 Applicability Provisions and Applicable Regulations

- a. The "affected system" for the purpose of these unit-specific conditions, is the granite elite processing system, listed above, for which construction or modification commenced on or after April 14, 1972.

- b. 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 which, 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 determined by using the equation [35 IAC 212.321]:

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

Where:

P = Process weight rate
 E = Allowable emission rate

For process weight rates up to 408 Mg/hr (450 ton/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	ton/hr
E	kg/hr	lbs/hr
A	1.214	2.54
B	0.534	0.534

2.1.4 Non-Applicability of Regulations of Concern

None

2.1.5 Operational and Production Limits and Work Practices

The Permittee shall follow good operating practices for the filters, including periodic inspection, routine maintenance and prompt repair of defects.

2.1.6 Emission Limitations

- a. Emissions and operation of the affected system shall not exceed the following limits:

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

Emission Unit	Particulate Matter(PM ₁₀) Emissions	
	(Tons/Mo)	(Tons/Yr)
GRNPMX001, 002, 003 and GRNFPP001, 002, 003 (All Controlled by Main Baghouse)	0.28	3.30
GRNFPT001	0.18	2.06
GRNFPT002	0.18	2.06

These calculations are figured from emission factor of 0.022 gr/scf and total flow of 4000 scfm for the main baghouse and a total flow of 2500 scfm for the other two baghouses for the finished product storage. Compliance with annual limits shall be determined from a running total of 12 months of data.

- b. This permit is issued based on negligible emissions of particulate matter from the disc conveyors (GRNCDC001, 002, 003, and 004) and the hand dump point at the mixer (GRNPMX001). For this purpose, emissions shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.

2.1.7 Testing Requirements

None

2.1.8 Monitoring Requirements

None

2.1.9 Recordkeeping Requirements

The Permittee shall maintain records of the following items for the system to demonstrate compliance:

- a. Throughput of product rate of for the system in tons/month and tons/year.
- b. The aggregate monthly and yearly particulate matter emissions from the system, based on the throughput rate, enclosure control efficiency, filter

efficiency, and the operating schedule,
with supporting calculations.

2.1.10 Reporting Requirements

The Permittee shall notify the Illinois EPA of any record showing violation of emission limit in Condition 2.1.6 within 30 days of such an occurrence of the violation.

2.1.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

2.1.12 Compliance Procedures

- a. Compliance with the particulate matter limitations in this section is assured and achieved by the proper operation and maintenance of fabric filters as required by this permit and the work practices inherent in operation of the affected system.
- b. Compliance with emission limitations of Condition 2.1.6 shall be determined based on the recordkeeping requirements of Condition 2.1.9 (a) and (b) or formula listed below:

$$\text{ER (lb/hr)} = \text{EF (gr/scf)} \times 1 \text{ lb/7,000 gr} \\ \times \text{FLOW (ft}^2\text{/min)} \times 60 \text{ min/hr}$$

Where:

ER = Emission rate in lb/hr

EF = Emission factor in gr/scf

FLOW = Total flow for dust collector in scfm

If you have any questions on this, please call Robin Helmerichs
at 217/782-2113.

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

DES:RBH:jar

cc: Region 2

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

If you have any questions on this, please call Minesh Patel at
217/782-2113.

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

DES:MVP:psj

cc: Region 2

FINAL DRAFT/PROPOSED CAAPP PERMIT
 J.M. Huber Corporation
 I.D. No.: 001815AAS
 Application No.: 95070021
 September 3, 2002

<u>Emission Unit</u>	<u>Material Throughput (Ton/Yr)</u>	<u>Emission Factor (Lb/Ton)</u>	<u>PM Emissions (Ton/Yr)</u>
EU-1	750,000	0.058	21.8
EU-2	250,000	0.408	51.0
EU-3	500,000	0.191	47.8
EU-4	50,000	1.482	37.1
EU-5	250,000	0.156	19.5
EU-6	900,000	0.051	<u>22.8</u>
		Total:	<u>199.8</u>

Compliance with annual limits shall be determined from a running total of 12 months of data.

