

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0075-AOP-R9 AFIN: 41-00001

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Ash Grove Cement Company
4457 Highway 108
Foreman, Arkansas 71836

3. PERMIT WRITER:

Joseph Hurt

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Cement Manufacturing
NAICS Code: 327310

5. SUBMITTALS:

10/10/07

6. REVIEWER'S NOTES:

Ash Grove Cement Company (AFIN: 41-00001) operates a portland cement plant located at 4457 Hwy 108 West in Foreman, Arkansas 71836. This modification will allow Ash Grove to replace existing loadout spouts at the North Truck Load in the Shipping Department, add a baghouse at the south load out, and remove from the permit a baghouse that was never installed. This will result in permitted emissions reductions of 2.7 tpy PM and PM₁₀ for the Three Kiln Configuration Operating Scenario, and an increase of 1.8 tpy of PM and PM₁₀ for the Pyroprocess Unit Operating Scenario.

The permit is set up in a way that will allow Ash Grove to change operating scenarios without requiring a modification. It is essentially two permits in one. This SOB is for both the three kiln operating scenario and the pyroprocess unit operating scenario.

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 no known compliance issues at this time.

8. APPLICABLE REGULATIONS:

PSD Applicability

Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N
 Has the facility undergone PSD review in the past? Y
 Is the facility categorized as a major source for PSD? Y
 ≥ 100 tpy and on the list of 28? Y
 ≥ 250 tpy all other? Y

PSD Netting

Was netting performed to avoid PSD review in this permit? N

Source and Pollutant Specific Regulatory Applicability

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
P5, P6, P8, P10, P11, P12, P13, P15, P16, P17, P18, P19, P20, P26, P27, P28, P29, P30, P31, P32, P33, P34, P35, P36, P37, P38, M1, M3, M4, M8, M9, M10, M11, M12, M13, M14, M15, M16, M17, M18, M19, M20, M21, M22, M23, M24, M25, M26, M27, M28, M29, M30, M31, M32, M33, M34, M35, M36, M37, M38, M39, M40, M41, M42, M43, M44, M45, M46, S1-S13, S15-S18, C1-C11, C13-C21, C26-C28, C32-C35, C41-C44	PM ₁₀	NESHAP Subpart LLL
C4, P23, R12, R17, R19	PM ₁₀	NSPS Subpart F
F19, F20	VOC	NSPS Subpart Kb
F19, F20, facility	Benzene Waste Operations	40 CFR Part 61, Subpart FF 40 CFR 63, Subpart DD

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Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
P1, P2, P3	All	NESHAP Subpart EEE

9. EMISSION CHANGES:

The following table summarizes plantwide emission changes associated with this permitting action.

Plantwide Permitted Emissions (tpy)			
Pollutant	Permit # 0075-AOP-R8	Permit # 0075-AOP-R9	Change
PM	1096.55	1093.85	-2.7
PM ₁₀	556.85	554.15	-2.7
SO ₂	5736.1	5736.1	0
VOC	285.1	285.1	0
CO	1214.9	1214.9	0
NO _x	9097.0	9097.0	0
HCl	749.0	749.0	0

10. MODELING:

Criteria Pollutants

Pollutant	Emission Rate (lb/hr)	NAAQS Standard ($\mu\text{g}/\text{m}^3$)	Averaging Time	Highest Concentration ($\mu\text{g}/\text{m}^3$)	% of NAAQS
PM ₁₀ *	134.27	50	Annual	41.6	83%
		150	24-Hour	144.6	96%
SO ₂ *	2563.4	80	Annual	23.6	30%
		1300	3-Hour	882.6	68%
		365	24-Hour	268.6	74%
CO	551.4	10,000	8-Hour	1169.0	12%
		40,000	1-Hour	4366.8	11%
NO _x	3337.1	100	Annual	51.1	51%

* These modeling results were obtained through detailed modeling performed by the facility in Permit # 0075-AOP-R7. Changes in this permit were not significant enough to change the results.

Non-Criteria Pollutants:

This facility is subject to 40 CFR 63, Subpart EEE. This subpart requires a risk assessment to be performed and no threat to the public health or safety was found.

11. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
Kilns	testing	various	ESP	99%	
fabric filters	various	0.01 gr/dscf		95%	
P6	AP-42	0.147 lb/ton	baghouse		
M20	AP-42	0.0195 lb/ton	scrubber		
F19	tanks3		thermal oxidizer, carbon adsorber	99.9%	

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
combustion sources	AP-42	various			based on equation in AP-42
crushers	AP-42	various			based on equation in AP-42
roads	AP-42	various			based on equation in AP-42
storage piles	AP-42	various			based on equation in AP-42

12. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
P1, P2, P3	all	See NESHAP EEE		

13. MONITORING OR CEMS

The permittee must monitor the following parameters with CEMS or other monitoring equipment (temperature, pressure differential, etc.)

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
P1, P2, P3	CO, NO _x , SO ₂	CEM	continuously	Y
F20	temperature	continuous recorder	continuously	Y

14. RECORD KEEPING 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)
M17, M19	Grinding Aid used, VOC content, HAP content, density	196,190 lb 9.996 lb/gal 90% VOC 4% HAP	Monthly	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
P1, P2, P3	Amount of fuel used and clinker produced	various	monthly	Y
F4, F5, R2, R5, R17, R18, R19	Pile Area	various	every 3 months	N
Q2, Q8	Amount crushed	1,116,000 tons/month 632,400 tons/month	Monthly	Y

15. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
P1, P2, P3	20	Department Guidance	Weekly observation
P5, P6, P8, P10, P11, P12, P13, P15, P16, P17, P18, P19, P20, P26, P27, P28, P29, P30, P31, P32, P33, P34, P35, P36, P37, P38, M1, M3, M4, M8, M9, M10, M11, M12, M13, M14, M15, M16, M17, M18, M19, M20, M21, M22, M23, M24, M25, M26, M27, M28, M29, M30, M31, M32, M33, M34, M35, M36, M37, M38, M39, M40, M41, M42, M43, M44, M45, M46, S1-S13, S15-S18 C1-C11, C13, C20, C21, C26-C28, C32-C35, C41-C44	10	NESHAP Limit	weekly observation
C4, P23, R12, R17, R19	10	NSPS Subpart F Limit	Weekly observation
F19, F20	10	Department Guidance	Weekly observation

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16. DELETED CONDITIONS:

Former SC	Justification for removal
No deleted conditions	

17. VOIDED, SUPERCEDED, OR SUBSUMED PERMITS:

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

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18. CONCURRENCE BY:

The following supervisor concurs with the permitting decision.

Wesley Crouch, P.E.