ADEQ

A R K A N S A S
Department of Environmental Quality

December 17, 2008

Allen Johnson
Environmental Manager
3M Industrial Mineral Products Division
P.O. Box 165860
Little Rock, AR 72216

Re: Notice of Administrative Amendment
AFIN: 60-00003, Permit No.: 0039-AOP-R8

Dear Mr. Johnson:

Enclosed is revised Permit 0039-AOP-R8 completed in accordance with the provisions of Section 26.901 of Regulation No. 26, *Regulations of the Arkansas Operating Air Permit Program.*

On page 7, the Emission Summary Table was updated to reflect the Total Allowable Emissions values for PM/PM_{10}.

On page 21, asterisks were included for SN-116 to indicate the removal of equipment from the source. The associated baghouse, SN-116 Dryer No. 2 Baghouse, will remain as a permitted source. Also on page 21, the Waste Conveyor Baghouse (SN-125) and Conveyors 27A, 27B, and 27C, was removed from the Baghouses – College Station Table. In Appendix A, the Waste Conveyor Baghouse (SN-125) was removed.

On page 26, the Coloring Pug Mill (SN-185) was removed from the Conveyor Transfer Points-College Station Table.

On page 27, SN-185 was removed from Specific Condition 45. In Appendix A, the Coloring Pug Mill (SN-185) was removed.

On Page 32, the Truck Loading at the Coloring Pug Mill (FS-305) was removed from the Material Handling/Unloading and Vehicle Traffic, College Station Table.

On page 35, the Truck Loading at the Coloring Pug Mill (FS-305) was removed from the Pigment Usage at Various Sources Table. In Appendix A, the Truck Loading at the Coloring Pug Mill (FS-305) was removed.

Please place the revised permit in your files.

Sincerely,

Mike Bates
Chief, Air Division

nel
Enclosure

ADEQ
OPERATING
AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation 26:

Permit No. : 0039-AOP-R8
Renewal #1
IS ISSUED TO:
3M Industrial Mineral Products Division
Highway 365 and Walters Dr.
Little Rock, AR 72216
Pulaski County
AFIN: 60-00003

THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

May 8, 2007 AND May 7, 2012

THE PERMITTEE IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Mike Bates
Chief, Air Division

December 17, 2008
Date Amended

Table of Contents

List of Acronyms and Abbreviations

A.C.A.	Arkansas Code Annotated
AFIN	ADEQ Facility Identification Number
CFR	Code of Federal Regulations
CO	Carbon Monoxide
HAP	Hazardous Air Pollutant
lb/hr	Pound Per Hour
MVAC	Motor Vehicle Air Conditioner
No.	Number
NO_x	Nitrogen Oxide
PM	Particulate Matter
PM_{10}	Particulate Matter Smaller Than Ten Microns
SNAP	Significant New Alternatives Program (SNAP)
SO_2	Sulfur Dioxide
SSM	Startup, Shutdown, and Malfunction Plan
Tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

SECTION I: FACILITY INFORMATION

PERMITTEE:	3M Industrial Mineral Products Division
AFIN:	60-00003
PERMIT NUMBER:	0039-AOP-R8
FACILITY ADDRESS:	Highway 365 and Walters Dr. Little Rock, AR 72216
MAILING ADDRESS:	P.O. Box 165860 Little Rock, AR 72216
COUNTY:	Pulaski
CONTACT POSITION:	Allen Johnson
TELEPHONE NUMBER:	(501) 490-1509
REVIEWING ENGINEER:	Karen Cerney
UTM North South (Y):	Zone 15: 3840.8, 3839.0
UTM East West (X):	Zone 15: 569.7, 564.8

SECTION II: INTRODUCTION

Summary of Permit Activity

3M's Little Rock facilities are considered as one facility for air permitting purposes due to a connecting railroad even though they are located three miles apart. This minor modification permit is being issued to allow the permittee to replace three baghouses (SN-150, SN-151, and SN-152) with one large baghouse (SN-214). The proposed change results in a permitted emission decrease of 2.8 ton per year (tpy) of PM/PM_{10}.

Process Description

Arch Street

3M mines, crushes, screens, transfers, and loads nepheline syenite mineral at the Arch Street Quarry for further processing into granules by the roofing industry. The mineral is quarried, loaded into trucks, and delivered to primary crushers on-site. After screening and further crushing, the material is loaded to railcars and shipped to the 3M roofing granule facility located at College Station. Particulate emission sources are located throughout the Arch Street Quarry. The primary method of controlling emissions, if necessary, is by water spray with or without surfactant additives at various points throughout the process. Baghouse control may also be used to control particulate emissions from the tertiary crushing and screening circuit (SN-01) when the wet suppression system is not being used, if necessary.

College Station

At the College Station facility, 3M receives, crushes, screens, and transfers nepheline syenite in the production of roofing granules. Raw nepheline syenite is brought into the plant by train car, unloaded, and placed into a raw material stockpile. The nepheline syenite is then screened, crushed, and dried. The dried material is transferred to the crushing and screening plant, where the desired size is achieved by further crushing and screening operations. The material leaving the crushing and screening lines is considered to be in "raw granule form." The raw granules are either sent to the coloring plant or stored for future use.

The first stage in the coloring process is mixing, where the raw granules are mixed with pigments. The pigment-coated granules are fired in kilns and then cooled in coolers. In the coolers, water, neutralizers, and oil are added to cool the granules and prevent dusting. These finished granules undergo a final product screening prior to the finished granule storage/loadout processes. Finished granules are fed to product bins and silos prior to shipping in tank car or truck. Waste mineral and granules are sold as aggregate, shipped away in truck or tank cars, or are stockpiled on site for future use.

Particulate emissions are generated throughout the process and are controlled by baghouses, scrubbers, water spray suppression, and other wet suppression methods including oil coating and foam dust suppression.

Emissions

Emissions from the facility result primarily from the quarrying and processing of stone or fuel combustion at the dryers, kilns, and sodium silicate plant boiler. Various pollutants emitted include particulate matter (PM), particulate matter under 10 microns (PM_{10}), carbon monoxide (CO), nitrogen oxides (NO_X), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

Test data obtained by 3M shows that the rock crushed and used in granule production contains small quantities of naturally occurring elemental compounds regulated by the Department as air emissions of hazardous air pollutants or HAPs pursuant to state regulation, and lead, pursuant to federal regulation. The naturally occurring compounds, regulated by the Department as HAPs, are combinations of naturally occurring elements, which include the elements arsenic, beryllium, cadmium, and manganese.

Other HAPs emitted are a result of the use of coloring pigments at various sources throughout the facility. HAPs are also emitted from burning used oil. These HAPs are arsenic, lead, chromium, manganese, PCB, and cobalt compounds.

Regulations

The following table contains the regulations applicable to this permit.

Regulations
Arkansas Air Pollution Control Code, Regulation 18, effective February 15, 1999
Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective July 15, 2007
Regulations of the Arkansas Operating Air Permit Program, Regulation 26, effective September 26, 2002
40 CFR Part 64 – Compliance Assurance Monitoring

This facility is not subject to requirements of the *New Source Performance Standards* (NSPS), 40 CFR Part 60, Subpart OOO, because the mineral processed at the facility has been determined to be not a listed non-metallic mineral in Subpart OOO. The material contains less than 50% of any of the listed components that constitute a non-metallic mineral. See Appendix B.

The facility is not currently subject to *New Source Performance Standards* (NSPS), 40 CFR Part 60, Subpart UUU, because affected equipment was installed before the effective date of April 23, 1986.

The facility is considered a "major source" for Title V and PSD purposes. This facility is subject to applicable portions of the Prevention of Significant Deterioration (PSD) portion of the federal New Source Review (NSR) program. Currently, the facility is not subject to PSD review because

no related modifications have increased PM rates by greater than 25 tpy or PM_{10} rates by greater than 15 tpy. If the permittee makes related modifications that exceed significant levels of regulated pollutants, the facility will be required to undergo PSD review for the new equipment. The following table is a summary of emissions from the facility. This table, in itself, is not an enforceable condition of the permit.

Emission Summary

EMISSION SUMMARY			
Source Number	Description	Pollutant	Plantwide Emission Rates
			tpy
Total Allowable Emissions		PM	708.8
		PM_{10}	540.0
		SO_2	61.1
		VOC	5.9
		CO	139.5
		NO_X	118.4
		Lead	0.09493
HAPs		Arsenic*	0.0062
		Beryllium*	0.0002
		Cadmium*	0.0064
		Chromium*	1.3675
		Cobalt*	0.2349
		Manganese*	0.0629
		PCB*	0.0253

*HAPs included in the VOC or PM totals. Other HAPs are not included in any other totals unless specifically stated.

SECTION III: PERMIT HISTORY

Arch Street

On March 23, 1979, 3M was issued Air Permit #0542-A allowing operation of a quarry at 65th and Arch Street.

On August 31, 1993, Permit #0542-AR-1 was issued which served to include emissions sources not previously addressed, and to quantify all emission sources to be consistent with the current operations at that time.

College Station

Air Permit #0039-A was assigned to the 3M, College Station Plant, on November 20, 1970, as the initial permit for the roofing granule production facility.

Air Permit #0175-A was assigned to 3M, College Station, on December 1, 1973, for the operation of an Aerodyne Model 18,000 SY cyclone to control emissions from a mixer and rotary kiln operation.

Permit #0039-AR-1 was issued on May 23, 1980, to install additional baghouse control devices.

Air Permit #0613-A was assigned to 3M on May 23, 1980, allowing instillation of a portable rotary dryer associated with a Cedarapids 15,000 CFM baghouse. This equipment is no longer on-site.

Permit #0039-AR-2 was issued October 20, 1981, in order to evaluate particulate emissions and perform dispersion modeling of reported emissions to ensure that the National Ambient Air Quality Standards (NAAQS) were not threatened.

Permit #0039-AR-3 was issued on August 3, 1983, allowing operation of a portable crusher, associated equipment, and two baghouses. The equipment is no longer on-site.

Permit #0039-AR-4 was issued on November 18, 1987, allowing four new baghouses to control emissions from existing colorizing mixers and kilns at the granule plant.

Permit #0039-AR-5 was issued on August 23, 1991, to allow replacement of an existing cyclone and an ESP with baghouses at the #1 kiln area.

0039-AOP-R0, issued February 26, 2002, was the initial Title V Operating Air Permit for both the College Station and Arch Street facilities. The permit combined both Minor Source Air Permits No. 0542-AR-1 (Arch Street) and No. 0039-AR-5 (College Station). Several modification requests were submitted prior to the issuance of the initial operating permit. The notable changes that occurred during this permitting action were the inclusion of HAP emission estimates and various new sources associated with new material handling systems (SN-59, 60, 61, 62, 211, 212, 213, 302, 303, 310, and 106A). It is also allowed by this permit the use of

foam type dust suppressant in place of water suppression in some areas of either the Arch Street or College Station units. Source numbers (SN) in the Title V permit do not necessarily coincide with the source numbers of previous permits.

0039-AOP-R1, issued May 1, 2003, incorporated changes resulting from a minor modification application which was approved on November 27, 2002. The approved minor-mod allowed the permittee the use of alternate pigmenting materials at the College Station Plant which contain compounds of cobalt. Cobalt compounds were permitted from various emission sources located at and downstream from the coloring operations.

0039-AOP-R2, issued May 17, 2004, incorporated changes resulting from a minor modification application which was approved on October 28, 2003. The minor mod approval allowed the permittee to install duct work to route emissions from the bucket elevators (SN-121, 122, and 123) and Rotex Screen sources (SN-189, 131, 132, 133, 134, and 135) to the Cooler Scrubbers (SN-115, 154, and 155).

0039-AOP-R3, issued March 25, 2005, incorporated changes allowed by a minor modification approved by the Department on August 26, 2004. The minor-mod approval allowed the permittee to install and operate a classifier and closed loop cyclone tying into existing bins, Bins 4 and 6. Also, the permittee was allowed to install and operate an additional bin, Bin 6A. This new and existing equipment is controlled using a new 10,000 cfm baghouse which is located atop Bin 4 (SN-105, Filler Baghouse). This new larger baghouse eliminates the need for the former source SN-106A (Loadout Dust System) which was removed from service.

0039-AOP-R4, issued on August 24, 2005, incorporated changes allowed by a minor modification approved by the Department on April 29, 2005. The minor-mod approval allowed the permittee to install and operate an Automated Mixing System associated with Building 8 pigment operations. Emissions from this operation was controlled and vented through the new 10,000 cfm Automated Mixing System Baghouse (SN-311).

0039-AOP-R5, issued on March 29, 2006, allowed the facility to combust used oil at SN-108, SN-111, SN-112, SN-113, and SN-116. Also, emission rates from these sources were revised using the most updated USEPA AP-42 emissions factors. Emissions changes included decreases of PM/PM_{10} by 1.71 tons per year (tpy), NO_X by 43.36 tpy, increases of SO_2 by 7.25 tpy, VOC by 1.99 tpy, CO by 50.5 tpy, lead by 0.4496 tpy, and increases of (miscellaneous HAPs) chromium, arsenic, cadmium, and PCB by 0.1757 tpy, 0.05 tpy, 0.05 tpy, and 0.02 tpy respectively.

0039-AOP-R6 was a minor modification issued on August 1, 2006. This minor modification permit authorized the facility to increase the airflow for the Dryer No. 1 Baghouse (SN-108) from 26,896 scfm to 44,832 scfm. The proposed change resulted in a permitted emission increase of 13.5 ton per year (tpy) of PM/PM_{10}.

0039-AOP-R7 was a Title V permit renewal; it updated emission factors, corrected moisture content for storage pile emissions, and corrected emission calculations for SN-55. The proposed

changes resulted in a permitted emissions increase of 0.0053 ton per year (tpy) of PCB and various permitted emissions decreases:

SECTION IV: SPECIFIC CONDITIONS

SN-03, 07, 09, 60, 31, and 33
Crushers – Arch St.

Source Description

SN	Description
03	Traylor Crusher
07	Norberg Crusher
09*	Cone Crusher
60*	Parallel Crusher
31	Tertiary Crusher
33	Tertiary Crusher

*These two crushers operate in parallel with each other and keep one emission limit.

The five crushers listed above are each operated at the Arch Street Quarry for the purpose of size reduction of material. The crusher emissions are controlled, if necessary, by either wet suppression (with or without additives), foam dust suppressant, or a combination of each at various points in the process or alternatively, with respect to the tertiary crushers, a baghouse, if necessary, to control emissions.

Specific Conditions

1. From the sources listed above, the permittee shall not exceed the emission rates set forth in Appendix A of this permit for PM_{10} and lead. Compliance shall be demonstrated by compliance with Specific Conditions 4 and 5. [Regulation 19, §19.501 et seq., effective July 15, 2007 and 40 CFR Part 52, Subpart E]

2. From the sources listed above, the permittee shall not exceed the emission rates set forth in Appendix A for PM, arsenic compounds, beryllium compounds, cadmium compounds, and manganese compounds. Compliance shall be demonstrated by compliance with Specific Conditions 4 and 5. [Regulation 18, §18.801, effective February 15, 1999, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

3. The permittee shall not exceed the opacity limits in the following table. Compliance shall be demonstrated by compliance with Specific Condition 4.

SN	Limit	Regulatory Citation
07, 09, 60	20%	§19.503
03, 31, 33	40%	§19.503

4. Throughout the Arch Street quarry, the permittee shall utilize, as necessary, wet suppression, with or without additives, foam or water on equipment and wet suppression with or without additives on haul roads, as necessary, to prevent excess emissions. This requirement does not apply to equipment SN-30 through SN-33 (Tertiary Crushers and Screens) during operation of SN-01 (Tertiary Crushing and Screening Circuit Baghouse). [Regulation 19, §19.303 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

5. The permittee shall not process more than 3,000,000 tons of material at the Arch Street unit per twelve consecutive months. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part §70.6]

6. The permittee shall maintain monthly records demonstrating compliance with Specific Condition 5. Records shall be updated by the 15th day following the previous month and a twelve month rolling total shall be kept. Records shall be made available to Department personnel upon request. The records shall be submitted to the Department in accordance with General Provision 7. [Regulation 19, §19.705 and 40 CFR Part 52, Subpart E]

SN-01
Tertiary Crushing and Screening Circuit Baghouse – Arch St.