- b. As a consequence of above condition, this permit is issued based on plant modification in construction permits (99050094, 99050074, 99050033, 99050055, and 99050067) not constituting a new major source or major modification subject to Prevention of Significant Deterioration (PSD), 40 CFR 52.21.

- 5a. Permittee shall keep monthly records of the following items:
 - i. Material throughput of each emission unit.
 - ii. Particulate matter emissions with calculation for each emission unit.

- b. These records shall be retained for at least three years and shall be available to the Illinois EPA for inspection and copying upon request.

If you have any questions on this, please call Minesh Patel at 217/782-2113.

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

DES:MVP:jar

cc: Region 2

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

- d. Compliance with annual limit shall be determined from a running total of 12 months of data.
- 3a. The Permittee shall maintain records of the following items:
 - i. Diesel fuel usage (gallon/month)
 - ii. NO_x and Co emissions.
- b. These records shall be kept for at least three years and shall be available for inspection and copying by the Illinois EPA upon request.

If you have any questions on this, please call Minesh Patel at 217/782-2113.

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

DES:MVP:psj

cc: Region 2

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

217/782-2113

JOINT CONSTRUCTION AND OPERATING PERMIT

PERMITTEE

J. M. Huber Corporation
Attn: Brian K. Cooley
3150 Gardner Expressway
Quincy, Illinois 62301

<u>Application No.:</u> 99050074	<u>I.D. No.:</u> 001815AAS
<u>Applicant's Designation:</u> 03MDC004	<u>Date Received:</u> May 20, 1999
<u>Subject:</u> Mill 3 Bin Vents and Tank	
<u>Date Issued:</u> November 1, 1999	<u>Operating Permit Expiration</u>
	<u>Date:</u> November 1, 2004
<u>Location:</u> 3150 Gardner Expressway, Quincy	

Permit is hereby granted to the above-designated Permittee to CONSTRUCT and OPERATE emission source(s) and/or air pollution control equipment consisting of one finished product storage tank (03FPT005) with bin vent (03MDC005) and one bin vent (03MDC004) to control existing finished product storage tank (03FPT004) as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. Operation of the emission source(s) included in this permit shall not begin until all associated air pollution control equipment has been constructed and is operational.
2. PM-10 emissions and operation of each bin vent shall not exceed 0.57 lb/hour and 2.48 tons/year. These limits are based on the manufacturer's emission rate (0.022 gr/scf) and maximum flow rate (3000 scfm). Compliance with annual limits shall be determined based on the 12 months of data.
- 3a. The Permittee shall maintain monthly records of the following limits:
 - i. Material throughput; and
 - ii. PM-10 emissions with calculation.
- b. These records shall be maintained for at least three years and shall be available for inspection and copying by the Illinois EPA upon request.

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

If you have any questions on this, please call Minesh Patel at
217/782-2113.

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

DES:MVP:psj

cc: Region 2

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

- b. These records shall be maintained for at least three years and shall be available for inspection and copying by the Illinois EPA upon request.

If you have any questions on this, please call Minesh Patel at 217/782-2113.

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

DES:MVP:jar

cc: Region 2

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
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217/782-2113

CONSTRUCTION PERMIT - NSPS SOURCES

PERMITTEE

J. M. Huber Corporation
Attn: Herbert E. Becton
3150 Gardner Expressway
Quincy, Illinois 62301

Application No.: 00060041 I.D. No.: 001815AAS
Applicant's Designation: WFEEDSYST Date Received: June 13, 2000
Subject: Feed System to Mill 10
Date Issued: September 7, 2000
Location: 3150 Gardner Expressway, Quincy

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of one stock feed system for Mill 10 (including one rock hopper, two rubber belt conveyors, and one lump buster) as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This stock feed system is subject to New Source Performance Standards (NSPS), 40 CFR 60, Subparts A and 000. The Illinois EPA is administering these standards in Illinois on behalf of the United States EPA under a delegation agreement.
2. At all times the Permittee shall also, to the extent practicable, maintain and operate these sources, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.
3. Fugitive emissions of particulate matter from grinding mills, screens (except from truck dumping), bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck or railcar loading operations shall not exceed 10 percent opacity, (40 CFR 60.672(b) and (d)).
4. This permit is issued based on negligible emissions of particulate matter from stock feed system for Mill 10. For this purpose, emissions shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.

