

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0620-AR-9 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: Industrial Sand Mining
NAICS Code: 212322

5. SUBMITTALS:

9/10/2010

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 replace bucket elevator BE-01 (SN-01) which increased throughput capacity. VSI Crusher CR-03 (SN-27) was replaced with a crusher that was rated at the same capacity. The total permitted emission increases are 4.7 tpy of PM and 2.6 tpy of PM₁₀.

7. COMPLIANCE STATUS: No changes

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: No changes

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 ₁₀	NSPS Subpart OOO

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. MODELING: No changes

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

H₂S Modeling: N/A

12. CALCULATIONS: No changes

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 Cyclone	99.0%	Controlled
02	AP-42	Various lb/ton	Wet	98.5%	Controlled

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
			Scrubber		
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 ₁₀ 0.0024	N/A	N/A	Uncontrolled Bulk Bagging Operation
32 & 33	AP-42	lb/ton: PM 0.00014 PM ₁₀ 0.000046	Wet material	N/A	Controlled
34	Stack test data	lb/ton: PM 0.00056 PM ₁₀ 0.000206	Wet Material	N/A	Controlled
35, 36, & 38	AP-42 Section 11.19.2	lb/ton: PM 0.003 PM ₁₀ 0.0012	N/A	N/A	Uncontrolled
37	AP-42 Section 11.19.2	lb/ton: PM 0.0054 PM ₁₀ 0.0024	N/A	N/A	Uncontrolled
39	AP-42 Section 13.2.4	lb/ton: PM 0.00925 PM ₁₀ 0.00324	N/A	N/A	Uncontrolled
40	AP-42 Section 3.3	lb/MMBtu: PM 0.31 PM ₁₀ 0.31 SO ₂ 0.29 NO _x 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 ₁₀ 0.0024 Screen - lb/ton PM 0.025	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
		PM ₁₀ 0.0087			
42	AP-42 Sections 11.19 (8/04) 8.19 (9/91)	Conveyor - lb/ton PM 0.0030 PM ₁₀ 0.0011 Storage/Loadout - lb/ton PM 0.0560 PM ₁₀ 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
01, 02, 27	Particulate Matter Concentration	5 or 17	Initial Performance test	To verify NSPS limits

15. RECORDKEEPING REQUIREMENTS: No changes

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
Portable crushing plant	Processing of Silica Sand material	Confidential records of material processed and	Monthly	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
		fuel usage maintained on site.		

16. OPACITY: No changes

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
35	20	Dept. Guidance	Daily observation
36	20	Dept. Guidance	Daily observation

SN	Opacity	Justification for limit	Compliance Mechanism
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: No changes

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

18. GROUP A INSIGNIFICANT ACTIVITIES: No changes

Source Name	Group A Category	Emissions (tpy)						
		PM/ PM ₁₀	SO ₂	VOC	CO	NO _x	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				

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

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20. CONCURRENCE BY:

The following supervisor concurs with the permitting decision.



Paula Parker, P.E.

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Minor Source

Revised 03-01-10

Facility Name: Unimin Corporation
 Permit Number: 0620-AR-9
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			Old Permit		New Permit
\$/ton factor	22.07	Permit Predominant Air Contaminant	110.4		123.6
Minimum Fee \$	400	Net Chargeable Emission Increase	13.2		
Minimum Initial Fee \$	500	Permit Modification Fee \$	400		
		Initial Permit Fee \$	0		
Check if Administrative Amendment	<input type="checkbox"/>	Annual Chargeable Emissions (tpy)	123.6		

Pollutant (tpy)	Old Permit	New Permit	Change
PM	110.4	123.6	13.2
PM ₁₀	31.3	34.7	3.4
SO ₂	1.5	1.5	0
VOC	1.4	1.4	0
CO	15.4	15.4	0
NO _x	39	39	0