Source Description

Operation of this source is considered an alternate scenario to operation of equipment with this baghouse off. During periods when this source is not operating, the crushing and screening equipment must employ proper wet suppression, foam dust suppressant, or a combination of each.

Specific Conditions

7. The permittee shall not exceed the emission rates set forth in Appendix A of this permit for PM_{10} and lead. Compliance shall be demonstrated by compliance with Specific Condition 5. [Regulation 19, §19.501 and 40 CFR Part 52]

8. From SN-01, the permittee shall not exceed the emission rates set forth in Appendix A for PM, arsenic compounds, beryllium compounds, cadmium compounds, and manganese compounds. Compliance shall be demonstrated by compliance with Specific Condition 5. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

9. During periods when SN-01 is operating, the permittee shall not exceed 5% opacity as measured by EPA Reference Method 9. [Regulation 18, §18.501 and 40 CFR Part 52, Subpart E]

10. The permittee shall conduct weekly observations of opacity at SN-01:

    The visible emission observations shall be used as a method of compliance verification for the 5% opacity limit at each baghouse. The observations shall be conducted by personnel familiar with the facility's visible emissions. If during the weekly observations, visible emissions are detected which appear to be in excess of the permitted opacity limit, the permittee shall:

    a. Take immediate action to identify the cause of the visible emissions.
    b. Implement all necessary corrective action.
    c. Reassess the visible emissions after corrective action is taken.

        i. If excessive visible emissions are still detected, an opacity reading shall be conducted in accordance with EPA Reference Method 9. This reading shall be conducted by personnel trained and certified in the reference method. If the opacity reading exceeds the permitted limit, further corrective measures shall be taken.
        ii. If no excessive visible emissions are detected, the incident shall be noted in the records as described below.

The permittee shall maintain weekly records related to all visible emission observations and Method 9 readings. The records shall be kept on site and made available to Department personnel upon request. The records shall contain the following items:

a. The date and time of each observation/reading.
b. Any observance of visible emissions appearing to be above permitted limits, or any Method 9 reading which indicates exceedance.
c. Any observance of visible emissions appearing to be above permitted limits, or any Method 9 reading which indicates exceedance.
d. The name of the person conducting the observation/reading.

[Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-02, 04, 05, 10-16, 19, 20, 28, 29, 59, 61, and 62
Conveyor Transfer Points – Arch St.

Source Description

SN	Description
02	Transfer Tower
04	Traylor Crusher Surge Bin
05	No. 20 Conveyor
10	No. 1 Conveyor
11	Transfer Station
12	Load Out Bin
13	Load Out Bin
14	No. 3 Conveyor
15	No. 3A Conveyor
16	A.C. Crusher Surge Bin
19	Feeders
20	No. 4 Conveyor
28	No. 5 Conveyor
29	No. 6 Conveyor
59	Conveyor from AC Crusher
61	Conveyor No. 45
62	Conveyor No. 46

Each of the seventeen sources listed above is a point of transfer from one conveyer to another, to a bin, or to a storage pile at the Arch Street Plant. Emissions from conveyers are controlled as necessary by either wet suppression, foam dust suppressant, or a combination of each at various points in the process.

Specific Conditions

11. From the sources listed in the table above, the permittee shall not exceed the emission rates set forth in Appendix A of this permit for PM_{10} and lead. Compliance with this condition shall be demonstrated by compliance with Specific Conditions 4 and 5. [Regulation 19, §19.501 and 40 CFR Part 52, Subpart E]

12. From the sources listed in the table above, the permittee shall not exceed the emission rates set forth in Appendix A for PM, arsenic compounds, beryllium compounds, cadmium compounds, and manganese compounds. Compliance with this condition shall be demonstrated by compliance with Specific Conditions 4 and 5. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

13. The permittee shall not exceed the opacity limits in the following table. Compliance shall be demonstrated by compliance with Specific Condition 4.

SN	Limit	Regulatory Citation
2, 12, 13, 16, 19, 20, 28, 29, 59, 61, 62	20%	§19.503
4, 5, 10, 11, 14, 15	40%	§19.503

SN-06, 08, 30, and 32
Screens – Arch St.

Source Description

SN	Description
06	Primary Screen
08	Primary Screen
30	Secondary Screen
32	Secondary Screen

The four screens listed in the table above are each operated at the Arch Street Plant for the purpose of size separation of crushed material. These screen emissions are controlled by either wet suppression, foam dust suppressant, or a combination of each at various points in the process.

Specific Conditions

14. From the sources listed in the table above, the permittee shall not exceed the emission rates set forth in Appendix A of this permit for PM_{10} and lead. Compliance shall be demonstrated by compliance with Specific Conditions 4 and 5. [Regulation 19, §19.501 and 40 CFR Part 52, Subpart E]

15. From the sources listed in table above, the permittee shall not exceed the emission rates set forth in Appendix A for PM, arsenic compounds, beryllium compounds, cadmium compounds, and manganese compounds. Compliance shall be demonstrated by compliance with Specific Conditions 4 and 5. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

16. The permittee shall not exceed an opacity of 40% from any screen at Arch Street. Compliance shall be demonstrated by Specific Condition 4. [Regulation 19, §19.503 and 40 CFR Part 52, Subpart E]

SN-18 and 58
Material Loading – Arch St.

Source Description

Material is loaded into trucks at the Quarry, and after being resized, it is loaded to rail car or trucks and approximately 80% is shipped to College Station.

Specific Conditions

17. For SN-18 and SN-58, the permittee shall not exceed the emission rates set forth in Appendix A of this permit for PM_{10} and lead. Compliance shall be demonstrated by compliance with Specific Conditions 4 and 5. [Regulation 19, §19.501 and 40 CFR Part 52, Subpart E]

18. For SN-18 and SN-58, the permittee shall not exceed the emission rates set forth in Appendix A for PM, arsenic compounds, beryllium compounds, cadmium compounds, and manganese compounds. Compliance shall be demonstrated by compliance with Specific Conditions 4 and 5. [Regulation 18, §18.801and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

19. The permittee shall not exceed an opacity of 40% from SN-18 or SN-58. Compliance shall be demonstrated by Specific Condition 4. [Regulation 19, §19.503 and 40 CFR Part 52, Subpart E]

SN-17 and 57
Stock Piles – Arch St.

Source Description

These two stockpiles are each located at the Arch Street Plant for the purpose of storage of crushed material.

Specific Conditions

20. For SN-17 and SN-57, the permittee shall not exceed the emission rates set forth in Appendix A of this permit for PM_{10} and lead. Compliance shall be demonstrated by compliance with Specific Conditions 4 and 5. [Regulation 19, §19.501 and 40 CFR Part 52, Subpart E]

21. For SN-17 and SN-57, the permittee shall not exceed the emission rates set forth in Appendix A for PM, arsenic compounds, beryllium compounds, cadmium compounds, and manganese compounds. Compliance shall be demonstrated by compliance with Specific Conditions 4 and 5. [Regulation 18, §18.801and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-50 through 55
Miscellaneous Quarrying Activities – Arch St.

Source Description

SN	Description
50	Overburden Removal
51	Drilling
52	Blasting
53	Explosives Detonation
54	Quarry Truck Loading
55	Quarry Truck Traffic

At the Arch Street Quarry, 3M uses typical methods for dislodging the mineral. Drilling and blasting are used to free material, each of which results in particulate emissions. Detonation of the explosives results in the emissions of CO, SO_X, and NO_X. After blasting, the broken mineral must be removed for further processing. At times, soils and weathered stone are removed from the upper surfaces of the quarry prior to blasting for the roofing granule mineral itself. This is recognized as overburden removal.

Quarry truck traffic is another source of particulate emissions. These emissions are controlled using wet suppression on haul roads as necessary.

Specific Conditions

22. From the sources listed in the table above, the permittee shall not exceed the emission rates set forth in Appendix A of this permit for PM_{10} and lead. Compliance shall be demonstrated by compliance with Specific Conditions 4 and 5. [Regulation 19, §19.501 and 40 CFR Part 52, Subpart E]

23. From the sources listed in table above, the permittee shall not exceed the emission rates set forth in Appendix A for PM, arsenic compounds, beryllium compounds, cadmium compounds, and manganese compounds. Compliance shall be demonstrated by compliance with Specific Conditions 4 and 5. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

24. The permittee shall not exceed an opacity of 40% from any miscellaneous quarrying activity at Arch Street. Compliance shall be demonstrated by Specific Condition 4. [Regulation 19, §19.503 and 40 CFR Part 52, Subpart E]

SN-101-106, 108, 110-114, 116-119, 124, 128, 129, 211, 214, and 311
Baghouses – College Station

Source Description

SN	Description	Nameplate Maximum Capacity (SCFM)
101	Dryer Feed End Baghouse	30,000
102	C & S Line #1 Baghouse	24,738
103	C & S Line #2 Baghouse	24,738
104	C & S Line #3 Baghouse	30,836
105	Filler Baghouse	10,000
106	Product Tripper and Storage Baghouse	10,600
108	Dryer No. 1 Baghouse	44,832
110	No. 7 Filler Tank Baghouse	2,977
111	No. 1 Kiln Baghouse	24,805
112	No. 2 Kiln Baghouse	24,805
113	No. 3 Kiln Baghouse	24,805
114	No. 2 Mixer Baghouse	9,925
*116	Dryer No. 2 Baghouse	24,844
117	No. 1 Clay Tank Baghouse	1,500
118	No. 2 Clay Tank Baghouse	1,500
119	No. 3 Clay Tank Baghouse	1,500
124	Coloring Feed End Baghouse	15,213
128	No. 3 Mixer Baghouse	9,925
129	No. 1 Mixer Baghouse	9,925
211	Covered Raw Granule Stockpile Baghouse	8,000
214	IC Circuit Baghouse	25,000
311	Automated Mixing System Baghouse	10,000

*Equipment from SN-116, Bin 35 and Conveyor 27D, will be removed from service.

The sources listed in the table above represent baghouse control devices used throughout the College Station unit to control particulate emissions. When properly maintained and operated at the manufacturer's recommended specifications, baghouse control devices can achieve particulate removal at or above 99%.

Each of the baghouses listed in the table above has the potential to emit particulates resulting from the granule production. However, two dryers and three kilns also exhaust through five baghouses emitting other criteria pollutants resulting from combustion of fuels. The natural gas usage is based on the maximum capacity of the dryers and kilns, but diesel and used oil combined usage may not exceed 2.5 million gallons per twelve consecutive months to ensure compliance with annual emission rates.

Specific Conditions

25. From the sources listed in the table above, the permittee shall not exceed the emission rates set forth in Appendix A of this permit for PM_{10}, SO_2, VOC, CO, NO_X, and lead. Compliance shall be demonstrated by compliance with Specific Conditions 30, 32, and 33. [Regulation 19, §19.501 and 40 CFR Part 52, Subpart E]

26. From the sources listed in table above, the permittee shall not exceed the emission rates set forth in Appendix A for PM, arsenic compounds, beryllium compounds, cadmium compounds, and manganese compounds. Compliance shall be demonstrated by compliance with Specific Conditions 30 and 34. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

27. The permittee shall not exceed opacity of 5% from any baghouse at College Station as measured by EPA Reference Method 9. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

28. During periods of smoking due to re-run of oily material or diesel fuel combustion, SN-111, 112, 113, and 116 shall not exceed 20% opacity as measured by EPA Reference Method 9. [Regulation 19, §19.503 and 40 CFR Part 52, Subpart E]

29. The permittee shall conduct weekly observations of opacity for each of the College Station Baghouse except SN-214:

    The visible emission observations shall be used as a method of compliance verification for the 5% opacity limit at each baghouse (or 20% for SN-111, 112, 113, 116). The observations shall be conducted by personnel familiar with the facility's visible emissions. If during the weekly observations, visible emissions are detected which appear to be in excess of the permitted opacity limit, the permittee shall:

    a. Take immediate action to identify the cause of the visible emissions.
    b. Implement all necessary corrective action.
    c. Reassess the visible emissions after corrective action is taken.
        i. If excessive visible emissions are still detected, an opacity reading shall be conducted in accordance with EPA Reference Method 9. This reading shall be conducted by personnel trained and certified in the reference method. If the opacity reading exceeds the permitted limit, further corrective measures shall be taken.
        ii. If no excessive visible emissions are detected, the incident shall be noted in the records as described below.

    The permittee shall maintain weekly records related to all visible emission observations and Method 9 Readings. The records shall be kept on site and made available to Department personnel upon request. The records shall contain the following items:

    a. The date and time of each observation/reading.

b. Any observance of visible emissions appearing to be above permitted limits, or any Method 9 reading which indicates exceedance.
c. The name of the person conducting the observation/reading.

[Regulation 19, §19.503, Regulation 18, §18.501, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

30. The permittee shall not consume more than 2,500,000 gallons of combined diesel/used oil per twelve consecutive months at the dryers and kilns (SN-108, 111 through 113, and 116). [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR §70.6]

31. The permittee shall maintain monthly records to demonstrate compliance with Specific Condition 30. Records shall be updated by the 15th day following the previous month. Records shall be accompanied with a twelve month rolling total. Records shall be kept on-site and made available to Department personnel upon request. Records shall be submitted in accordance with General Provision 7. [Regulation 19, §19.705 and 40 CFR Part 52, Subpart E]

32. The permittee shall not consume diesel with fuel bound sulfur content greater than 0.3% by weight. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR §70.6]

33. The permittee shall not consume used oil with fuel bound sulfur content greater than 0.33% by weight. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR §70.6]

34. The permittee shall not consume used oil which exceed the levels listed in the table below, and the used oil shall meet the criteria of 40 C.F.R. §279.11. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR §70.6]

Constituent	Maximum Allowable Level (By Weight)
Arsenic	0.5 ppm maximum
Cadmium	0.5 ppm maximum
Chromium	10 ppm maximum
Lead	50 ppm maximum
PCB	2 ppm maximum

35. The permittee shall maintain monthly records to demonstrate compliance with Specific Conditions 32, 33, and 34. Records shall be in the form of supplier certification. Records shall be updated with each delivery of fuel. Records shall be kept on-site for at least one year. Records shall be made available to Department personnel upon request. Records shall be submitted in accordance with General Provision 7. [Regulation 19, §19.705 and 40 CFR Part 52, Subpart E]

36. The permittee will perform a one time test of the IC Circuit Baghouse (SN-214) for PM and PM_{10}. The PM test will be performed using EPA Reference Method 5. The PM_{10} test will be performed using either EPA Reference Method 201A or 5. By using Method 5 for PM_{10}, the facility will assume that all collected particulate is PM_{10}. These tests will be conducted in accordance with Plantwide Condition 3. During the tests, the equipment feeding the silos connected with the baghouse must be operated within 10% of its maximum permitted hourly operating capacity. [Regulation No. 19 §19.702 and 40 CFR Part 52 Subpart E]

37. The permittee shall conduct daily observations of opacity for SN-214. The visible emission observations shall be used as a method of compliance verification for the 5% opacity limit at the baghouse. The observations shall be conducted by personnel trained and certified in EPA Reference Method 9. If during the daily observations, visible emissions are detected which appear to be in excess of the permitted opacity limit, the permittee shall:
    a. Take immediate action to identify the cause of the visible emissions.
    b. Implement all necessary corrective action.
    c. Reassess the visible emissions after corrective action is taken.
        i. If excessive visible emissions are still detected, an opacity reading shall be conducted in accordance with EPA Reference Method 9. If the opacity reading exceeds the permitted limit, further corrective measures shall be taken.
        ii. If no excessive visible emissions are detected, the incident shall be noted in the records as described below.

    The permittee shall maintain daily records related to all Method 9 Readings for SN-214. The records shall be kept on site and made available to Department personnel upon request. The records shall contain the following items:

    a. The date and time of each reading.
    b. Any Method 9 reading which indicates exceedance.
    c. The name of the person conducting the reading.