5. The Permittee shall notify the Illinois EPA as required by 40 CFR 60.7, including:
 - a. Commencement of construction
 - b. Actual date of initial startup
6. These sources may be operated for 180 days under this construction permit.
- 7a. Within 60 days after each source achieves maximum production, but not later than 180 days after initial startup pursuant to 40 CFR 60.675 and 60.8, the opacity from the affected facilities shall be measured during conditions which are representative of the maximum performance. The Illinois EPA may provide additional time for the performance of this testing upon request from the Permittee which shows that it is not feasible to perform representative testing within 90 days.
 - b.
 - i. The following methods and procedures shall be used for opacity measurements.

USEPA Method 9, 40 CFR 60 Appendix A
 - ii. A test shall consist of 30 sets of 24 consecutive observations.
 - c. Opacity measurements shall be performed by a certified observer.
 - d. The Illinois EPA shall be notified prior to these measurements to enable the Illinois EPA to observe these measurements. Notification of the expected date of the measurements shall be submitted to a minimum of thirty (30) days prior to the expected date. Notification of the actual date and expected time of measurement shall be submitted a minimum of five (5) working days prior to the actual date of the measurement. The Illinois EPA may, at its discretion, accept notification with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe the measurements.
8. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

FINAL DRAFT/PROPOSED CAAPP PERMIT
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
5415 North University
Peoria, Illinois 61614

10.4 Attachment 4 - 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: _____

10.5 Attachment 5 - 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
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

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

Application For Construction Permit (For CAAPP Sources Only)	For Illinois EPA use only
	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.

Source Information		
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:

Owner Information		
9. Name:		
10. Address:		
11. City:	12. State:	13. Zip code:

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

Applicant Information	
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.

10.7 Attachment 7 - 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
J.M. Huber Corporation
I.D. No.: 001815AAS
Application No.: 95070021
September 3, 2002

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

Project Summary

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 Adams County near Quincy. The source consists of an underground calcium carbonate mine, non-metallic minerals processing plant, and a trace minerals processing plant. The initial step in the grinding operations is primary crushing using jaw crusher, vibratory screen, hammermill and belt conveyors system connecting it to storage silos. The next step in the non-metallic mineral processing involves a variety of grinding mills which continually reduce the particle size of the product. The grinding operations are conducted by a variety of equipment including cage mills, hammermills, roller mills, ball mills, and wet and dry media mills. All of the mills are equipped with air classifiers, cyclones, or sifters which separate particle sizes into a variety of products. The source is major for particulate matter emissions.

II. EMISSION UNITS

Significant emission units at this source are as follows:

Emission Unit	Description	Mill #	Equipment	Date of Construction/Modification
01	Primary crushing and transfer	Mill #31	Jaw crusher, Hammer mill, 2 Vibratory screens, 3 Main silos, 2 Side tanks, 5 Belt conveyors, Dust collector/Baghouse, Wet spray bars	6/74 2/92 (addition of baghouse)
		Mill #32	Jaw crusher, Vibratory screen, Cone crusher, 5 Belt conveyors, Wet spray bars	5/74
02	Non-metallic mineral processing (Impact mill & Screen grade circuit)	Mill #1	Rock hopper, 4 Bucket elevators, Rotary screen, Mill feed tank, Vibratory feeder, Mill furnace/dryer, Cage mill, 2 Vibratory screens, 2 Finished product tanks, 3 Dust collectors/Baghouses	1973 1989 (addition of bin vent dust collector)

