

STATEMENT OF BASIS

for the issuance of Draft Air Permit # 75-AOP-R1

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality
8001 National Drive
Post Office Box 8913
Little Rock, Arkansas 72219-8913

2. APPLICANT:

Ash Grove Cement Company
4457 Hwy 108
Foreman, Arkansas 71836

3. PERMIT WRITER:

Wesley Crouch

4. PROCESS DESCRIPTION AND SIC CODE:

SIC Description: Portland Cement Manufacturing
SIC Code: 3241

5. SUBMITTALS: September 30, 2002, November 5, 2002, February 72, 2003

6. REVIEWER'S NOTES:

Ash Grove Cement Company operates a portland cement plant near Foreman, Arkansas. This facility is subject to regulation under the Arkansas Air Pollution Control Code (Regulation 18), the Arkansas State Implementation Plan for Air Pollution Control (Regulation 19), the Arkansas Operating Air Permit Program (Regulation 26), 40 CFR Part 60 Subpart F, *Standards of Performance for Portland Cement Plants*, 40 CFR Part 60 Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification commenced After July 23, 1984*, 40 CFR Part 61, Subpart FF, *National Emission Standards for Benzene Waste Operations*, 40 CFR Part 63, Subpart DD, *National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations*, 40 CFR Part 63, Subpart LLL, *National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry*, and 40 CFR Part 63, Subpart EEE, *National Emission Standards for Hazardous Air Pollutants From Hazardous Waste Combustors*.

This modification will allow Ash Grove to construct a new cement kiln dust (CKD) handling system (SN-P32, SN-P33, SN-P34, SN-P35 and SN-P36). This system will allow the CKD to be pneumatically conveyed across the highway to a new CKD landfill and it will also allow some of the

CKD to be recycled to kiln #3. This modification will result in PM/PM₁₀ emissions increases of 1.2 lb/hr and 4.0 tpy from the CKD handling equipment and 4 proposed new fabric filter dust collectors. Also, Ash Grove proposes to construct a baghouse (SN-C44). This change will result in an increase of PM/PM₁₀ emissions of 0.17 lb/hr and 0.75 tpy. Finally, Ash Grove Cement Company will add 3 drag conveyors and replace 2 bucket conveyors and a belt conveyor that are part of the clinker handling system. The two bucket conveyors are the number 6 and number 7 bucket conveyors. The belt conveyor is the 440 belt. These conveyors are subject to all applicable sections of 40 CFR 63, Subpart LLL. No additional emissions are expected to result from this modification.

7. **COMPLIANCE STATUS:** The following summarizes the current compliance status of the facility including active/pending enforcement actions and recent compliance activities and issues.

There are no outstanding compliance issues with this facility.

8. **APPLICABLE REGULATIONS:**

A. Applicability

Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, et cetera) (Y/N) N

Has this facility underwent PSD review in the past (Y/N) N Permit #

Is this facility categorized as a major source for PSD? (Y/N) N

\$ 100 tpy and on the list of 28 (100 tpy)? (Y/N)

\$ 250 tpy all other (Y/N)

B. Source and Pollutant Specific Regulatory Applicability

Source	Pollutant	Regulation [NSPS, NESHAP (Part 61 & Part 63), or PSD <u>only</u>]
P5, P6, P8, P10, P11, P12, P13, P15, P16, P17, P18, P19, P20, P26, P27, P28, P29, P30, P31, M1, M3, M4, M8, M9, M10, M11, M12, M13, M14, M15, M16, M17, M18, M19, M20, M21, M22,	PM ₁₀	NESHAP Subpart LLL

Source	Pollutant	Regulation [NSPS, NESHAP (Part 61 & Part 63), or PSD <u>only</u>]
M23, M24, M25, M26, M27, M28, M29, M30, M31, M32, M33, M34, M35, M36, M37, M38, M39, M40, M42, M43, M44, M45, S1-S13, C1-C11, C13-C21, C26-28, C32-C37, C41-C44		
C4, P23, R12, R17, R19	PM ₁₀	NSPS Subpart F
F19, F20	VOC	NSPS Subpart Kb
F19, F20, Facility	Benzene Waste Operations	40 CFR 61, Subpart FF 40 CFR Part 63, Subpart DD
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 (ton/yr)			
Pollutant	Air Permit 75-AOP-RO	Air Permit 75-AOP-R1	Change
PM	1100.2	1103.55	3.35
PM ₁₀	549.3	552.55	4.65
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