    [Regulation 19, §19.503, Regulation 18, §18.501, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-115, 154, and 155
Cooler Scrubbers – College Station

Source Description

SN	Description
115	No. 1 Cooler Scrubber
154	No. 2 Cooler Scrubber
155	No. 3 Cooler Scrubber

Specific Conditions

38. From the sources listed in the table above, the permittee shall not exceed the emission rates set forth in Appendix A of this permit for PM_{10}, SO_2, VOC, CO, NO_X, and lead. Compliance shall be demonstrated by compliance with Specific Conditions 41 and 42. [Regulation 19, §19.501 and 40 CFR Part 52, Subpart E]

39. From the sources listed in table above, the permittee shall not exceed the emission rates set forth in Appendix A for PM, arsenic compounds, beryllium compounds, cadmium compounds, and manganese compounds. Compliance shall be demonstrated by compliance with Specific Conditions 41 and 42. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

40. From the sources listed in table above, the permittee shall not exceed an opacity of 20% measured by EPA Reference Method 9. [Regulation 18, §18.501 and 40 CFR Part 52, Subpart E]

41. The permittee shall not exceed 4.8 pounds per hour total particulate matter during operation at each of the sources listed in the table above. Compliance was demonstrated by successful stack testing completed in March 2005. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR §70.6]

42. The permittee shall maintain a minimum liquid flow at each scrubber listed in the table above of 70 gallons per minute, or the minimum determined during the most recent successful performance testing. The permittee shall install a flow meter at each scrubber and record liquid flow once daily. Records shall be updated daily, kept on-site, and made available to Department personnel upon request. [Regulation 18, §18.1004, 40 CFR Part 64, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-107, 109, 156-176, 183-184, 212, 213, 310, 401-427
Conveyor Transfer Points – College Station

Source Description

SN	Description
107	Feeders at Raw Stockpile
109	Conveyer J.B.
156	Conveyer No. 1
157	Conveyer No. 2
158	Transfer Conveyer No. 20
159	Transfer Conveyer No. 21
160	Transfer Conveyer No. 22
161	Transfer Conveyer No. 23
162	Transfer Conveyer No. 24
163	Transfer Conveyer No. 25
164	Transfer Conveyer No. 33
165	Transfer Conveyer No. 34
166	Transfer Conveyer No. 35
167	Transfer Conveyer No. 36
168	Transfer Conveyer No. 37
169	Transfer Conveyer No. 39
170	Transfer Conveyer No. 40
171	Transfer Conveyer No. 41
172	Transfer Conveyer No. 42
173	Conveyer No. 15
174	Conveyer No. 16
175	Conveyer No. 31
176	Conveyer 31A (Sodium Silicate Plant)
183	Pugmill at Waste Silo #4
184	Pugmill at Waste Silo #4
212	Conveyer 43
213	Conveyer 44
310	Truck /Railcar Loading Conveyer
401	C-101 Screen Feed Conveyor
402	C-102 Screens Feed Conveyor
403	C-103 Screens Feed Conveyor
404	C-104 Screens Feed Conveyor
405	C-105 Screens Feed Conveyor
406	C-106 Screens Feed Conveyor
407	C-107 Screens Feed Conveyor
408	C-108 Screens Feed Conveyor
409	C-109 Screens Feed Conveyor

SN	Description
410	C-110 Screens Feed Conveyor
411	C-111 Screens Feed Conveyor
412	C-112 Screens Feed Conveyor
413	C-113 Screens Feed Conveyor
414	C-114 Screens Feed Conveyor
415	C-115 Screens Feed Conveyor
416	C-116 Screens Feed Conveyor
417	C-117 Screens Feed Conveyor
418	C-118 Screens Feed Conveyor
419	C-119 Screens Feed Conveyor
420	C-120 Screens Feed Conveyor
421	C-121 Screens Feed Conveyor
422	C-122 Screens Feed Conveyor
423	C-123 Screens Feed Conveyor
424	C-124 Screens Feed Conveyor
425	C-125 Screens Feed Conveyor
426	C-126 Screens Feed Conveyor
427	C-127 Screens Feed Conveyor

Specific Conditions

43. From the sources listed in the table above, the permittee shall not exceed the emission rates set forth in Appendix A of this permit for PM_{10} and lead. Compliance shall be demonstrated by compliance with Specific Condition 46. [Regulation 19, §19.501 and 40 CFR Part 52, Subpart E]

44. From the sources listed in table above, the permittee shall not exceed the emission rates set forth in Appendix A for PM, arsenic compounds, beryllium compounds, cadmium compounds, and manganese compounds. Compliance shall be demonstrated by compliance with Specific Condition 46. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

45. The permittee shall not exceed the opacity limits in table below. Compliance with this condition will be demonstrated by Specific Condition 46. [Regulation 19, §19.503 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Opacity Limit
109, 164, 167-172, 184, 212, 213, 401-427	20%
107, 156-163, 165, 166, 173-176, 183, 310	40%

46. The permittee shall utilize wet suppression with or without foam, water spray with or without surfactant additives, or other dust suppressant as the primary methods of controlling emissions when necessary. This shall be used for equipment and haul roads to prevent excess emissions throughout College Station Granule Plant. [Regulation 19, §19.303 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-131-135 and 428-431
Screens – College Station

Source Description

SN	Description	Opacity Limit
131	Screen No. 25	40%
132	Screen No. 26	40%
133	Screen No. 29	40%
134	Screen No. 28	40%
135	Screen No. 27	40%
428	Screen 1 (S-1)	20%
429	Screen 2 (S-2)	20%
430	Screen 3 (S-3)	20%
431	Screen 4 (S-4)	20%

Specific Conditions

47. From the sources listed in the table above, the permittee shall not exceed the emission rates set forth in Appendix A of this permit for PM_{10} and lead. Compliance shall be demonstrated by compliance with Specific Condition 46. [Regulation 19, §19.501 and 40 CFR Part 52, Subpart E]

48. From the sources listed in table above, the permittee shall not exceed the emission rates set forth in Appendix A for PM, arsenic compounds, beryllium compounds, cadmium compounds, and manganese compounds. Compliance shall be demonstrated by compliance with Specific Condition 46. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

49. The permittee shall not exceed the opacity limits in table above from the building vent associated with the sources listed. Compliance with this condition will be demonstrated by Specific Condition 46. [Regulation 19, §19.503 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-121-123 and 186-191
Elevators – College Station

Source Description

SN	Description
121	No. 21 Elevator
122	No. 22 Elevator
123	No. 23 Elevator
186	Bucket Elevator No. 18
187	Bucket Elevator No. 19
188	Bucket Elevator No. 20
189	Bucket Elevator No. 24
190	Bucket Elevator No. 25
191	Bucket Elevator No. 27 (Sodium Silicate)

Specific Conditions

50. From the sources listed in the table above, the permittee shall not exceed the emission rates set forth in Appendix A of this permit for PM_{10} and lead. Compliance shall be demonstrated by compliance with Specific Condition 46. [Regulation 19, §19.501 and 40 CFR Part 52, Subpart E]

51. From the sources listed in table above, the permittee shall not exceed the emission rates set forth in Appendix A for PM, arsenic compounds, beryllium compounds, cadmium compounds, and manganese compounds. Compliance shall be demonstrated by compliance with Specific Condition 46. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

52. The permittee shall not exceed the opacity limits in table below. Compliance with this condition will be demonstrated by Specific Condition 46. [Regulation 19, §19.503 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Opacity Limit
190	20%
121-123, 186-189, 191	40%

SN-199-210, 303, 307, 308, 438-440
Storage Bins and Stockpiles – College Station

Source Description

SN	Description
199	Product Bin P1
200	Product Bin P2
201	Product Bin P3
202	Product Bin P4
203	Product Bin P5
204	Product Bin P6
205	Product Bin P7
206	Product Bin P8
207	Waste Bin 21
208	Waste Bin 22
209	Waste Bin 23
210	Waste Bin 24
303	Pugmill Discharge Pile
307	Temporary Storage Stockpile
308	Raw Stockpile
438	Screen Feed Bin
439	Crushers Feed Bin
440	11 Grade Bin

Specific Conditions

53. From the sources listed in the table above, the permittee shall not exceed the emission rates set forth in Appendix A of this permit for PM_{10} and lead. Compliance shall be demonstrated by compliance with Specific Condition 46. [Regulation 19, §19.501 and 40 CFR Part 52, Subpart E]

54. From the sources listed in table above, the permittee shall not exceed the emission rates set forth in Appendix A for PM, arsenic compounds, beryllium compounds, cadmium compounds, and manganese compounds. Compliance shall be demonstrated by compliance with Specific Condition 46. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-194, 195, 300-302, 304, and 306
Material Handling/Unloading and Vehicle Traffic – College Station

Source Description

SN	Description
194	Finished Granule Storage and Loading
195	Waste Granule Storage and Loading
300	Train Car Unload
301	Truck Loading at C & S Pugmill
302	Mineral Unloading at Pugmill Discharge Pile
304	Train Car Unloading – Sodium Silicate
306	Plant Vehicle Traffic including Baghouse Waste Haul Off

Specific Conditions

55. From the sources listed in the table above, the permittee shall not exceed the emission rates set forth in Appendix A of this permit for PM_{10} and lead. Compliance shall be demonstrated by compliance with Specific Condition 46. [Regulation 19, §19.501 and 40 CFR Part 52, Subpart E]

56. From the sources listed in table above, the permittee shall not exceed the emission rates set forth in Appendix A for PM, arsenic compounds, beryllium compounds, cadmium compounds, and manganese compounds. Compliance shall be demonstrated by compliance with Specific Condition 46. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-120, 130, 176, 191, and 304
Sodium Silicate Plant – College Station

Source Description

SN	Description
120	Sodium Silicate Bin
130	Sodium Silicate Plant Boiler
176	Conveyer 31A
191	Bucket Elevator 27
304	Train Car Unload - Sodium Silicate

Sources 120 and 130 are decommissioned equipment. Both pieces of equipment were used in the sodium silicate section of the College Station Plant. 3M currently uses a form of sodium silicate in liquid form; therefore, this equipment is not operating. If the equipment is brought back into service, a permit modification will be required to permit emissions from these sources. Other equipment listed in the table above is currently in operation.

Specific Conditions

57. From the sources listed in the table above, the permittee shall not exceed the emission rates set forth in Appendix A of this permit for PM_{10}, SO_2, VOC, CO, NO_X, and lead. Compliance shall be demonstrated by compliance with Specific Conditions 46 and 59. [Regulation 19, §19.501 and 40 CFR Part 52, Subpart E]

58. From the sources listed in table above, the permittee shall not exceed the emission rates set forth in Appendix A for PM, arsenic compounds, beryllium compounds, cadmium compounds, and manganese compounds. Compliance shall be demonstrated by compliance with Specific Conditions 46 and 59. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

59. The permittee shall not operate sources SN-120 or SN-130 at any time without a permit modification to incorporate the emission rates for these sources. [Regulation 19, §19.705, Regulation 18, §18.1004, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR §70.6]

SN-111-115, 121-123, 131-135, 154, 155, 158-172, 176, 186-191, 194, 195, 199-210, 304, and 311
Pigment Usage at Various Sources

Source Description

SN	Description
111	No. 1 Kiln Baghouse
112	No. 2 Kiln Baghouse
113	No. 3 Kiln Baghouse
114	No. 2 Mixer Baghouse
115	No. 1 Cooler Scrubber
121	No. 21 Elevator
122	No. 22 Elevator
123	No. 23 Elevator
131	Screen No. 25
132	Screen No. 26
133	Screen No. 29
134	Screen No. 28
135	Screen No. 27
154	No. 2 Cooler Scrubber
155	No. 3 Cooler Scrubber
158	Transfer Conveyer No. 20
159	Transfer Conveyer No. 21
160	Transfer Conveyer No. 22
161	Transfer Conveyer No. 23
162	Transfer Conveyer No. 24
163	Transfer Conveyer No. 25
164	Transfer Conveyer No. 33
165	Transfer Conveyer No. 34
166	Transfer Conveyer No. 35
167	Transfer Conveyer No. 36
168	Transfer Conveyer No. 37
169	Transfer Conveyer No. 39
170	Transfer Conveyer No. 40
171	Transfer Conveyer No. 41
172	Transfer Conveyer No. 42
176	Conveyer 31A (Sodium Silicate Plant)
186	Bucket Elevator No. 18
187	Bucket Elevator No. 19
188	Bucket Elevator No. 20
189	Bucket Elevator No. 24
190	Bucket Elevator No. 25

SN	Description
191	Bucket Elevator No. 27 (Sodium Silicate)
194	Finished Granule Storage/ Loading
195	Waste Granule Storage/ Loading
199	Product Bin P1
200	Product Bin P2
201	Product Bin P3
202	Product Bin P4
203	Product Bin P5
204	Product Bin P6
205	Product Bin P7
206	Product Bin P8
207	Waste Bin W21
208	Waste Bin W22
209	Waste Bin W23
210	Waste Bin W24
304	Train Car Unload (Sodium Silicate)
311	Automated Mixing System Baghouse

Coloring pigments are added to granules at an intermediate stage during production. The pigments have a small weight fraction of HAPs and, therefore, impact air emissions at subsequent sources shown in the table above. The pigment HAPs have been accounted for these sources in Appendix A.

Specific Conditions

60. From the sources listed in table above, the permittee shall not exceed the emission rates set forth in Appendix A for lead, chromium, manganese, and cobalt compounds that result directly from coloring pigment usage at these sources. Compliance shall be demonstrated by compliance with particulate matter emission limits at these sources and by compliance with Specific Condition 61. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

61. The permittee shall not exceed the following HAP content limits:

HAP	Limit
Lead Compounds	0.024 lb/ton (0.0012% by weight)
Chromium Compounds	6.5 lb/ton (0.325% by weight)
Manganese Compounds	0.3 lb/ton (0.015% by weight)
Cobalt Compounds	4 lb/ton (0.2% by weight)

The permittee shall keep records demonstrating compliance with the finished granule composition limits. Records may be in the form of MSDS sheets, product labels, lab analyses, or calculations using Department approved methodology. Records shall be kept

on-site and made available to Department personnel upon request. [Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-432-437
Crushers – College Station

Source Description

SN	Description
432	Crusher 1 (C-1)
433	Crusher 2 (C-2)
434	Crusher 3 (C-3)
435	Crusher 4 (C-4)
436	Crusher 5 (C-5)
437	Crusher 6 (C-6)

The crushers listed in above are each operated at the College Station location for the purpose of size reduction of material. The crusher emissions are controlled, if necessary, by wet suppression (with or without additives), foam dust suppressant, or a combination of each at various points in the process or alternatively.

Specific Conditions

62. From the sources listed in the table above, the permittee shall not exceed the emission rates set forth in Appendix A of this permit for PM_{10} and lead. Compliance shall be demonstrated by compliance with Specific Condition 65. [Regulation 19, §19.501 and 40 CFR Part 52, Subpart E]

63. From the sources listed in table above, the permittee shall not exceed the emission rates set forth in Appendix A for PM, arsenic compounds, beryllium compounds, cadmium compounds, and manganese compounds. Compliance shall be demonstrated by compliance with Specific Condition 65. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

64. The permittee shall not exceed the opacity limits in table below. Compliance with this condition will be demonstrated by Specific Condition 65. [Regulation 19, §19.503 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Opacity Limit
432-437	20%

65. Throughout the College Station Plant, the permittee shall utilize, as necessary, wet suppression, with or without additives, foam or water on equipment and wet suppression with or without additives on haul roads, as necessary, to prevent excess emissions. [Regulation 19, §19.303 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SECTION V: COMPLIANCE PLAN AND SCHEDULE

According to information submitted to the date of issuance of this permit, 3M is in compliance with the PM_{10} NAAQS. To ensure ongoing compliance, 3M shall continue to operate existing on-site ambient air monitors according to protocols outlined in past monitoring submissions and according to the Department's CEMS conditions found in Appendix D of this permit. The facility shall continue to submit quarterly monitoring reports, with the complete data, in a similar format as previously submitted reports. Any excess in the PM_{10} 24-hour or annual average PM_{10} concentrations shall be summarized, along with an explanation for each exceedance. Concentrations exceeding NAAQS may be cause for reopening of this permit. This schedule for submission shall be followed until the permittee has submitted a second Title V permit renewal application. At that point, the permittee may apply for removal of this requirement.

