

STATEMENT OF BASIS

For the issuance of Air Permit # 0075-AOP-R19 AFIN: 41-00001

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Ash Grove Cement Company
4343 Highway 108
Foreman, Arkansas 71836

3. PERMIT WRITER:

Joseph Hurt

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Cement Manufacturing
NAICS Code: 327310

5. SUBMITTALS:

Date of Application	Type of Application (New, Renewal, Modification, Deminimis/Minor Mod, or Administrative Amendment)	Short Description of Any Changes That Would Be Considered New or Modified Emissions
10/14/2016	Minor Modification	Addition of a portable crusher, and ancillary equipment, to process a clinker pile

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. With this permitting action, Ash Grove is seeking to permanently allow clinker crushing to be done on a periodic basis when the outside clinker pile warrants processing instead of asking for temporary permits in the future. The necessary equipment to process the outside clinker pile includes the end loader to crusher transfer system (SN-449.T7), transfer from crusher to belt (SN-449.T8), a portable crusher (SN-449.CR10), and the iron source pile (SN-213.P2). Also, the facility requested to add two small dust collectors to the crossover area (SN-409.BF10 & 449.BF31). The facility also requested to remove two transfer points (SN-502.T1 and

SN-502.T2) and four dust collectors (SN-449.BF1, 502.BF1, 502.BF2, and 502.BF3).

The permitted emission increases include 1.7 tpy of SO₂, 5.4 tpy of VOC, 4.8 tpy of CO, 5.4 tpy of NO_x, and 0.58 tpy of Total HAP. The permitted emission decreases include 2.0 tpy of PM and 3.7 tpy of PM₁₀.

7. COMPLIANCE STATUS:

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

The last inspection was conducted on December 7, 2015. The facility was found out of compliance with the following areas of concern noted:

Specific Condition 264: The permittee shall keep daily records of the OPLs required by Specific Conditions 216, 220, 221, 224, 225, 235, 238, 244, and 247, and as contained in Appendix N. These records shall be updated by the 15th day of the month following the month to which the records pertain. These records shall be maintained on site and shall be submitted in accordance with General Provision 7. [Regulation 19, §19.705 and 40 CFR Part 52, Subpart E].

The permittee did provide all of the daily records as required by Specific Conditions 216, 220, 221, 224, 225, 235, 238, 244, and 247. The records were available on site for review; however, these records were not submitted in accordance with General Provision 7. Mr. Byerly will be submitting a revised copy with all of the required documentation by January 1, 2016.

The report submitted on November 24, 2015 did not contain all of the data required for the reporting period. The report lacked all of the required documentation that is to be submitted to demonstrate compliance with Specific Condition 264. The documentation was being recorded and was viewed on site. The documentation was simply not submitted with semiannual report. Mr. Byerly will be submitting a revised copy with all of the required documentation by January 1, 2016.

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? Y

- *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 is not PSD.

There were no increases in emissions above the significance threshold.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
326.CH26, 403.CHM, 403.CHR, 403.CHU, 431.LS12, 443.CH46, 409.BF10, 449.BF10, 449.BF15, 449.BF20, 449.BF30, 449.BF31, 449.BF40, 449.BF50, 449.BF60, 449.BF70, 449.CH30, 449.CH31, 449.CH32, 449.CH33, 449.CH42, 449.HP2, 449.T7, 449.T8, 533.LS10, 534.CH12, 514.BF1, 514.BF2, 514.BF3, 524.BF1, 524.BF2, 611.BF1, 611.BF3, 611.BF4, 611.BF10, 611.BF20, 611.BF30, 611.BF40, 403.BF3, 403.BF4, 403.BF6, 403.BF7, 403.BF8, 612.BF1, 612.BF2, 612.BF3, 612.BF4, 612.BF5, 621.BF1, 621.BF2, 621.BF3, 621.BF5, 621.BF6(E), 621.BF7(W), 621.BF8, 621.BF9, 631.BF10, 631.BF15, 631.BF20, 631.BF25, 631.BF30, 513.BF1, 521.BF1, 521.BF2, 523.BF2, 531.BF10, 531.BF20, 533.BF10, 533.BF20, 534.BF10, 534.BF20, 535.BF10, 535.BF20, 44C.BF10, 44M.BF10, 327.BF10, 327.BF20, 327.BF30, 442.BF10, 442.BF20, 443.BF20, M9, 326.BF10, 326.BF20, 326.BF30, 329.BF10, 329.BF20, 611.UL10	PM ₁₀	NESHAP Subpart LLL
41A.BF10, 41A.BF20, 41A.T2, 41A.T10, 44A.T10, 44A.BF10, 44B.BF10	PM ₁₀	NSPS Subpart Y