Plantwide Permitted Emissions (ton/yr)			
Pollutant	Air Permit 75-AOP-RO	Air Permit 75-AOP-R1	Change
Cl and HCl	157.2	157.2	0
other HAPs	113.4	113.4	0

10. MODELING:

A. 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 *	135.0	50	Annual	41.6	83%
		150	24-hour	144.6	96%
SO ₂ *	2563.4	80	Annual	23.6	30%
		1,300	3-hour	882.6	68%
		365	24-hour	268.6	74%
NO _x	3337.1	100	Annual	51.1	51%
CO	551.4	10,000	8-hour	1,169.0	12%
		40,000	1-hour	4366.8	11%

**VOC emission rates did not indicate that modeling versus the NAAQS would be necessary.
 * These modeling results were obtained through detailed modeling performed by the facility.
 They include downwash and account for background concentrations.**

11. Non-Criteria Pollutants

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

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, Testing, etc)	Emission Factor and units (lbs/ton, lbs/hr, etc)	Control Equipment Type (if any)	Control Equipment Efficiency	Comments (Emission factor controlled/uncontrolled, etc)
Kilns	testing	various	esp	99%	
fabric filters	various	0.01gr/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%	
combustion sources	AP-42	various			
crushers	AP-42	0.00059 lb/ton			
transfer points	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

13. TESTING REQUIREMENTS:

This permit requires stack testing of the following sources.

SN(s)	Pollutant	Test Method	Test Interval	Justification For Test Requirement
P1, P2, P3	all			See NESHAP EEE

14. MONITORING OR CEMS

The following are parameters that must be monitored with CEMs or other monitoring equipment (temperature, pressure differential, etc), frequency of recording and whether records are needed to be included in any annual, semiannual or other reports.

SN	Parameter or Pollutant to be Monitored	Method of Monitoring (CEM, Pressure Gauge, etc)	Frequency*	Report (Y/N)**
P1, P2, P3	CO, Nox, SO2	CEM	continuously	Y
F20	temperature	continuous recorder	continuously	N

* Indicate frequency of recording required for the parameter (Continuously, hourly, daily, etc.)
 ** Indicates whether the parameter needs to be included in reports.

15. RECORD KEEPING REQUIREMENTS

The following are items (such as throughput, fuel usage, VOC content of coating, etc) that must be tracked and recorded, frequency of recording and whether records are needed to be included in any annual, semiannual or other reports.

SN	Recorded Item	Limit (as established in permit)	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
P1, P2,	Amount of fuel used and	various	monthly	Y

Permit #: 75-AOP-R1

AFIN #: 41-00001

Page 7 of 9

SN	Recorded Item	Limit (as established in permit)	Frequency *	Report (Y/N)**
P3	clinker produced			
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

* Indicate frequency of recording required for the item (Continuously, hourly, daily, etc.)

** Indicates whether the item needs to be included in reports

16. OPACITY

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism (daily observation, weekly, control equipment operation, etc)
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, 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,	10	NESHAP Limit	weekly observation

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism (daily observation, weekly, control equipment operation, etc)
M35, M36, M37, M38, M39, M40, M42, M43, M44, M45, S1-S13, C1-C11, C13-C21, C26-28, C32-C37, C41-C44			
C4, P23, R12, R17, R19	10	NSPS (Subpart F) Limit	Weekly observation
F19, F20	10	Department Guidance	Weekly observation

17. DELETED CONDITIONS:

The following Specific Conditions were included in the previous permit, but deleted for the current permitting action.

Former SC	Justification for removal
No new specific Conditions	

18. VOIDED, SUPERSEDED OR SUBSUMED PERMITS

List all active permits for this facility which are voided/superseded/subsumed by issuance of this permit.

Permit #
75-AOP-R0

Permit #: 75-AOP-R1
AFIN #: 41-00001
Page 9 of 9

19. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

Thomas Rheaume PE