3M is in compliance with the applicable regulations cited in the permit application. 3M will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

SECTION VI: PLANTWIDE CONDITIONS

1. The permittee shall notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [Regulation 19, §19.704, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

2. If the permittee fails to start construction within eighteen months or suspends construction for eighteen months or more, the Director may cancel all or part of this permit. [Regulation 19, §19.410(B) and 40 CFR Part 52, Subpart E]

3. The permittee must test any equipment scheduled for testing, unless stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) new equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start up of the permitted source or (2) operating equipment according to the time frames set forth by the Department or within 180 days of permit issuance if no date is specified. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. The permittee shall submit the compliance test results to the Department within thirty (30) days after completing the testing. [Regulation 19, §19.702 and/or Regulation 18 §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

4. The permittee must provide: [Regulation 19, §19.702 and/or Regulation 18, §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

    a. Sampling ports adequate for applicable test methods;
    b. Safe sampling platforms;
    c. Safe access to sampling platforms; and
    d. Utilities for sampling and testing equipment.

5. The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee shall maintain the equipment in good condition at all times. [Regulation 19, §19.303 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

6. This permit subsumes and incorporates all previously issued air permits for this facility. [Regulation 26 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SECTION VII: INSIGNIFICANT ACTIVITIES

The following sources are insignificant activities. Any activity that has a state or federal applicable requirement shall be considered a significant activity even if this activity meets the criteria of §26.304 of Regulation 26 or listed in the table below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated July 28, 2006.

Description	Category
550 Gallon Gasoline Tank (Arch Street)	A-13
12,000 Gallon Diesel Tank (College Station)	A-13
270 Gallon Gasoline Tank (College Station)	A-13
20,000 Gallon Oil Tank (College Station)	A-13
20,000 Gallon Oil Tank (College Station)	A-13

SECTION VIII: GENERAL PROVISIONS

1. Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute. [40 CFR 70.6(b)(2)]

2. This permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later. [40 CFR 70.6(a)(2) and §26.701(B) of the Regulations of the Arkansas Operating Air Permit Program (Regulation 26), effective September 26, 2002]

3. The permittee must submit a complete application for permit renewal at least six (6) months before permit expiration. Permit expiration terminates the permittee's right to operate unless the permittee submitted a complete renewal application at least six (6) months before permit expiration. If the permittee submits a complete application, the existing permit will remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due. [Regulation 26, §26.406]

4. Where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, et seq. (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, the permit incorporates both provisions into the permit, and the Director or the Administrator can enforce both provisions. [40 CFR 70.6(a)(1)(ii) and Regulation 26, §26.701(A)(2)]

5. The permittee must maintain the following records of monitoring information as required by this permit. [40 CFR 70.6(a)(3)(ii)(A) and Regulation 26, §26.701(C)(2)]

    a. The date, place as defined in this permit, and time of sampling or measurements;
    b. The date(s) analyses performed;
    c. The company or entity performing the analyses;
    d. The analytical techniques or methods used;
    e. The results of such analyses; and
    f. The operating conditions existing at the time of sampling or measurement.

6. The permittee must retain the records of all required monitoring data and support information for at least five (5) years from the date of the monitoring sample,

measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [40 CFR 70.6(a)(3)(ii)(B) and Regulation 26, §26.701(C)(2)(b)]

7. The permittee must submit reports of all required monitoring every six (6) months. If permit establishes no other reporting period, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due within thirty (30) days of the end of the reporting period. Although the reports are due every six months, each report shall contain a full year of data. The report must clearly identify all instances of deviations from permit requirements. A responsible official as defined in Regulation No. 26, §26.2 must certify all required reports. The permittee will send the reports to the address below: [40 C.F.R. 70.6(a)(3)(iii)(A) and Regulation 26, §26.701(C)(3)(a)]

Arkansas Department of Environmental Quality
Air Division
ATTN: Compliance Inspector Supervisor
5301 Northshore Dr.
North Little Rock, AR 72118-5317

8. The permittee shall report to the Department all deviations from permit requirements, including those attributable to upset conditions as defined in the permit.

a. For all upset conditions (as defined in Regulation19, § 19.601), the permittee will make an initial report to the Department by the next business day after the discovery of the occurrence. The initial report may be made by telephone and shall include:

i. The facility name and location
ii. The process unit or emission source deviating from the permit limit,
iii. The permit limit, including the identification of pollutants, from which deviation occurs,
iv. The date and time the deviation started,
v. The duration of the deviation,
vi. The average emissions during the deviation,
vii. The probable cause of such deviations,
viii. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future, and
ix. The name of the person submitting the report.

The permittee shall make a full report in writing to the Department within five (5) business days of discovery of the occurrence. The report must include, in addition to the information required by the initial report, a schedule of actions taken or planned to eliminate future occurrences and/or to minimize the amount the permit's limits were exceeded and to reduce the length of time the limits were exceeded. The

permittee may submit a full report in writing (by facsimile, overnight courier, or other means) by the next business day after discovery of the occurrence, and the report will serve as both the initial report and full report.

b. For all deviations, the permittee shall report such events in semi-annual reporting and annual certifications required in this permit. This includes all upset conditions reported in 8a above. The semi-annual report must include all the information as required by the initial and full reports required in 8a.

[Regulation 19, §19.601 and §19.602, Regulation 26, §26.701(C)(3)(b), and 40 CFR 70.6(a)(3)(iii)(B)]

9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable. [40 CFR 70.6(a)(5), Regulation 26, §26.701(E), and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

10. The permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation 26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. §7401, et seq. and is grounds for enforcement action; for permit termination, revocation and reissuance, for permit modification; or for denial of a permit renewal application. [40 CFR 70.6(a)(6)(i) and Regulation 26, §26.701(F)(1)]

11. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit. [40 CFR 70.6(a)(6)(ii) and Regulation 26, §26.701(F)(2)]

12. The Department may modify, revoke, reopen and reissue the permit or terminate the permit for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 CFR 70.6(a)(6)(iii) and Regulation 26, §26.701(F)(3)]

13. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 CFR 70.6(a)(6)(iv) and Regulation 26, §26.701(F)(4)]

14. The permittee must furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee must also furnish to the Director copies of records required by the permit. For information the permittee claims confidentiality, the Department may require the permittee to furnish such records directly to the Director

along with a claim of confidentiality. [40 CFR 70.6(a)(6)(v) and Regulation 26, §26.701(F)(5)]

15. The permittee must pay all permit fees in accordance with the procedures established in Regulation 9. [40 CFR 70.6(a)(7) and Regulation 26, §26.701(G)]

16. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes provided for elsewhere in this permit. [40 CFR 70.6(a)(8) and Regulation 26, §26.701(H)]

17. If the permit allows different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the operational scenario. [40 CFR 70.6(a)(9)(i) and Regulation 26, §26.701(I)(1)]

18. The Administrator and citizens may enforce under the Act all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, unless the Department specifically designates terms and conditions of the permit as being federally unenforceable under the Act or under any of its applicable requirements. [40 CFR 70.6(b) and Regulation 26, §26.702(A) and (B)]

19. Any document (including reports) required by this permit must contain a certification by a responsible official as defined in Regulation 26, §26.2. [40 CFR 70.6(c)(1) and Regulation 26, §26.703(A)]

20. The permittee must allow an authorized representative of the Department, upon presentation of credentials, to perform the following: [40 CFR 70.6(c)(2) and Regulation 26, §26.703(B)]

    a. Enter upon the permittee's premises where the permitted source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
    b. Have access to and copy, at reasonable times, any records required under the conditions of this permit;
    c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
    d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for assuring compliance with this permit or applicable requirements.

21. The permittee shall submit a compliance certification with the terms and conditions contained in the permit, including emission limitations, standards, or work practices. The permittee must submit the compliance certification annually within 30 days following the last day of the anniversary month of the initial Title V permit. The permittee must also

submit the compliance certification to the Administrator as well as to the Department. All compliance certifications required by this permit must include the following: [40 CFR 70.6(c)(5) and Regulation 26, §26.703(E)(3)]

a. The identification of each term or condition of the permit that is the basis of the certification;
b. The compliance status;
c. Whether compliance was continuous or intermittent;
d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit;
e. and Such other facts as the Department may require elsewhere in this permit or by §114(a)(3) and §504(b) of the Act.

22. Nothing in this permit will alter or affect the following: [Regulation 26, §26.704(C)]

a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
b. The liability of the permittee 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 §408(a) of the Act or,
d. The ability of EPA to obtain information from a source pursuant to §114 of the Act.

23. This permit authorizes only those pollutant emitting activities addressed in this permit. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

APPENDIX A

SN	Source Description	Total PM (lbs/hr)	PM_{10} (lbs/hr)	NO_x (lbs/hr)	SO_2 (lbs/hr)	VOC (lbs/hr)	CO (lbs/hr)	lead (lbs/hr)	chromium (lbs/hr)	manganese (lbs/hr)	cobalt (lbs/hr)	arsenic (lbs/hr)	cad (lb
1	Tertiary Crusher Baghouse	2.60	2.60										
2	Transfer Tower	0.22	0.08										
3	Traylor Primary Crusher	1.12	0.95										
4	Traylor Crusher Surge Bin	0.22	0.08										
5	No. 20 Conveyor	0.22	0.08										
6	Primary Screen	3.52	1.20										
7	A.C. Primary Crusher	1.12	0.95										
8	Primary Screen	3.52	1.20										
9	Cone Secondary Crusher	1.12	0.95										
10	No. 1 Crusher	0.22	0.08										
11	Transfer Station	0.22	0.08										
12	Load Out Bin	0.30	0.10										
13	Load Out Bin	0.30	0.10										
14	No. 3 Conveyor	0.22	0.08										
15	No. 3A Conveyor	0.22	0.08										
16	A.C. Crusher Surge Bin	0.22	0.08										
17	Tertiary Crushing Stock Pile	0.60	0.60										
18	Railroad Loadout	0.30	0.10										
19	Feeders	0.21	0.07										
20	No. 4 Conveyor	0.21	0.07										
28	No. 5 Conveyor	0.21	0.07										
29	No. 6 Conveyor	0.21	0.07										
30	Screen	1.70	0.60										
31	Crusher	0.90	0.50										
32	Screen	1.70	0.60										
33	Crusher	0.90	0.50										
50	Overburden Removal	3.00	1.50										
51	Drilling	0.30	0.20										
52	Blasting	4.70	4.70										
53	Blasting Explosives (ANFO)			13.60	1.60		53.6						
54	Quarry Truck Loading	0.40	0.20										
55	Quarry Truck Traffic	0.50	0.50										

SN	Source Description	Total PM (lbs/hr)	PM_{10} (lbs/hr)	NO_x (lbs/hr)	SO_2 (lbs/hr)	VOC (lbs/hr)	CO (lbs/hr)	lead (lbs/hr)	chromium (lbs/hr)	manganese (lbs/hr)	cobalt (lbs/hr)	arsenic (lbs/hr)	cadm (lbs
57	Emergency Stockpile	0.60	0.60										
58	Emergency Railroad Loadout	0.10	0.10										
59	Conveyor from A.C. Crusher	0.22	0.08										
60	Parallel Crusher	Bubbled w/ SN-09											
61	No. 45 Conveyor	0.22	0.08										
62	No. 46 Conveyor	0.22	0.08										
101	Dryer Feed End (BH)	5.20	5.20										
102	C&S Line #1 (BH)	4.30	4.30										
103	C&S Line #2 (BH)	4.30	4.30										
104	C&S Line #3 (BH)	5.30	5.30										
105	Filler Screen Baghouse	1.80	1.80										
106	Product & Tripper Flr. (BH)	1.90	1.90										
107	Feeders	0.12	0.04										
108	Dryer No. 1 Baghouse	7.70	7.70	10.14	24.80	0.40	6.00	2.00E-01	4.00E-02			1.85E-03	1.85E
109	JB Conveyor	0.12	0.04										
110	No. 7 Filler Tank (BH)	0.60	0.60										
111	No. 1 Kiln Baghouse	4.30	4.30	7.20	16.80	0.30	4.20	5.06E-05	1.38E-02	6.45E-04	2.41E-03	1.80E-03	1.90E
112	No. 2 Kiln Baghouse	4.30	4.30	7.20	16.80	0.30	4.20	5.06E-05	1.38E-02	6.45E-04	2.41E-03	1.80E-03	1.90E
113	No. 3 Kiln Baghouse	4.30	4.30	7.20	16.80	0.30	4.20	5.06E-05	1.38E-02	6.45E-04	2.41E-03	1.80E-03	1.90E
114	No. 2 Mixer Baghouse	1.80	1.80					2.12E-05	5.79E-03	2.70E-04	1.01E-03		
115	No. 1 Cooler (Scrubber)	4.80	4.80					5.64E-05	1.54E-02	7.20E-04	2.69E-03		
116	Dryer No. 2 Baghouse	4.30	4.30	2.90	6.80	0.20	1.70	2.00E-01	4.00E-02			1.90E-03	1.90E
117	No. 1 Clay Tank Baghouse	0.30	0.30										
118	No. 2 Clay Tank Baghouse	0.30	0.30										
119	No. 3 Clay Tank Baghouse	0.30	0.30										
120	Sodium Silicate Bin	Decommissioned											
121	No. 21 Elevator	1.60	1.60					1.88E-05	5.15E-03	2.40E-04	8.96E-04		
122	No. 22 Elevator	1.60	1.60					1.88E-05	5.15E-03	2.40E-04	8.96E-04		
123	No. 23 Elevator	1.60	1.60					1.88E-05	5.15E-03	2.40E-04	8.96E-04		
124	Coloring Feed End Baghouse	2.70	2.70										
128	No. 3 Mixer Baghouse	1.80	1.80					2.12E-05	5.79E-03	2.70E-04	1.01E-03		
129	No. 1 Mixer Baghouse	1.80	1.80					2.12E-05	5.79E-03	2.70E-04	1.01E-03		
130	Sodium Silicate Plant Boiler	Decommissioned											

