

## STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0620-AR-8 AFIN: 33-00002

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality  
5301 Northshore Drive  
North Little Rock, Arkansas 72118-5317

2. APPLICANT:

Unimin Corporation  
Main Street  
Guion, Arkansas 72540

3. PERMIT WRITER:

Andrea Sandage

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Silica Sand Mining and Processing Plant  
NAICS Code: 212322

5. SUBMITTALS:

8/13/2009

6. REVIEWER'S NOTES:

Unimin Corporation owns and operates a silica sand mine and processing plant in Guion (Izard County). This De minimis permit modification is being issued to allow Unimin to install the following new process equipment: 4 belt conveyors and 5 bucket elevators, which are controlled by the existing screenhouse wet scrubber SN-02 (WS-02), one feed bin and 4 product screens, which are controlled by dust collector SN-41 (DC-03) and one each belt conveyor, storage bin, and truck loadout which are controlled by dust collector SN-42 (DC-04). The total increase in emission is 7.8 tons per year (tpy) of PM and 2.8 tpy of PM<sub>10</sub>.

7. COMPLIANCE STATUS:

The following summarizes the current compliance of the facility including active/pending enforcement actions and recent compliance activities and issues.

There are currently no enforcement issues or actions against the facility at this time.

8. PSD APPLICABILITY:

a. Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N

b. Is the facility categorized as a major source for PSD? N  
*Single pollutant ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list?*

If yes, explain why this permit modification not PSD?

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
Facility-wide	PM/PM <sub>10</sub>	NSPS Subpart 000

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. MODELING:

Criteria Pollutants

Examination of the source type, location, plot plan, land use, emission parameters, and other available information indicate that modeling is not warranted at this time.

Other Modeling: N/A

Odor: N/A

H<sub>2</sub>S Modeling: N/A

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	AP-42	Lb/MMcf, lb/ton, lb/1000 gal	Wet Scrubber and	99.0%	Controlled

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
			Cyclone		
02	AP-42	Various lb/ton	Wet Scrubber	98.5%	Controlled
02A	AP-42	lb/ton	N/A	N/A	Uncontrolled
03 to 30	AP-42	Various lb/ton	N/A	N/A	Uncontrolled
31	AP-42	lb/ton: PM 0.056 PM <sub>10</sub> 0.0024	N/A	N/A	Uncontrolled Bulk Bagging Operation
32 & 33	AP-42	lb/ton: PM 0.00014 PM <sub>10</sub> 0.000046	Wet material	N/A	Controlled
34	Stack test data	lb/ton: PM 0.00056 PM <sub>10</sub> 0.000206	Wet Material	N/A	Controlled
35, 36, & 38	AP-42 Section 11.19.2	lb/ton: PM 0.003 PM <sub>10</sub> 0.0012	N/A	N/A	Uncontrolled
37	AP-42 Section 11.19.2	lb/ton: PM 0.0054 PM <sub>10</sub> 0.0024	N/A	N/A	Uncontrolled
39	AP-42 Section 13.2.4	lb/ton: PM 0.00925 PM <sub>10</sub> 0.00324	N/A	N/A	Uncontrolled
40	AP-42 Section 3.3	lb/MMBtu: PM 0.31 PM <sub>10</sub> 0.31 SO <sub>2</sub> 0.29 NO <sub>x</sub> 4.41 VOC 0.36 CO 0.95	N/A	N/A	Uncontrolled
41	AP-42 Sections 11.19 (8/04) 8.19 (9/91)	Feed Bin – lb/ton PM 0.056 PM <sub>10</sub> 0.0024	Fabric Filter	99.99%	Controlled

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		Screen - lb/ton PM 0.025 PM <sub>10</sub> 0.0087			
42	AP-42 Sections 11.19 (8/04) 8.19 (9/91)	Conveyor - lb/ton PM 0.0030 PM <sub>10</sub> 0.0011 Storage/Loadout - lb/ton PM 0.0560 PM <sub>10</sub> 0.0024	Fabric Filter	99.99%	Controlled

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
02	Particulate Matter Concentration	5 or 17	Initial Performance test	To verify NSPS limits

15. RECORDKEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content, etc.) that must be tracked and recorded.

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
Facility (fixed)	Processing of Silica Sand material	Confidential records of material processed maintained on site.	Monthly	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
Portable crushing plant	Processing of Silica Sand material	Confidential records of material processed and fuel usage maintained on site.	Monthly	N

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01	10	Dept Guidance	Daily observation
02	10	NSPS	Daily observation
02A	10	NSPS	Daily observation
03 through 08	10	NSPS	Daily observation
09	20	Dept. Guidance	Daily observation
14 & 15	20	Dept. Guidance	Daily observation
16 & 17	20	Dept. Guidance	Daily observation
18 & 19	10	Dept. Guidance	Daily observation
20 & 21	20	Dept. Guidance	Daily observation
22, 23 , & 24	10	NSPS	Daily observation
25	20	Dept. Guidance	Daily observation
26 & 27	15	NSPS	Daily observation
28 & 29	10	NSPS	Daily observation
30	20	Dept. Guidance	Daily observation
31	10	NSPS	Daily observation
32-34	10	NSPS	Annual Inspection

SN	Opacity	Justification for limit	Compliance Mechanism
35	20	Dept. Guidance	Daily observation
36	20	Dept. Guidance	Daily observation
37	20	Dept. Guidance	Daily observation
38	20	Dept. Guidance	Daily observation
39	20	Dept. Guidance	Daily observation
40	20	Dept. Guidance	Daily observation
41	20	Dept. Guidance	Daily observation
42	20	Dept. Guidance	Daily observation

17. DELETED CONDITIONS:

Former SC	Justification for removal
14	The equipment is not Subject to Subpart 000

18. GROUP A INSIGNIFICANT ACTIVITIES

Source Name	Group A Category	Emissions (tpy)						
		PM/ PM <sub>1</sub> 0	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs	
							Single	Total
Four (4) Reddy fuel burning heaters < 1.0 MMBtu/hr	A-1							
Tank TA-01 (Diesel), 15,000 gallon capacity 60,000 gal/yr throughput	A-13			0.01				
Tank TA-02 (Gasoline), 2,000 gallon capacity 12,000 gal/yr throughput	A-13			0.32				

Permit #: 0620-AR-8

AFIN: 33-00002

Page 7 of 7


19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

List all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
0620-AR-7

20. CONCURRENCE BY:

The following supervisor concurs with the permitting decision.

  
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Paula Parker, P.E.

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION



## Fee Calculation for Minor Source

Revised 07-27-09

Facility Name: Unimin Corporation

Permit Number: 0620-AR-8

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			<b>Old Permit</b>	<b>New Permit</b>
\$/ton factor	22.07	Permit Predominant Air Contaminant	102.6	110.4
Minimum Fee \$	400	Net Chargeable Emission Increase	7.8	
Minimum Initial Fee \$	500	Permit Modification Fee \$	400	
		Initial Permit Fee \$	<u>0</u>	
Check if Administrative Amendment	<input type="checkbox"/>	Annual Chargeable Emissions (tpy)	<u>110.4</u>	

Pollutant (tpy)	Old Permit	New Permit	Change
PM	102.6	110.4	7.8
PM <sub>10</sub>	28.5	31.3	2.8
SO <sub>2</sub>	1.5	1.5	0
VOC	1.4	1.4	0
CO	15.4	15.4	0
NO <sub>x</sub>	39	39	0