Emission Unit	Description	Mill #	Equipment	Date of Construction/Modification
		Mill #11	Rock hopper, Bucket elevator, Rotary screen, Mill feed tank, Vibratory feeder, Impact mill, 3 Air classifiers-Sifters, 4 Finished product tanks, 3 Dust free load-outs, 3 Belt conveyors, 6 Dust collectors/Baghouses	1989/ 1990 (addition of bin vent dust collector)
		Mill #12	Mill feed tank, Vibratory feeder, Air classifier-Sifter, Finished product tank, 3 Dust free load-outs, 3 Belt conveyors, 2 Dust collectors/Baghouses	1990
		Mill #18	Rock hopper, Bucket elevator, Rotary screen, Mill feed tank, Vibratory feeder, Mill furnace, Impact mill, 5 Air classifiers-Sifters, Belt conveyor, Dust collector/Baghouse	1990
		Mill #19	Rock hopper, Mill feed tank, Mill furnace/ dryer, Air classifier-Sifter, 5 Bucket elevators, Vibratory feed tank, 9 Vibratory screens, Cage mill, Air classifier-Sifter, 7 Finished product tanks, 2 Bagging stations, 6 Dust free load-outs, 4 Belt conveyors, 10 Dust collectors/Baghouses Belt apron, Belt conveyor, 3 Bucket elevators, Vibratory screen, Cage mill, Finished product tank	1990/ 1991 (addition of bin vent dust collector) 1996

Emission Unit	Description	Mill #	Equipment	Date of Construction/Modification
03	Non-metallic mineral dry grinding (Ball, Roller & TRZK mills)	Mill #3	Rock hopper, Bucket elevator, Miss run feed tank (Q60 recycle), Mill feed tank, Vibratory feeder, Mill furnace, Roller mill, 6 Air classifiers-Sifters, 3 Finished product tanks, Bagging station, 3 Dust collectors/Baghouses	1972/ 1991 (Addition of silo with dust collector)
		Mill #4	Mill feed tank, Vibratory feeder, Mill furnace, Roller mill, 6 Air classifiers-Sifters, Pressure pipe blower/Diverter valve, 6 Finished product tanks, Bagging station, 7 Dust free load-outs, Belt conveyor, 6 Dust collectors/Baghouses	1972/ 1991 (addition of silo with dust collector)
		Mill #5	Rock hopper, Bucket elevator, Lump crusher, Miss run feed tank, Mill feed tank, Mill furnace, Roller mill, 4 Air classifiers-Sifters, 3 Finished product tanks, 3 Dust free load-outs, 3 Dust collectors/Baghouses	1972/ 1991 (addition of silo with dust collector)
		Mill #6	Rock hopper, 2 Vibratory feeders, Bucket elevator, Mill feed tank, Mill furnace, Roller mill, 4 Air classifiers-Sifters, 3 Finished product tanks, 3 Dust free load-outs, 3 Dust collectors/Baghouses	1976
		Mill #8	Rock hopper, 2 Vibratory feeders, Bucket elevator, Mill feed tank, Mill furnace, Roller mill, 6 Air classifiers-Sifters, Miss run tank, Finished product tank, 2 Dust collectors/Baghouses	1975

Emission Unit	Description	Mill #	Equipment	Date of Construction/Modification
03 (Cont.)	Non-metallic mineral dry grinding (Ball, Roller & TRZK mills)	Mill #9	Mill feed tank, Mill furnace, Roller mill, 4 Air classifiers-Sifters to #6,#8,#33 FPT, 3 Finished product tanks, 2 Belt conveyors, Dust collector/Baghouse	1992
		Mill #10	Mill feed tank, Mill furnace, Roller mill, 7 Air classifiers-Sifters to #6,#8,#30,#33 FPT, 2 Belt conveyors, Dust collector/Baghouse	1985
		Mill #13	Rock hopper, Feed tank, Vibratory feeder, Mill furnace, Roller mill, 6 Air classifiers-Sifters, 4 Finished product tanks, 4 Dust free load-outs, 2 Belt conveyors, 4 Dust collectors/Baghouses	1990
		Mill #17	2 Mill feed tanks, Bucket elevator, 2 Air classifiers-Sifters, TRZK mill, Vibratory feeder, 2 Vibratory screens, Air classifier-Sifter, Finished product tank, Bagging station, 4 Dust collectors/Baghouses	1986
		Mill #28	Mill feed tank, Ball mill, Bucket elevator, 7 Air classifiers-Sifters, Dust collector/Baghouse	1991
04	Non-metallic mineral wet grinding (Ultra fine circuit)	Mill #14	Mill feed tank, Bucket elevator, Make down tank, Drais mill, Vibratory screen, Transfer tank, 4 Finished product tanks, Dust collector/Baghouse	1982
		Mill #15	Furnace, Spray dryer, Bucket elevator, Roto sieve to vertical mill feed tank, Dust collector/Baghouse	1979