SN	Source Description	Total PM (lbs/hr)	PM_{10} (lbs/hr)	NO_x (lbs/hr)	SO_2 (lbs/hr)	VOC (lbs/hr)	CO (lbs/hr)	lead (lbs/hr)	chromium (lbs/hr)	manganese (lbs/hr)	cobalt (lbs/hr)	arsenic (lbs/hr)	cad (lb
131	Screen No. 25	0.17	0.06					2.00E-06	5.47E-04	2.55E-05	9.52E-05		
132	Screen No. 26	0.17	0.06					2.00E-06	5.47E-04	2.55E-05	9.52E-05		
133	Screen No. 29	0.17	0.06					2.00E-06	5.47E-04	2.55E-05	9.52E-05		
134	Screen No. 28	0.17	0.06					2.00E-06	5.47E-04	2.55E-05	9.52E-05		
135	Screen No. 27	0.17	0.06					2.00E-06	5.47E-04	2.55E-05	9.52E-05		
150	IC Circuit - Silo No. 1 (BH)	Decommissioned											
151	IC Circuit - Silo No. 2 (BH)	Decommissioned											
152	IC Circuit - Silo No. 3 (BH)	Decommissioned											
153	Waste & Raw Granule(BH)	2.50	2.50										
154	No. 2 Cooler (Scrubber)	4.80	4.80					5.64E-05	1.54E-02	7.20E-04	2.69E-03		
155	No. 3 Cooler (Scrubber)	4.80	4.80					5.64E-05	1.54E-02	7.20E-04	2.69E-03		
156	Conveyor No. 1	2.40	0.90										
157	Conveyor No. 2	2.40	0.90										
158	Transfer Conveyor No. 20	0.021	0.007					2.47E-07	6.76E-05	3.15E-06	1.18E-05		
159	Transfer Conveyor No. 21	0.021	0.007					2.47E-07	6.76E-05	3.15E-06	1.18E-05		
160	Transfer Conveyor No. 22	0.014	0.005					1.65E-07	4.50E-05	2.10E-06	7.84E-06		
161	Transfer Conveyor No. 23	0.06	0.02					7.06E-07	1.93E-04	9.00E-06	3.36E-05		
162	Transfer Conveyor No. 24	0.06	0.02					7.06E-07	1.93E-04	9.00E-06	3.36E-05		
163	Transfer Conveyor No. 25	0.026	0.009					3.06E-07	8.37E-05	3.90E-06	1.46E-05		
164	Transfer Conveyor No. 33	0.042	0.014					4.94E-07	1.35E-04	6.30E-06	2.35E-05		
165	Transfer Conveyor No. 34	0.06	0.02					7.06E-07	1.93E-04	9.00E-06	3.36E-05		
166	Transfer Conveyor No. 35	0.06	0.02					7.06E-07	1.93E-04	9.00E-06	3.36E-05		
167	Transfer Conveyor No. 36	0.026	0.009					3.06E-07	8.37E-05	3.90E-06	1.46E-05		
168	Transfer Conveyor No. 37	0.026	0.009					3.06E-07	8.37E-05	3.90E-06	1.46E-05		
169	Transfer Conveyor No. 39	0.06	0.02					7.06E-07	1.93E-04	9.00E-06	3.36E-05		
170	Transfer Conveyor No. 40	0.06	0.02					7.06E-07	1.93E-04	9.00E-06	3.36E-05		
171	Transfer Conveyor No. 41	0.06	0.02					7.06E-07	1.93E-04	9.00E-06	3.36E-05		
172	Transfer Conveyor No. 42	0.06	0.02					7.06E-07	1.93E-04	9.00E-06	3.36E-05		
173	Conveyor No. 15	0.50	0.20										
174	Conveyor No. 16	0.50	0.20										
175	Conveyor No. 31	0.014	0.005										
176	Conveyor No. 31A (Silicate Plant)	0.10	0.04					1.18E-06	3.22E-04	1.50E-05	5.60E-05		
183	Pugmill	0.04	0.02										

SN	Source Description	Total PM (lbs/hr)	PM_{10} (lbs/hr)	NO_x (lbs/hr)	SO_2 (lbs/hr)	VOC (lbs/hr)	CO (lbs/hr)	lead (lbs/hr)	chromium (lbs/hr)	manganese (lbs/hr)	cobalt (lbs/hr)	arsenic (lbs/hr)	cadm (lbs
184	Pugmill	0.05	0.02										
186	Bucket Elevator No. 18	0.021	0.01					2.47E-07	6.76E-05	3.15E-06	1.18E-05		
187	Bucket Elevator No. 19	0.021	0.01					2.47E-07	6.76E-05	3.15E-06	1.18E-05		
188	Bucket Elevator No. 20	0.021	0.01					2.47E-07	6.76E-05	3.15E-06	1.18E-05		
189	Bucket Elevator No. 24	1.24	1.22					1.46E-05	3.99E-03	1.86E-04	6.94E-04		
190	Bucket Elevator No. 25	0.04	0.02					4.70E-07	1.29E-04	6.00E-06	2.24E-05		
191	Bucket Elv. No. 27 (Silicate Plt.)	0.10	0.04					1.18E-06	3.22E-04	1.50E-05	5.60E-05		
194	Finished Granule Storage/Loading	0.06	0.03					7.06E-07	1.93E-04	9.00E-06	3.36E-05		
195	Waste Granule Storage/Loading	0.03	0.05					3.53E-07	9.65E-05	4.50E-06	1.68E-05		
199	Product Bin P1	4.90	2.40					5.76E-05	1.58E-02	7.35E-04	2.74E-03		
200	Product Bin P2	4.90	2.40					5.76E-05	1.58E-02	7.35E-04	2.74E-03		
201	Product Bin P3	4.90	2.40					5.76E-05	1.58E-02	7.35E-04	2.74E-03		
202	Product Bin P4	4.90	2.40					5.76E-05	1.58E-02	7.35E-04	2.74E-03		
203	Product Bin P5	4.90	2.40					5.76E-05	1.58E-02	7.35E-04	2.74E-03		
204	Product Bin P6	4.90	2.40					5.76E-05	1.58E-02	7.35E-04	2.74E-03		
205	Product Bin P7	4.90	2.40					5.76E-05	1.58E-02	7.35E-04	2.74E-03		
206	Product Bin P8	4.90	2.40					5.76E-05	1.58E-02	7.35E-04	2.74E-03		
207	Waste Bin W21	3.00	1.50					3.53E-05	9.65E-03	4.50E-04	1.68E-03		
208	Waste Bin W22	3.00	1.50					3.53E-05	9.65E-03	4.50E-04	1.68E-03		
209	Waste Bin W23	3.00	1.50					3.53E-05	9.65E-03	4.50E-04	1.68E-03		
210	Waste Bin W24	3.00	1.50					3.53E-05	9.65E-03	4.50E-04	1.68E-03		
211	Covered Raw Gran. Stockpile (BH)	1.40	1.40										
212	Conveyor No. 43	0.06	0.02										
213	Conveyor No. 44	0.06	0.02										
214	IC Circuit Baghouse	1.10	1.10										
300	Train Car Unload	0.12	0.04										
301	Truck Loading at Pugmill	0.08	0.04										
302	Mineral Unloading at Wet Stockpile	0.05	0.02										
303	Wet Stockpile Fugitives	1.10	1.10										
304	Traincar Unloading (Silica)	0.08	0.04					9.41E-07	2.57E-04	1.20E-05	4.48E-05		
306	Plant Vehicle Traffic/Haul Off	9.00	1.80										

SN	Source Description	Total PM (lbs/hr)	PM_{10} (lbs/hr)	NO_x (lbs/hr)	SO_2 (lbs/hr)	VOC (lbs/hr)	CO (lbs/hr)	lead (lbs/hr)	chromium (lbs/hr)	manganese (lbs/hr)	cobalt (lbs/hr)	arsenic (lbs/hr)	cad (lb
307	Temporary Storage Stockpile Drop	0.70	0.70										
308	Raw Stockpile	2.30	2.30										
310	Truck/Railcar Loading	0.09	0.04										
311	Automated Mixing System	1.80	1.80					2.12E-05	5.79E-03	2.70E-04	1.01E-03		
401	C-101 Feed Conveyor Main Plant	0.07	0.023					8.23E-07	2.25E-04	1.05E-05	3.92E-05		
402	C-102 Screens Feed Conveyor	0.05	0.02					5.88E-07	1.61E-04	7.50E-06	2.80E-05		
403	C-103 Screens Feed Conveyor	0.05	0.02					5.88E-07	1.61E-04	7.50E-06	2.80E-05		
404	C-104 Under Screen Conveyor	0.01	0.01					8.23E-08	2.25E-05	1.05E-06	3.92E-06		
405	C-105 Under Screen Conveyor	0.01	0.01					8.23E-08	2.25E-05	1.05E-06	3.92E-06		
406	C-106 Under Screen Conveyor	0.01	0.01					8.23E-08	2.25E-05	1.05E-06	3.92E-06		
407	C-107 Under Screen Conveyor	0.01	0.01					8.23E-08	2.25E-05	1.05E-06	3.92E-06		
408	C-108 Screen Overs Conveyor	0.07	0.03					8.23E-07	2.25E-04	1.05E-05	3.92E-05		
409	C-109 Crusher Feed Bin Conveyor	0.07	0.03					8.23E-07	2.25E-04	1.05E-05	3.92E-05		
410	C-110 Crusher Feed Conveyor	0.02	0.01					2.35E-07	6.44E-05	3.00E-06	1.12E-05		
411	C-111 Crusher Feed Conveyor	0.02	0.01					2.35E-07	6.44E-05	3.00E-06	1.12E-05		
412	C-112 Crusher Feed Conveyor	0.02	0.01					2.35E-07	6.44E-05	3.00E-06	1.12E-05		
413	C-113 Crusher Feed Conveyor	0.02	0.01					2.35E-07	6.44E-05	3.00E-06	1.12E-05		
414	C-114 Crusher Feed Conveyor	0.02	0.01					2.35E-07	6.44E-05	3.00E-06	1.12E-05		
415	C-115 Crusher Feed Conveyor	0.02	0.01					2.35E-07	6.44E-05	3.00E-06	1.12E-05		
416	C-116 Crusher Discharge Conveyor	0.05	0.02					5.88E-07	1.61E-04	7.50E-06	2.80E-05		
417	C-117 Crusher Discharge Conveyor	0.05	0.02					5.88E-07	1.61E-04	7.50E-06	2.80E-05		
418	C-118 Collecting Conveyor	0.07	0.03					8.23E-07	2.25E-04	1.05E-05	3.92E-05		
419	C-119 Transfer Conveyor	0.07	0.03					8.23E-07	2.25E-04	1.05E-05	3.92E-05		
420	C-120 Screen Feed Bin Return Con	0.07	0.03					8.23E-07	2.25E-04	1.05E-05	3.92E-05		
421	C-121 Screen Thru Collect Con	0.05	0.02					5.88E-07	1.61E-04	7.50E-06	2.80E-05		
422	C-122 Wet Classification Conveyor	0.05	0.02					5.88E-07	1.61E-04	7.50E-06	2.80E-05		
423	C-123 Transfer Conveyor	0.03	0.01					3.53E-07	9.65E-05	4.50E-06	1.68E-05		
424	C-124 Waste Stacking Conveyor	0.05	0.02					5.88E-07	1.61E-04	7.50E-06	2.80E-05		
425	C-125 Transfer Conveyor	0.05	0.02					5.88E-07	1.61E-04	7.50E-06	2.80E-05		
426	C-126 Day Bin Feed Conveyor	0.05	0.02					5.88E-07	1.61E-04	7.50E-06	2.80E-05		

SN	Source Description	Total PM (lbs/hr)	PM_{10} (lbs/hr)	NO_x (lbs/hr)	SO_2 (lbs/hr)	VOC (lbs/hr)	CO (lbs/hr)	lead (lbs/hr)	chromium (lbs/hr)	manganese (lbs/hr)	cobalt (lbs/hr)	arsenic (lbs/hr)	cadn (lbs
427	C-126 Day Bin Discharge Conveyor	0.06	0.02					7.06E-07	1.93E-04	9.00E-06	3.36E-05		
428	S-1 Screen	0.11	0.04					1.29E-06	3.54E-04	1.65E-05	6.16E-05		
429	S-2 Screen	0.11	0.04					1.29E-06	3.54E-04	1.65E-05	6.16E-05		
430	S-3 Screen	0.11	0.04					1.29E-06	3.54E-04	1.65E-05	6.16E-05		
431	S-4 Screen	0.11	0.04					1.29E-06	3.54E-04	1.65E-05	6.16E-05		
432	C1 Crusher 1	0.11	0.05					1.29E-06	3.54E-04	1.65E-05	6.16E-05		
433	C2 Crusher 2	0.11	0.05					1.29E-06	3.54E-04	1.65E-05	6.16E-05		
434	C3 Crusher 3	0.11	0.05					1.29E-06	3.54E-04	1.65E-05	6.16E-05		
435	C4 Crusher 4	0.11	0.05					1.29E-06	3.54E-04	1.65E-05	6.16E-05		
436	C5 Crusher 5	0.11	0.05					1.29E-06	3.54E-04	1.65E-05	6.16E-05		
437	C6 Crusher 6	0.11	0.05					1.29E-06	3.54E-04	1.65E-05	6.16E-05		
438	Screen Feed Bin	0.06	0.02					7.06E-07	1.93E-04	9.00E-06	3.36E-05		
439	Crusher Feed Bin	0.07	0.03					8.23E-07	2.25E-04	1.05E-05	3.92E-05		
440	11 Grade Bin	0.042	0.014					4.94E-07	1.35E-04	6.30E-06	2.35E-05		
	Total Pounds/hour =	192.76	140.16	48.24	83.60	1.50	73.90	0.40113	0.3904	0.0145	0.0540	0.0092	0.0(

SN	Source Description	Total PM (tons/yr)	PM_{10} (tons/yr)	NO_x (tons/yr)	SO_2 (tons/yr)	VOC (tons/yr)	CO (tons/yr)	lead (tons/yr)	chromium (tons/yr)	manganese (tons/yr)	cobalt (tons/yr)	arsenic (tons/yr
1	Tertiary Crusher Baghouse	11.30	11.30									
2	Transfer Tower	0.21	0.07									
3	Traylor Primary Crusher	1.10	0.90									
4	Traylor Crusher Surge Bin	0.21	0.07									
5	No. 20 Conveyor	0.21	0.07									
6	Primary Screen	3.30	1.20									
7	A.C. Primary Crusher	1.10	0.90									
8	Primary Screen	3.52	1.20									
9	Cone Secondary Crusher	1.10	0.90									
10	No. 1 Crusher	0.21	0.07									
11	Transfer Station	0.21	0.07									
12	Load Out Bin	0.21	0.07									
13	Load Out Bin	0.21	0.07									
14	No. 3 Conveyor	0.21	0.07									
15	No. 3A Conveyor	0.21	0.07									
16	A.C. Crusher Surge Bin	0.21	0.07									
17	Tertiary Crushing Stock Pile	0.50	0.50									
18	Railroad Loadout	0.21	0.07									
19	Feeders	0.21	0.07									
20	No. 4 Conveyor	0.21	0.07									
28	No. 5 Conveyor	0.21	0.07									
29	No. 6 Conveyor	0.21	0.07									
30	Screen	3.30	1.20									
31	Crusher	1.80	0.90									
32	Screen	3.30	1.20									
33	Crusher	1.80	0.90									
50	Overburden Removal	18.00	9.00									
51	Drilling	0.30	0.20									
52	Blasting	0.12	0.12									
53	Blasting Explosives (ANFO)			12.80	1.50		50.3					
54	Quarry Truck Loading	0.40	0.20									
55	Quarry Truck Traffic	2.20	2.20									

SN	Source Description	Total PM (tons/yr)	PM_{10} (tons/yr)	NO_x (tons/yr)	SO_2 (tons/yr)	VOC (tons/yr)	CO (tons/yr)	lead (tons/yr)	chromium (tons/yr)	manganese (tons/yr)	cobalt (tons/yr)	arsenic (tons/yr)
57	Emergency Stockpile	0.50	0.50									
58	Emergency Railroad Loadout	0.40	0.20									
59	Conveyor from A.C. Crusher	0.21	0.07									
60	Parallel Crusher	Bubbled w/ SN-09										
61	No. 45 Conveyor	0.21	0.07									
62	No. 46 Conveyor	0.21	0.07									
101	Dryer Feed End (BH)	22.60	22.60									
102	C&S Line #1 (BH)	18.60	18.60									
103	C&S Line #2 (BH)	18.60	18.60									
104	C&S Line #3 (BH)	23.2	23.2									
105	Filler Screen Baghouse	7.50	7.50									
106	Product & Tripper Flr. (BH)	8.00	8.00									
107	Feeders	0.60	0.20									
108	Dryer No. 1 Baghouse	33.70	33.70	31.10	12.40	1.80	26.60	9.00E-02	1.80E-02			9.00E-04
109	JB Conveyor	0.60	0.20									
110	No. 7 Filler Tank (BH)	2.30	2.30									
111	No. 1 Kiln Baghouse	18.70	18.70	21.90	11.80	1.20	18.40	2.20E-04	6.02E-02	2.81E-03	1.05E-02	1.30E-03
112	No. 2 Kiln Baghouse	18.70	18.70	21.90	11.80	1.20	18.40	2.20E-04	6.02E-02	2.81E-03	1.05E-02	1.30E-03
113	No. 3 Kiln Baghouse	18.70	18.70	21.90	11.80	1.20	18.40	2.20E-04	6.02E-02	2.81E-03	1.05E-02	1.30E-03
114	No. 2 Mixer Baghouse	7.50	7.50					8.82E-05	2.41E-02	1.13E-03	4.20E-03	
115	No. 1 Cooler (Scrubber)	21.00	21.00					2.47E-04	6.76E-02	3.15E-03	1.18E-02	
116	Dryer No. 2 Baghouse	18.70	18.70	8.80	11.80	0.50	7.40					1.37E-03
117	No. 1 Clay Tank Baghouse	1.20	1.20									
118	No. 2 Clay Tank Baghouse	1.20	1.20									
119	No. 3 Clay Tank Baghouse	1.20	1.20									
120	Sodium Silicate Bin	Decommissioned										
121	No. 21 Elevator	6.70	6.70					7.88E-05	2.16E-02	1.01E-03	3.75E-03	
122	No. 22 Elevator	6.70	6.70					7.88E-05	2.16E-02	1.01E-03	3.75E-03	
123	No. 23 Elevator	6.70	6.70					7.88E-05	2.16E-02	1.01E-03	3.75E-03	
124	Coloring Feed End Baghouse	11.50	11.50									
128	No. 3 Mixer Baghouse	7.50	7.50					8.82E-05	2.41E-02	1.13E-03	4.20E-03	
129	No. 1 Mixer Baghouse	7.50	7.50					8.82E-05	2.41E-02	1.13E-03	4.20E-03	
130	Sodium Silicate Plant Boiler	Decommissioned										

SN	Source Description	Total PM (tons/yr)	PM_{10} (tons/yr)	NO_x (tons/yr)	SO_2 (tons/yr)	VOC (tons/yr)	CO (tons/yr)	lead (tons/yr)	chromium (tons/yr)	manganese (tons/yr)	cobalt (tons/yr)	arsenic (tons/yr)
131	Screen No. 25	0.80	0.25					9.41E-06	2.57E-03	1.20E-04	4.48E-04	
132	Screen No. 26	0.80	0.25					9.41E-06	2.57E-03	1.20E-04	4.48E-04	
133	Screen No. 29	0.80	0.25					9.41E-06	2.57E-03	1.20E-04	4.48E-04	
134	Screen No. 28	0.80	0.25					9.41E-06	2.57E-03	1.20E-04	4.48E-04	
135	Screen No. 27	0.80	0.25					9.41E-06	2.57E-03	1.20E-04	4.48E-04	
150	IC Circuit - Silo No. 1 (BH)	Decommissioned										
151	IC Circuit - Silo No. 2 (BH)	Decommissioned										
152	IC Circuit - Silo No. 3 (BH)	Decommissioned										
153	Waste & Raw Granule(BH)	10.70	10.70									
154	No. 2 Cooler (Scrubber)	21.00	21.00					2.47E-04	6.76E-02	3.15E-03	1.18E-02	
155	No. 3 Cooler (Scrubber)	21.00	21.00					2.47E-04	6.76E-02	3.15E-03	1.18E-02	
156	Conveyor No. 1	4.50	1.70									
157	Conveyor No. 2	4.50	1.70									
158	Transfer Conveyor No. 20	0.092	0.040					1.08E-06	2.96E-04	1.38E-05	5.15E-05	
159	Transfer Conveyor No. 21	0.092	0.040					1.08E-06	2.96E-04	1.38E-05	5.15E-05	
160	Transfer Conveyor No. 22	0.070	0.030					8.23E-07	2.25E-04	1.05E-05	3.92E-05	
161	Transfer Conveyor No. 23	0.25	0.09					2.94E-06	8.04E-04	3.75E-05	1.40E-04	
162	Transfer Conveyor No. 24	0.25	0.09					2.94E-06	8.04E-04	3.75E-05	1.40E-04	
163	Transfer Conveyor No. 25	0.120	0.040					1.41E-06	3.86E-04	1.80E-05	6.72E-05	
164	Transfer Conveyor No. 33	0.200	0.080					2.35E-06	6.44E-04	3.00E-05	1.12E-04	
165	Transfer Conveyor No. 34	0.25	0.09					2.94E-06	8.04E-04	3.75E-05	1.40E-04	
166	Transfer Conveyor No. 35	0.25	0.09					2.94E-06	8.04E-04	3.75E-05	1.40E-04	
167	Transfer Conveyor No. 36	0.120	0.040					1.41E-06	3.86E-04	1.80E-05	6.72E-05	
168	Transfer Conveyor No. 37	0.120	0.040					1.41E-06	3.86E-04	1.80E-05	6.72E-05	
169	Transfer Conveyor No. 39	0.25	0.09					2.94E-06	8.04E-04	3.75E-05	1.40E-04	
170	Transfer Conveyor No. 40	0.25	0.09					2.94E-06	8.04E-04	3.75E-05	1.40E-04	
171	Transfer Conveyor No. 41	0.25	0.09					2.94E-06	8.04E-04	3.75E-05	1.40E-04	
172	Transfer Conveyor No. 42	0.25	0.09					2.94E-06	8.04E-04	3.75E-05	1.40E-04	
173	Conveyor No. 15	2.00	0.80									
174	Conveyor No. 16	2.00	0.80									
175	Conveyor No. 31	0.070	0.030									
176	Conveyor No. 31A (Silicate Plant)	0.40	0.20					4.70E-06	1.29E-03	6.00E-05	2.24E-04	
183	Pugmill	0.16	0.06									

SN	Source Description	Total PM (tons/yr)	PM_{10} (tons/yr)	NO_x (tons/yr)	SO_2 (tons/yr)	VOC (tons/yr)	CO (tons/yr)	lead (tons/yr)	chromium (tons/yr)	manganese (tons/yr)	cobalt (tons/yr)	arsenic (tons/yr)
184	Pugmill	0.22	0.08									
186	Bucket Elevator No. 18	0.100	0.04					1.18E-06	3.22E-04	1.50E-05	5.60E-05	
187	Bucket Elevator No. 19	0.100	0.04					1.18E-06	3.22E-04	1.50E-05	5.60E-05	
188	Bucket Elevator No. 20	0.100	0.04					1.18E-06	3.22E-04	1.50E-05	5.60E-05	
189	Bucket Elevator No. 24	5.46	5.36					6.42E-05	1.76E-02	8.19E-04	3.06E-03	
190	Bucket Elevator No. 25	0.16	0.06					1.88E-06	5.15E-04	2.40E-05	8.96E-05	
191	Bucket Elv. No. 27 (Silicate Plt.)	0.40	0.20					4.70E-06	1.29E-03	6.00E-05	2.24E-04	
194	Finished Granule Storage/Loading	0.30	0.20					3.53E-06	9.65E-04	4.50E-05	1.68E-04	
195	Waste Granule Storage/Loading	0.10	0.05					1.18E-06	3.22E-04	1.50E-05	5.60E-05	
199	Product Bin P1	21.50	10.30					2.53E-04	6.92E-02	3.23E-03	1.20E-02	
200	Product Bin P2	21.50	10.30					2.53E-04	6.92E-02	3.23E-03	1.20E-02	
201	Product Bin P3	21.50	10.30					2.53E-04	6.92E-02	3.23E-03	1.20E-02	
202	Product Bin P4	21.50	10.30					2.53E-04	6.92E-02	3.23E-03	1.20E-02	
203	Product Bin P5	21.50	10.30					2.53E-04	6.92E-02	3.23E-03	1.20E-02	
204	Product Bin P6	21.50	10.30					2.53E-04	6.92E-02	3.23E-03	1.20E-02	
205	Product Bin P7	21.50	10.30					2.53E-04	6.92E-02	3.23E-03	1.20E-02	
206	Product Bin P8	21.50	10.30					2.53E-04	6.92E-02	3.23E-03	1.20E-02	
207	Waste Bin W21	12.90	6.20					1.52E-04	4.15E-02	1.94E-03	7.22E-03	
208	Waste Bin W22	12.90	6.20					1.52E-04	4.15E-02	1.94E-03	7.22E-03	
209	Waste Bin W23	12.90	6.20					1.52E-04	4.15E-02	1.94E-03	7.22E-03	
210	Waste Bin W24	12.90	6.20					1.52E-04	4.15E-02	1.94E-03	7.22E-03	
211	Covered Raw Gran. Stockpile (BH)	6.10	6.10									
212	Conveyor No. 43	0.25	0.09									
213	Conveyor No. 44	0.25	0.09									
214	IC Circuit Baghouse	4.90	4.90									
300	Train Car Unload	0.50	0.20									
301	Truck Loading at Pugmill	0.40	0.20									
302	Mineral Unloading at Wet Stockpile	0.30	0.10									
303	Wet Stockpile Fugitives	4.60	4.60									
304	Traincar Unloading (Silica)	0.40	0.20					4.70E-06	1.29E-03	6.00E-05	2.24E-04	
306	Plant Vehicle Traffic/Haul Off	8.60	1.70									
307	Temporary Storage Stockpile Drop	3.10	3.10									
308	Raw Stockpile	10.00	10.00									

SN	Source Description	Total PM (tons/yr)	PM_{10} (tons/yr)	NO_x (tons/yr)	SO_2 (tons/yr)	VOC (tons/yr)	CO (tons/yr)	lead (tons/yr)	chromium (tons/yr)	manganese (tons/yr)	cobalt (tons/yr)	arsenic (tons/yr
310	Truck/Railcar Loading	0.40	0.20									
311	Automated Mixing System	7.90	7.90					9.29E-05	2.54E-02	1.19E-03	4.42E-03	
401	C-101 Feed Conveyor Main Plant	0.31	0.100					3.65E-06	9.97E-04	4.65E-05	1.74E-04	
402	C-102 Screens Feed Conveyor	0.20	0.07					2.35E-06	6.44E-04	3.00E-05	1.12E-04	
403	C-103 Screens Feed Conveyor	0.20	0.07					2.35E-06	6.44E-04	3.00E-05	1.12E-04	
404	C-104 Under Screen Conveyor	0.04	0.02					4.70E-07	1.29E-04	6.00E-06	2.24E-05	
405	C-105 Under Screen Conveyor	0.04	0.02					4.70E-07	1.29E-04	6.00E-06	2.24E-05	
406	C-106 Under Screen Conveyor	0.04	0.02					4.70E-07	1.29E-04	6.00E-06	2.24E-05	
407	C-107 Under Screen Conveyor	0.04	0.02					4.70E-07	1.29E-04	6.00E-06	2.24E-05	
408	C-108 Screen Overs Conveyor	0.31	0.10					3.65E-06	9.97E-04	4.65E-05	1.74E-04	
409	C-109 Crusher Feed Bin Conveyor	0.31	0.10					3.65E-06	9.97E-04	4.65E-05	1.74E-04	
410	C-110 Crusher Feed Conveyor	0.06	0.02					7.06E-07	1.93E-04	9.00E-06	3.36E-05	
411	C-111 Crusher Feed Conveyor	0.06	0.02					7.06E-07	1.93E-04	9.00E-06	3.36E-05	
412	C-112 Crusher Feed Conveyor	0.06	0.02					7.06E-07	1.93E-04	9.00E-06	3.36E-05	
413	C-113 Crusher Feed Conveyor	0.06	0.02					7.06E-07	1.93E-04	9.00E-06	3.36E-05	
414	C-114 Crusher Feed Conveyor	0.06	0.02					7.06E-07	1.93E-04	9.00E-06	3.36E-05	
415	C-115 Crusher Feed Conveyor	0.06	0.02					7.06E-07	1.93E-04	9.00E-06	3.36E-05	
416	C-116 Crusher Discharge Conveyor	0.20	0.07					2.35E-06	6.44E-04	3.00E-05	1.12E-04	
417	C-117 Crusher Discharge Conveyor	0.20	0.07					2.35E-06	6.44E-04	3.00E-05	1.12E-04	
418	C-118 Collecting Conveyor	0.31	0.10					3.65E-06	9.97E-04	4.65E-05	1.74E-04	
419	C-119 Transfer Conveyor	0.31	0.10					3.65E-06	9.97E-04	4.65E-05	1.74E-04	
420	C-120 Screen Feed Bin Return Con	0.31	0.10					3.65E-06	9.97E-04	4.65E-05	1.74E-04	
421	C-121 Screen Thru Collect Con	0.20	0.07					2.35E-06	6.44E-04	3.00E-05	1.12E-04	
422	C-122 Wet Classification Conveyor	0.20	0.07					2.35E-06	6.44E-04	3.00E-05	1.12E-04	
423	C-123 Transfer Conveyor	0.10	0.04					1.18E-06	3.22E-04	1.50E-05	5.60E-05	
424	C-124 Waste Stacking Conveyor	0.20	0.07					2.35E-06	6.44E-04	3.00E-05	1.12E-04	
425	C-125 Transfer Conveyor	0.20	0.07					2.35E-06	6.44E-04	3.00E-05	1.12E-04	
426	C-126 Day Bin Feed Conveyor	0.20	0.07					2.35E-06	6.44E-04	3.00E-05	1.12E-04	
427	C-126 Day Bin Discharge Conveyor	0.30	0.10					3.53E-06	9.65E-04	4.50E-05	1.68E-04	
428	S-1 Screen	0.50	0.20					5.88E-06	1.61E-03	7.50E-05	2.80E-04	
429	S-2 Screen	0.50	0.20					5.88E-06	1.61E-03	7.50E-05	2.80E-04	
430	S-3 Screen	0.50	0.20					5.88E-06	1.61E-03	7.50E-05	2.80E-04	
431	S-4 Screen	0.50	0.20					5.88E-06	1.61E-03	7.50E-05	2.80E-04	

Total PM (tons/yr)	PM_{10} (tons/yr)	NO_x (tons/yr)	SO_2 (tons/yr)	VOC (tons/yr)	CO (tons/yr)	lead (tons/yr)	chromium (tons/yr)	manganese (tons/yr)	cobalt (tons/yr)	arsenic (tons/yr)	cadmium (tons/yr)	PCB (tons/yr)	beryllium (tons/yr)
0.50	0.21					5.88E-06	1.61E-03	7.50E-05	2.80E-04				
0.50	0.21					5.88E-06	1.61E-03	7.50E-05	2.80E-04				
0.50	0.21					5.88E-06	1.61E-03	7.50E-05	2.80E-04				
0.50	0.21					5.88E-06	1.61E-03	7.50E-05	2.80E-04				
0.50	0.21					5.88E-06	1.61E-03	7.50E-05	2.80E-04				
0.50	0.21					5.88E-06	1.61E-03	7.50E-05	2.80E-04				
0.30	0.10					3.53E-06	9.65E-04	4.50E-05	1.68E-04				
0.31	0.10					3.65E-06	9.97E-04	4.65E-05	1.74E-04				
0.20	0.07					2.35E-06	6.44E-04	3.00E-05	1.12E-04				
710.454	541.460	118.40	61.10	5.90	139.50	0.09493	1.3675	0.0629	0.2349	0.0062	0.0064	0.0253	0.0002

APPENDIX B
40 CFR 60, Subpart OOO Determination from EPA Region 6

Title 40: Protection of Environment
PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Browse Previous | Browse Next

Subpart OOO—Standards of Performance for Nonmetallic Mineral Processing Plants

Source: 51 FR 31337, Aug. 1, 1985, unless otherwise noted.

§ 60.670 Applicability and designation of affected facility.

(a)(1) Except as provided in paragraphs (a)(2), (b), (c), and (d) of this section, the provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions of this subpart.

(2) The provisions of this subpart do not apply to the following operations: All facilities located in underground mines; and stand-alone screening operations at plants without crushers or grinding mills.

(b) An affected facility that is subject to the provisions of subpart F or I or that follows in the plant process any facility subject to the provisions of subparts F or I of this part is not subject to the provisions of this subpart.

(c) Facilities at the following plants are not subject to the provisions of this subpart:

(1) Fixed sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 23 megagrams per hour (25 tons per hour) or less;

(2) Portable sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 136 megagrams per hour (150 tons per hour) or less; and

(3) Common clay plants and pumice plants with capacities, as defined in §60.671, of 9 megagrams per hour (10 tons per hour) or less.