Emission Unit	Description	Mill #	Equipment	Date of Construction/Modification
05	Non-metallic mineral dry grinding & component blending (Ball mills, Roller mills & Pin mixers)	Mill #2	Miss run feed tank, 2 Vibratory feeders, Rock hopper, Bucket elevator, Mill feed tank, Mill furnace, Roller mill, 6 Air classifiers-Sifters, Rotary pin mixer, 2 Finished product tanks, 2 Bagging stations, 3 Belt conveyors, 3 Dust collectors/Baghouses	1972
		Mill #7	Conveyor (Mill #1 FPT to Mill #7), Ball mill, Bucket elevator, 9 Air classifiers-Sifters, Pneumatic transfer system, Furnace, Rotary pin mixer, 2 Finished product tanks, 2 Bagging stations	1973/ 1990 (addition of Pin mixer)
		Mill #16	2 Mill feed tanks, Screw feeder, Vertical impact mill, Conveyance system, Rotary pin mixer, 2 Finished product tanks, Bagging station, 2 Dust collectors/Baghouses	1985/ 1986
		Mill #27	Conveyor (Mill #1 FPT to Mill #27), Ball mill, Bucket elevator, 10 Air classifiers-Sifters, Pneumatic transfer system, Furnace, Rotary pin mixer, Finished product tank, 3 Bagging stations	1979
		Mill #29	Feed tank, 2 Mixers, Air classifier-Sifter, Rotary pin mill, Finished product tank, 2 Bagging stations, Dust collector/Baghouse	1991/ 1992
06	Non-metallic mineral packaging & bulk load-out	Mill #26	10 Finished product silos, 3 Finished product baggers, 8 Dust free load-outs Feed tank, 2 Mixers, Air classifier-Sifter, Rotary pin mill, Finished product tank, 2 Bagging stations, 10 Dust collectors/Baghouses	1992

Emission Unit	Description	Mill #	Equipment	Date of Construction/Modification
06 (Cont.)	Non-metallic mineral packaging & bulk load-out	Mill #30	9 Finished product silos, Bagger (Manual cart), Bagger (automatic cart), Super stacker, Finished product conveyor, 10 Dust collectors/Baghouses	1982
		Mill #33	Finished product silo, 2 Dust free load-outs rails and truck	1994
07	Trace mineral grinding & processing (Rotary dryer & Roller mill)	Mill #20	Wet rock hopper, main mill furnace, Rotary dryer, Air classifier, 3 Bucket elevators, Vibratory screen, Hammer mill (Full circle pulverator), 4 Finished product tanks, Bagging station, 2 Dust collectors/Baghouses	1982
		Mill #21	Rock hopper, Mill furnace, Rotary mill, Air classifier/Sifter, Dust collector/Baghouse	1982
		Mill #24	Full circle pulverator, Mill feed tank, Weigh belt feeder, Product pan granulator, Fluid bed dryer, Main mill furnace, Flow dryer, Metal screw conveyor, Vibratory screen, Finished product tank, Finished product bagger, Super sack bagger, Dust collector/Baghouse	1996
08	Trace minerals mixing	Mill #22	2 Rock hoppers, Super sack hopper, Hand dump hopper/flowveyor, 19 Mill feed tanks, Weigh vessel, Single roll crusher, mixer, Flowveyor, Finished product tank, 3 Finished product baggers, Super sack bagger, Hopper/Flowveyor (selenium production), Mixer, Bagger, 14 Dust collectors/Baghouses	1985/ 1992 (addition of 3 silos with dust control)
09	Co-Generation System		2 General Motors Engines	1985
10	Storage Tanks		2 Diesel fuel Storage Tanks	1985

Emission Unit	Description	Mill #	Equipment	Date of Construction/Modification
11	Fugitive Emissions		Unpaved Haul Roads	-

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)	17.2
Sulfur Dioxide (SO ₂)	63.8
Particulate Matter (PM)	267.4
Nitrogen Oxides (NO _x)	69.4
HAP, not included in VOM or PM	9.6
Total	427.4

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.