(d)(1) When an existing facility is replaced by a piece of equipment of equal or smaller

size, as defined in §60.671, having the same function as the existing facility, the new facility is exempt from the provisions of §§60.672, 60.674, and 60.675 except as provided for in paragraph (d)(3) of this section.

(2) An owner or operator complying with paragraph (d)(1) of this section shall submit the information required in §60.676(a).

(3) An owner or operator replacing all existing facilities in a production line with new facilities does not qualify for the exemption described in paragraph (d)(1) of this section and must comply with the provisions of §§60.672, 60.674 and 60.675.

(e) An affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after August 31, 1983 is subject to the requirements of this part.

(f) table 1 of this subpart specifies the provisions of subpart A of this part 60 that apply and those that do not apply to owners and operators of affected facilities subject to this subpart.

Table 1—Applicability of Subpart A to Subpart OOO

Subpart A reference	Applies to Subpart OOO	Comment
60.1, Applicability	Yes	
60.2, Definitions	Yes	
60.3, Units and abbreviations	Yes	
60.4, Address:		
(a)	Yes	
(b)	Yes	
60.5, Determination of construction or modification	Yes	
60.6, Review of plans	Yes	
60.7, Notification and recordkeeping	Yes	Except in (a)(2) report of anticipated date of initial startup is not required (§60.676(h)).
60.8, Performance tests	Yes	Except in (d), after 30 days notice for an initially scheduled performance test, any rescheduled performance test requires 7 days notice, not 30 days (§60.675(g)).
60.9, Availability of information	Yes	
60.10, State authority	Yes	
60.11, Compliance with	Yes	Except in (b) under certain conditions (§§60.675 (c)(3)

standards and maintenance requirements		and (c)(4)), Method 9 observation may be reduced from 3 hours to 1 hour. Some affected facilities exempted from Method 9 tests (§60.675(h)).
60.12, Circumvention	Yes	
60.13, Monitoring requirements	Yes	
60.14, Modification	Yes	
60.15, Reconstruction	Yes	
60.16, Priority list	Yes	
60.17, Incorporations by reference	Yes	
60.18, General control device	No	Flares will not be used to comply with the emission limits.
60.19, General notification and reporting requirements	Yes	

[51 FR 31337, Aug. 1, 1985, as amended at 62 FR 31359, June 9, 1997]

§ 60.671 Definitions.

All terms used in this subpart, but not specifically defined in this section, shall have the meaning given them in the Act and in subpart A of this part.

Bagging operation means the mechanical process by which bags are filled with nonmetallic minerals.

Belt conveyor means a conveying device that transports material from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.

Bucket elevator means a conveying device of nonmetallic minerals consisting of a head and foot assembly which supports and drives an endless single or double strand chain or belt to which buckets are attached.

Building means any frame structure with a roof.

Capacity means the cumulative rated capacity of all initial crushers that are part of the plant.

Capture system means the equipment (including enclosures, hoods, ducts, fans, dampers, etc.) used to capture and transport particulate matter generated by one or more process operations to a control device.

Control device means the air pollution control equipment used to reduce particulate matter emissions released to the atmosphere from one or more process operations at a nonmetallic mineral processing plant.

Conveying system means a device for transporting materials from one piece of equipment or location to another location within a plant. Conveying systems include but are not limited to the following: Feeders, belt conveyors, bucket elevators and pneumatic systems.

Crusher means a machine used to crush any nonmetallic minerals, and includes, but is not limited to, the following types: jaw, gyratory, cone, roll, rod mill, hammermill, and impactor.

Enclosed truck or railcar loading station means that portion of a nonmetallic mineral processing plant where nonmetallic minerals are loaded by an enclosed conveying system into enclosed trucks or railcars.

Fixed plant means any nonmetallic mineral processing plant at which the processing equipment specified in §60.670(a) is attached by a cable, chain, turnbuckle, bolt or other means (except electrical connections) to any anchor, slab, or structure including bedrock.

Fugitive emission means particulate matter that is not collected by a capture system and is released to the atmosphere at the point of generation.

Grinding mill means a machine used for the wet or dry fine crushing of any nonmetallic mineral. Grinding mills include, but are not limited to, the following types: hammer, roller, rod, pebble and ball, and fluid energy. The grinding mill includes the air conveying system, air separator, or air classifier, where such systems are used.

Initial crusher means any crusher into which nonmetallic minerals can be fed without prior crushing in the plant.

Nonmetallic mineral means any of the following minerals or any mixture of which the majority is any of the following minerals:

(a) Crushed and Broken Stone, including Limestone, Dolomite, Granite, Traprock, Sandstone, Quartz, Quartzite, Marl, Marble, Slate, Shale, Oil Shale, and Shell.

(b) Sand and Gravel.

(c) Clay including Kaolin, Fireclay, Bentonite, Fuller's Earth, Ball Clay, and Common Clay.

(d) Rock Salt.

(e) Gypsum.

(f) Sodium Compounds, including Sodium Carbonate, Sodium Chloride, and Sodium Sulfate.

(g) Pumice.

(h) Gilsonite.

(i) Talc and Pyrophyllite.

(j) Boron, including Borax, Kernite, and Colemanite.

(k) Barite.

(l) Fluorospar.

(m) Feldspar.

(n) Diatomite.

(o) Perlite.

(p) Vermiculite.

(q) Mica.

(r) Kyanite, including Andalusite, Sillimanite, Topaz, and Dumortierite.

Nonmetallic mineral processing plant means any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, portland cement plants, or any other facility processing nonmetallic minerals except as provided in §60.670 (b) and (c).

Portable plant means any nonmetallic mineral processing plant that is mounted on any chassis or skids and may be moved by the application of a lifting or pulling force. In addition, there shall be no cable, chain, turnbuckle, bolt or other means (except electrical connections) by which any piece of equipment is attached or clamped to any anchor, slab, or structure, including bedrock that must be removed prior to the application of a lifting or pulling force for the purpose of transporting the unit.

Production line means all affected facilities (crushers, grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck and railcar loading stations) which are directly connected or are connected together by a conveying system.

Screening operation means a device for separating material according to size by passing undersize material through one or more mesh surfaces (screens) in series, and retaining oversize material on the mesh surfaces (screens).

Size means the rated capacity in tons per hour of a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station; the total surface area of the top screen of a screening operation; the width of a conveyor belt; and the rated capacity in tons of a storage bin.

Stack emission means the particulate matter that is released to the atmosphere from a capture system.

Storage bin means a facility for storage (including surge bins) or nonmetallic minerals prior to further processing or loading.

Transfer point means a point in a conveying operation where the nonmetallic mineral is transferred to or from a belt conveyor except where the nonmetallic mineral is being transferred to a stockpile.

Truck dumping means the unloading of nonmetallic minerals from movable vehicles designed to transport nonmetallic minerals from one location to another. Movable vehicles include but are not limited to: trucks, front end loaders, skip hoists, and railcars.

Vent means an opening through which there is mechanically induced air flow for the purpose of exhausting from a building air carrying particulate matter emissions from one or more affected facilities.

Wet mining operation means a mining or dredging operation designed and operated to extract any nonmetallic mineral regulated under this subpart from deposits existing at or below the water table, where the nonmetallic mineral is saturated with water.

Wet screening operation means a screening operation at a nonmetallic mineral processing plant which removes unwanted material or which separates marketable fines from the product by a washing process which is designed and operated at all times such that the product is saturated with water.

[51 FR 31337, Aug. 1, 1985, as amended at 62 FR 31359, June 9, 1997]

§ 60.672 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any stack emissions which:

(1) Contain particulate matter in excess of 0.05 g/dscm (0.022 gr/dscf); and

(2) Exhibit greater than 7 percent opacity, unless the stack emissions are discharged from an affected facility using a wet scrubbing control device. Facilities using a wet scrubber must comply with the reporting provisions of §60.676 (c), (d), and (e).

(b) On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.11 of this part, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any fugitive emissions which exhibit greater than 10 percent opacity, except as provided in paragraphs (c), (d), and (e) of this section.

(c) On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.11 of this part, no owner or operator shall cause to be discharged into the atmosphere from any crusher, at which a capture system is not used, fugitive emissions which exhibit greater than 15 percent opacity.

(d) Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.

(e) If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in paragraphs (a), (b) and (c) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:

(1) No owner or operator shall cause to be discharged into the atmosphere from any building enclosing any transfer point on a conveyor belt or any other affected facility any visible fugitive emissions except emissions from a vent as defined in §60.671.

(2) No owner or operator shall cause to be discharged into the atmosphere from any vent of any building enclosing any transfer point on a conveyor belt or any other affected facility emissions which exceed the stack emissions limits in paragraph (a) of this section.

(f) On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.11 of this part, no owner or operator shall cause to be discharged into the atmosphere from any baghouse that controls emissions from only an individual, enclosed storage bin, stack emissions which exhibit greater than 7 percent opacity.

(g) Owners or operators of multiple storage bins with combined stack emissions shall comply with the emission limits in paragraph (a)(1) and (a)(2) of this section.

(h) On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, no owner or operator shall cause to be discharged into the atmosphere any visible emissions from:

(1) Wet screening operations and subsequent screening operations, bucket elevators, and belt conveyors that process saturated material in the production line up to the next crusher, grinding mill or storage bin.

(2) Screening operations, bucket elevators, and belt conveyors in the production line downstream of wet mining operations, where such screening operations, bucket elevators, and belt conveyors process saturated materials up to the first crusher, grinding mill, or storage bin in the production line.

[51 FR 31337, Aug. 1, 1985, as amended at 62 FR 31359, June 9, 1997; 65 FR 61778, Oct. 17, 2000]

§ 60.673 Reconstruction.

(a) The cost of replacement of ore-contact surfaces on processing equipment shall not be considered in calculating either the "fixed capital cost of the new components" or the "fixed capital cost that would be required to construct a comparable new facility" under §60.15. Ore-contact surfaces are crushing surfaces; screen meshes, bars, and plates; conveyor belts; and elevator buckets.

(b) Under §60.15, the "fixed capital cost of the new components" includes the fixed capital cost of all depreciable components (except components specified in paragraph (a) of this section) which are or will be replaced pursuant to all continuous programs of component replacement commenced within any 2-year period following August 31, 1983.

§ 60.674 Monitoring of operations.

The owner or operator of any affected facility subject to the provisions of this subpart which uses a wet scrubber to control emissions shall install, calibrate, maintain and operate the following monitoring devices:

(a) A device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The monitoring device must be certified by the manufacturer to be accurate within ±250 pascals ±1 inch water gauge pressure and must be calibrated on an annual basis in accordance with manufacturer's instructions.

(b) A device for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within ±5 percent of design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with manufacturer's instructions.

§ 60.675 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section.

(b) The owner or operator shall determine compliance with the particulate matter standards in §60.672(a) as follows:

(1) Method 5 or Method 17 shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5, if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.

(2) Method 9 and the procedures in §60.11 shall be used to determine opacity.

(c)(1) In determining compliance with the particulate matter standards in §60.672 (b) and (c), the owner or operator shall use Method 9 and the procedures in §60.11, with the following additions:

(i) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(ii) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9, Section 2.1) must be followed.

(iii) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

(2) In determining compliance with the opacity of stack emissions from any baghouse that controls emissions only from an individual enclosed storage bin under §60.672(f) of this subpart, using Method 9, the duration of the Method 9 observations shall be 1 hour (ten 6-minute averages).

(3) When determining compliance with the fugitive emissions standard for any affected

facility described under §60.672(b) of this subpart, the duration of the Method 9 observations may be reduced from 3 hours (thirty 6-minute averages) to 1 hour (ten 6-minute averages) only if the following conditions apply:

(i) There are no individual readings greater than 10 percent opacity; and

(ii) There are no more than 3 readings of 10 percent for the 1-hour period.

(4) When determining compliance with the fugitive emissions standard for any crusher at which a capture system is not used as described under §60.672(c) of this subpart, the duration of the Method 9 observations may be reduced from 3 hours (thirty 6-minute averages) to 1 hour (ten 6-minute averages) only if the following conditions apply:

(i) There are no individual readings greater than 15 percent opacity; and

(ii) There are no more than 3 readings of 15 percent for the 1-hour period.

(d) In determining compliance with §60.672(e), the owner or operator shall use Method 22 to determine fugitive emissions. The performance test shall be conducted while all affected facilities inside the building are operating. The performance test for each building shall be at least 75 minutes in duration, with each side of the building and the roof being observed for at least 15 minutes.

(e) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For the method and procedure of paragraph (c) of this section, if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:

(i) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

(ii) Separate the emissions so that the opacity of emissions from each affected facility can be read.

(f) To comply with §60.676(d), the owner or operator shall record the measurements as required in §60.676(c) using the monitoring devices in §60.674 (a) and (b) during each particulate matter run and shall determine the averages.

(g) If, after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting any rescheduled performance test required in this section, the owner or operator of an affected facility shall submit a notice to the Administrator at least 7 days prior to any rescheduled performance test.

(h) Initial Method 9 performance tests under §60.11 of this part and §60.675 of this subpart are not required for:

(1) Wet screening operations and subsequent screening operations, bucket elevators, and belt conveyors that process saturated material in the production line up to, but not including the next crusher, grinding mill or storage bin.

(2) Screening operations, bucket elevators, and belt conveyors in the production line downstream of wet mining operations, that process saturated materials up to the first crusher, grinding mill, or storage bin in the production line.

[54 FR 6680, Feb. 14, 1989, as amended at 62 FR 31360, June 9, 1997]

§ 60.676 Reporting and recordkeeping.

(a) Each owner or operator seeking to comply with §60.670(d) shall submit to the Administrator the following information about the existing facility being replaced and the replacement piece of equipment.

(1) For a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station:

(i) The rated capacity in megagrams or tons per hour of the existing facility being replaced and

(ii) The rated capacity in tons per hour of the replacement equipment.

(2) For a screening operation:

(i) The total surface area of the top screen of the existing screening operation being replaced and

(ii) The total surface area of the top screen of the replacement screening operation.

(3) For a conveyor belt:

(i) The width of the existing belt being replaced and

(ii) The width of the replacement conveyor belt.

(4) For a storage bin:

(i) The rated capacity in megagrams or tons of the existing storage bin being replaced and

(ii) The rated capacity in megagrams or tons of replacement storage bins.

(b) [Reserved]

(c) During the initial performance test of a wet scrubber, and daily thereafter, the owner or operator shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate.

(d) After the initial performance test of a wet scrubber, the owner or operator shall submit semiannual reports to the Administrator of occurrences when the measurements of the scrubber pressure loss (or gain) and liquid flow rate differ by more than ±30 percent from the averaged determined during the most recent performance test.

(e) The reports required under paragraph (d) shall be postmarked within 30 days following

end of the second and fourth calendar quarters.

(f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in §60.672 of this subpart, including reports of opacity observations made using Method 9 to demonstrate compliance with §60.672(b), (c), and (f), and reports of observations using Method 22 to demonstrate compliance with §60.672(e).

(g) The owner or operator of any screening operation, bucket elevator, or belt conveyor that processes saturated material and is subject to §60.672(h) and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. This screening operation, bucket elevator, or belt conveyor is then subject to the 10 percent opacity limit in §60.672(b) and the emission test requirements of §60.11 and this subpart. Likewise a screening operation, bucket elevator, or belt conveyor that processes unsaturated material but subsequently processes saturated material shall submit a report of this change within 30 days following such change. This screening operation, bucket elevator, or belt conveyor is then subject to the no visible emission limit in §60.672(h).

(h) The subpart A requirement under §60.7(a)(2) for notification of the anticipated date of initial startup of an affected facility shall be waived for owners or operators of affected facilities regulated under this subpart.

(i) A notification of the actual date of initial startup of each affected facility shall be submitted to the Administrator.

(1) For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the owner or operator to the Administrator. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.

(2) For portable aggregate processing plants, the notification of the actual date of initial startup shall include both the home office and the current address or location of the portable plant.

(j) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected facilities within the State will be relieved of the obligation to comply with the reporting requirements of this section, provided that they comply with requirements established by the State.

[51 FR 31337, Aug. 1, 1985, as amended at 54 FR 6680, Feb. 14, 1989; 62 FR 31360, June 9, 1997; 65 FR 61778, Oct. 17, 2000]

APPENDIX C
ADEQ CEMS Conditions

Arkansas Department of Environmental Quality

CONTINUOUS EMISSION MONITORING SYSTEMS CONDITIONS

Revised August 2004

PREAMBLE

These conditions are intended to outline the requirements for facilities required to operate Continuous Emission Monitoring Systems/Continuous Opacity Monitoring Systems (CEMS/COMS). Generally there are three types of sources required to operate CEMS/COMS:

1. CEMS/COMS required by 40 CFR Part 60 or 63,
2. CEMS required by 40 CFR Part 75,
3. CEMS/COMS required by ADEQ permit for reasons other that Part 60, 63 or 75.

These CEMS/COMS conditions are not intended to supercede Part 60, 63 or 75 requirements.

- Only CEMS/COMS in the third category (those required by ADEQ permit for reasons other than Part 60, 63, or 75) shall comply with SECTION II, MONITORING REQUIREMENTS and SECTION IV, QUALITY ASSURANCE/QUALITY CONTROL.

- All CEMS/COMS shall comply with Section III, NOTIFICATION AND RECORDKEEPING.

SECTION I

DEFINITIONS

Continuous Emission Monitoring System (CEMS) - The total equipment required for the determination of a gas concentration and/or emission rate so as to include sampling, analysis and recording of emission data.

Continuous Opacity Monitoring System (COMS) - The total equipment required for the determination of opacity as to include sampling, analysis and recording of emission data.

Calibration Drift (CD) - The difference in the CEMS output reading from the established reference value after a stated period of operation during which no unscheduled maintenance, repair, or adjustments took place.

Back-up CEMS (Secondary CEMS) - A CEMS with the ability to sample, analyze and record stack pollutant to determine gas concentration and/or emission rate. This CEMS is to serve as a back-up to the primary CEMS to minimize monitor downtime.

Excess Emissions - Any period in which the emissions exceed the permit limits.

Monitor Downtime - Any period during which the CEMS/COMS is unable to sample, analyze and record a minimum of four evenly spaced data points over an hour, except during one daily zero-span check during which two data points per hour are sufficient.

Out-of-Control Period - Begins with the time corresponding to the completion of the fifth, consecutive, daily CD check with a CD in excess of two times the allowable limit, or the time corresponding to the completion of the daily CD check preceding the daily CD check that results in a CD in excess of four times the allowable limit and the time corresponding to the completion of the sampling for the RATA, RAA, or CGA which exceeds the limits outlined in Section IV. Out-of-Control Period ends with the time corresponding to the completion of the CD check following corrective action with the results being within the allowable CD limit or the completion of the sampling of the subsequent successful RATA, RAA, or CGA.

Primary CEMS - The main reporting CEMS with the ability to sample, analyze, and record stack pollutant to determine gas concentration and/or emission rate.

Relative Accuracy (RA) - The absolute mean difference between the gas concentration or emission rate determined by the CEMS and the value determined by the reference method plus the 2.5 percent error confidence coefficient of a series of tests divided by the mean of the reference method tests of the applicable emission limit.

Span Value – The upper limit of a gas concentration measurement range.

SECTION II

MONITORING REQUIREMENTS

A. For new sources, the installation date for the CEMS/COMS shall be no later than thirty (30) days from the date of start-up of the source.

B. For existing sources, the installation date for the CEMS/COMS shall be no later than sixty (60) days from the issuance of the permit unless the permit requires a specific date.

C. Within sixty (60) days of installation of a CEMS/COMS, a performance specification test (PST) must be completed. PST's are defined in 40 CFR, Part 60, Appendix B, PS 1-9. The Department may accept alternate PST's for pollutants not covered by Appendix B on a case-by-case basis. Alternate PST's shall be approved, in writing, by the ADEQ CEM Coordinator prior to testing.

D. Each CEMS/COMS shall have, as a minimum, a daily zero-span check. The zero-span shall be adjusted whenever the 24-hour zero or 24-hour span drift exceeds two times the limits in the applicable performance specification in 40 CFR, Part 60, Appendix B. Before any adjustments are made to either the zero or span drifts measured at the 24-hour interval the excess zero and span drifts measured must be quantified and recorded.

E. All CEMS/COMS shall be in continuous operation and shall meet minimum frequency of operation requirements of 95% up-time for each quarter for each pollutant measured. Percent of monitor down-time is calculated by dividing the total minutes the monitor is not in operation by the total time in the calendar quarter and multiplying by one hundred. Failure to maintain operation time shall constitute a violation of the CEMS conditions.

F. Percent of excess emissions are calculated by dividing the total minutes of excess emissions by the total time the source operated and multiplying by one hundred. Failure to maintain compliance may constitute a violation of the CEMS conditions.

G. All CEMS measuring emissions shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive fifteen minute period unless more cycles are required by the permit. For each CEMS, one-hour averages shall be computed from four or more data points equally spaced over each one hour period unless more data points are required by the permit.

H. All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

I. When the pollutant from a single affected facility is released through more than one point, a CEMS/COMS shall be installed on each point unless installation of fewer systems is approved, in writing, by the ADEQ CEM Coordinator. When more than one CEM/COM is used to monitor emissions from one affected facility the owner or operator shall report the results as required from each CEMS/COMS.

SECTION III

NOTIFICATION AND RECORD KEEPING

A. When requested to do so by an owner or operator, the ADEQ CEM Coordinator will review plans for installation or modification for the purpose of providing technical advice to the owner or operator.

B. Each facility which operates a CEMS/COMS shall notify the ADEQ CEM Coordinator of the date for which the demonstration of the CEMS/COMS performance will commence (i.e. PST, RATA, RAA, CGA). Notification shall be received in writing no less than 15 days prior to testing. Performance test results shall be submitted to the Department within thirty days after completion of testing.

C. Each facility which operates a CEMS/COMS shall maintain records of the occurrence and duration of start up/shut down, cleaning/soot blowing, process problems, fuel problems, or other malfunction in the operation of the affected facility which causes excess emissions. This includes any malfunction of the air pollution control equipment or any period during which a continuous monitoring device/system is inoperative.

D. Except for Part 75 CEMs, each facility required to install a CEMS/COMS shall submit an excess emission and monitoring system performance report to the Department (Attention: Air Division, CEM Coordinator) at least quarterly, unless more frequent submittals are warranted to assess the compliance status of the facility. Quarterly reports shall be postmarked no later than the 30th day of the month following the end of each calendar quarter. Part 75 CEMs shall submit this information semi-annually and as part of Title V six (6) month reporting requirement if the facility is a Title V facility.

E. All excess emissions shall be reported in terms of the applicable standard. Each report shall be submitted on ADEQ Quarterly Excess Emission Report Forms. Alternate forms may be used with prior written approval from the Department.

F. Each facility which operates a CEMS/COMS must maintain on site a file of CEMS/COMS data including all raw data, corrected and adjusted, repair logs, calibration checks, adjustments, and test audits. This file must be retained for a period of at least five years, and is required to be maintained in such a condition that it can easily be audited by an inspector.

G. Except for Part 75 CEMs, quarterly reports shall be used by the Department to determine compliance with the permit. For Part 75 CEMs, the semi-annual report shall be used.

SECTION IV

QUALITY ASSURANCE/QUALITY CONTROL

A. For each CEMS/COMS a Quality Assurance/Quality Control (QA/QC) plan shall be submitted to the Department (Attn.: Air Division, CEM Coordinator). CEMS quality assurance procedures are defined in 40 CFR, Part 60, Appendix F. This plan shall be submitted within 180 days of the CEMS/COMS installation. A QA/QC plan shall consist of procedure and practices which assures acceptable level of monitor data accuracy, precision, representativeness, and availability.

B. The submitted QA/QC plan for each CEMS/COMS shall not be considered as accepted until the facility receives a written notification of acceptance from the Department.

C. Facilities responsible for one, or more, CEMS/COMS used for compliance monitoring shall meet these minimum requirements and are encouraged to develop and implement a more extensive QA/QC program, or to continue such programs where they already exist. Each QA/QC program must include written procedures which should describe in detail, complete, step-by-step procedures and operations for each of the following activities:

1. Calibration of CEMS/COMS
   a. Daily calibrations (including the approximate time(s) that the daily zero and span drifts will be checked and the time required to perform these checks and return to stable operation)
2. Calibration drift determination and adjustment of CEMS/COMS
   a. Out-of-control period determination
   b. Steps of corrective action
3. Preventive maintenance of CEMS/COMS
   a. CEMS/COMS information
      1) Manufacture
      2) Model number
      3) Serial number
   b. Scheduled activities (check list)
   c. Spare part inventory
4. Data recording, calculations, and reporting
5. Accuracy audit procedures including sampling and analysis methods
6. Program of corrective action for malfunctioning CEMS/COMS

D. A Relative Accuracy Test Audit (RATA), shall be conducted at least once every four calendar quarters. A Relative Accuracy Audit (RAA), or a Cylinder Gas Audit (CGA), may be conducted in the other three quarters but in no more than three quarters in succession. The RATA should be conducted in accordance with the applicable test procedure in 40 CFR Part 60 Appendix A and calculated in accordance with the applicable performance specification in 40 CFR Part 60 Appendix B. CGA's and RAA's should be conducted and the data calculated in accordance with the procedures outlined on 40 CFR Part 60 Appendix F.

If alternative testing procedures or methods of calculation are to be used in the RATA, RAA or CGA audits prior authorization must be obtained from the ADEQ CEM Coordinator.

E. Criteria for excessive audit inaccuracy.

RATA

All Pollutants except Carbon Monoxide	> 20% Relative Accuracy
Carbon Monoxide	> 10% Relative Accuracy
All Pollutants except Carbon Monoxide	> 10% of the Applicable Standard
Carbon Monoxide	> 5% of the Applicable Standard
Diluent (O_2 & CO_2)	> 1.0 % O2 or CO2
Flow	> 20% Relative Accuracy

CGA

Pollutant	> 15% of average audit value or 5 ppm difference
Diluent (O_2 & CO_2)	> 15% of average audit value or 5 ppm difference

RAA

Pollutant	> 15% of the three run average or > 7.5 % of the applicable standard
Diluent (O_2 & CO_2)	> 15% of the three run average or > 7.5 % of the applicable standard

F. If either the zero or span drift results exceed two times the applicable drift specification in 40 CFR, Part 60, Appendix B for five consecutive, daily periods, the CEMS is out-of-control. If either the zero or span drift results exceed four times the applicable drift specification in Appendix B during a calibration drift check, the CEMS is out-of-control. If the CEMS exceeds the audit inaccuracies listed above, the CEMS is out-of-control. If a CEMS is out-of-control, the data from that out-of-control period is not counted towards meeting the minimum data availability as required and described in the applicable subpart. The end of the out-of-control period is the time corresponding to the completion of the successful daily zero or span drift or completion of the successful CGA, RAA or RATA.

G. A back-up monitor may be placed on an emission source to minimize monitor downtime. This back-up CEMS is subject to the same QA/QC procedure and practices as the primary CEMS. The back-up CEMS shall be certified by a PST. Daily zero-span checks must be performed and recorded in accordance with standard practices. When the primary CEMS goes down, the back-up CEMS may then be engaged to sample, analyze and record the emission source pollutant until repairs are made and the primary unit is placed back in service. Records must be maintained on site when the back-up CEMS is placed in service, these records shall include at a minimum the reason the primary CEMS is out of service, the date and time the primary CEMS was out of service and the date and time the primary CEMS was placed back in service.

APPENDIX D
40 CFR §279.1

e-CFR Data is current as of November 14, 2008

Title 40: Protection of Environment

PART 279—STANDARDS FOR THE MANAGEMENT OF USED OIL
Subpart A—Definitions

§ 279.1 Definitions.

Terms that are defined in §§260.10, 261.1, and 280.12 of this chapter have the same meanings when used in this part.

Aboveground tank means a tank used to store or process used oil that is not an underground storage tank as defined in §280.12 of this chapter.

Container means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

Do-it-yourselfer used oil collection center means any site or facility that accepts/aggregates and stores used oil collected only from household do-it-yourselfers.

Existing tank means a tank that is used for the storage or processing of used oil and that is in operation, or for which installation has commenced on or prior to the effective date of the authorized used oil program for the State in which the tank is located. Installation will be considered to have commenced if the owner or operator has obtained all federal, state, and local approvals or permits necessary to begin installation of the tank and if either (1) A continuous on-site installation program has begun, or

(2) The owner or operator has entered into contractual obligations—which cannot be canceled or modified without substantial loss—for installation of the tank to be completed within a reasonable time.

Household "do-it-yourselfer" used oil means oil that is derived from households, such as used oil generated by individuals who generate used oil through the maintenance of their personal vehicles.

Household "do-it-yourselfer" used oil generator means an individual who generates household "do-it-yourselfer" used oil.

New tank means a tank that will be used to store or process used oil and for which installation has commenced after the effective date of the authorized used oil program for the State in which the tank is located.

Petroleum refining facility means an establishment primarily engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, and lubricants, through fractionation, straight distillation of crude oil, redistillation of unfinished petroleum derivatives, cracking or other processes (i.e., facilities classified as SIC 2911).

Processing means chemical or physical operations designed to produce from used oil, or to make used oil more amenable for production of, fuel oils, lubricants, or other used oil-derived product. Processing includes, but is not limited to: blending used oil with virgin petroleum products, blending used oils to meet the fuel specification, filtration, simple distillation, chemical or physical separation

and re-refining.

Re-refining distillation bottoms means the heavy fraction produced by vacuum distillation of filtered and dehydrated used oil. The composition of still bottoms varies with column operation and feedstock.

Tank means any stationary device, designed to contain an accumulation of used oil which is constructed primarily of non-earthen materials, (e.g., wood, concrete, steel, plastic) which provides structural support.

Used oil means any oil that has been refined from crude oil, or any synthetic oil, that has been used and as a result of such use is contaminated by physical or chemical impurities.

Used oil aggregation point means any site or facility that accepts, aggregates, and/or stores used oil collected only from other used oil generation sites owned or operated by the owner or operator of the aggregation point, from which used oil is transported to the aggregation point in shipments of no more than 55 gallons. Used oil aggregation points may also accept used oil from household do-it-yourselfers.

Used oil burner means a facility where used oil not meeting the specification requirements in §279.11 is burned for energy recovery in devices identified in §279.61(a).

Used oil collection center means any site or facility that is registered/licensed/permitted/recognized by a state/county/municipal government to manage used oil and accepts/aggregates and stores used oil collected from used oil generators regulated under subpart C of this part who bring used oil to the collection center in shipments of no more than 55 gallons under the provisions of §279.24. Used oil collection centers may also accept used oil from household do-it-yourselfers.

Used oil fuel marketer means any person who conducts either of the following activities:

(1) Directs a shipment of off-specification used oil from their facility to a used oil burner; or

(2) First claims that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in §279.11 of this part.

Used oil generator means any person, by site, whose act or process produces used oil or whose act first causes used oil to become subject to regulation.

Used oil processor/re-refiner means a facility that processes used oil.

Used oil transfer facility means any transportation related facility including loading docks, parking areas, storage areas and other areas where shipments of used oil are held for more than 24 hours and not longer than 35 days during the normal course of transportation or prior to an activity performed pursuant to §279.20(b)(2). Transfer facilities that store used oil for more than 35 days are subject to regulation under subpart F of this part.

Used oil transporter means any person who transports used oil, any person who collects used oil from more than one generator and transports the collected oil, and owners and operators of used oil transfer facilities. Used oil transporters may consolidate or aggregate loads of used oil for purposes of transportation but, with the following exception, may not process used oil. Transporters may conduct incidental processing operations that occur in the normal course of used oil transportation (e.g., settling and water separation), but that are not designed to produce (or make more amenable for production of) used oil derived products or used oil fuel.

[57 FR 41612, Sept. 10, 1992, as amended at 58 FR 26425, May 3, 1993; 59 FR 10559, Mar. 4, 1994; 71 FR 40280, July 14, 2006]