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
41A.BF10, 41A.BF20, 44A.BF10, 213.BF10, 213.BF20, 213.T2, 213.T3, 221.BF10, 323.BF10, 325.BF10, 325.BF20, 325.BF30, 41A.T1, 111.T10, 111.T12, 213.T1, 221.CH01, 221.RMB1, 221.T1, 321.CH01, 323.T1, 41A.BF10, 41A.BF20, 44A.BF10	PM ₁₀	NSPS Subpart OOO
41F.FT10, 40F.FT3, 40F.FT4, 40F.FT5, 40F.FT6, 40F.FT7, 40F.FT8, 40F.FT9, 40F.FTA	VOC	NSPS Subpart Kb
41F.BF10, 41F.FT10, 41F.TK10, 40F.FT3, 40F.FT4, 40F.FT5, 40F.FT6, 40F.FT7, 40F.FT8, 40F.FT9, 40F.FTA, 40F.TX1, 45F.TX10	Benzene Waste Operations	40 CFR Part 61, Subpart FF
41F.BF10, 41F.FT10, 41F.TK10, 40F.FT3, 40F.FT4, 40F.FT5, 40F.FT6, 40F.FT7, 40F.FT8, 40F.FT9, 40F.FTA, 40F.TX1, 45F.TX10, RCC	Benzene Waste Operations	40 CFR 63, Subpart DD
443.BF10, 443.BF30, 443.SK10	HAPs and THC	NESHAP Subpart EEE
710-EG10	Varies	NSPS Subpart IIII
Facility	Varies	NESHAP Subpart G
		NESHAP Subpart XX

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. AMBIENT AIR EVALUATIONS:

a) Reserved.

b) 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.

12. CALCULATIONS:

SN	Emission Factor Source	Emission Factor	Control Equipment	Control Equipment Efficiency	Comments
Kiln	Testing BACT	Various VOC: 44.5 lb/hr	Baghouse	99%	
	EPA Consent Decree	lb/ton: 1.5 NO _x 0.6 SO ₂ 0.086 PM/PM ₁₀	SNCR for NO _x	--	30-day rolling average emission limits
Fabric filters	Various	0.01 gr/dscf or 0.005 gr/dscf		95%	
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
45F.TX10	AP-42 Chapter 5.2, Equation 1 And Chapter 7.1, equation 4.4	Various VOC: 0.7 lb/hr	RTO	95%	

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
443.SK10	All	See NESHAP EEE		
443.SK10	Methane	18 with 25A or 25A with Methane cutter	Quarterly	To verify the methane portion of emission from 443.SK10

SN	Pollutants	Test Method	Test Interval	Justification
443.SK10	PM (Condensables)	202	Once every five years	§26.703(A)
HR07 - HR09, HR15, HR17 - HR22, 111.R1A-F	Silt content of roads to verify PM ₁₀	Appendix C.1 and C.2 of AP-42	Within 60 days of issuance of Permit 0075- AOP-R14, and quarterly thereafter until each road segment has been tested twice.	§26.703(A)
HR01 - HR06, HR12 - HR14, HR16, HR23	Road surface silt loading to verify PM ₁₀			

14. 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)
443.SK10	CO	CEM	Continuously	Y
	VOC	THC Analyzer (CEM)	Continuously	Y
	NO _x	CEM	Continuously	Y
	SO ₂	CEM	Continuously	Y
40F.TX1 & 41F.TX10	Combustion chamber temperature	Continuous temperature recorder	Continuously	N
45F.TX10	Combustion chamber temperature	Continuous temperature recorder	Continuously	N

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)
443.SK10 & Plantwide	Clinker production	5,300 tons/day	Daily	Y
443.SK10	Daily clinker production	Tons per hour	Hourly	N
	Operating Parameter Limits	See Appendix N	Daily	Y
403.P1	Pile area	20 acres	Annually	Y

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
449.P1	Pile area	4 acres	Annually	Y
213.P2	Pile area	22,500 ft ²	Annually	Y
41.AP1, 41.AP2, & 41.AP3	Pile area	0.92 acres (total)	Annually	Y
41A.P5	Pile area	1.03 acres	Annually	Y
41A.P6	Pile area	0.52 acres	Annually	Y
221.RMB1	Pile area	4.93 acres	Annually	Y
710.EG10	Operating Hours	500 hours per consecutive 12-month period	As Necessary	Y
40F.TX1	Combustion chamber temperature	≥ 1500°F	Continuously	N
	Breakthrough indicators	Log of observations	Good engineering judgment	N
45F.TX10	Combustion chamber temperature	≥ 1425°F	Continuously	N
449.CR10	Fuel oil sulfur content	Not to exceed 0.05%	Each fuel shipment received	N

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
443.BF10, 443.BF30, & 443.SK10	20	NESHAP Subpart EEE	Weekly observation

SN	Opacity	Justification for limit	Compliance Mechanism
326.BF10, 326.BF20, 326.BF30, 326.CH26, 327.BF10, 327.BF20, 329.BF10, 329.BF20, 403.CHM, 403.CHR, 403.CHU, 431.LS12, 442.BF20, 443.BF20, 443.CH46, 449.CH30, 449.CH31, 449.CH32, 449.CH33, 449.CH42, 449.HP2, 449.T7, 449.T8, 533.LS10, 534.CH12, M9, 514.BF1, 514.BF2, 514.BF3, 524.BF1, 524.BF2, 611.BF1, 611.BF3, 611.BF4, 611.BF10, 611.BF20, 611.BF30, 611.BF40, 611.UL10, 403.BF3, 403.BF4, 403.BF6, 403.BF7, 403.BF8, 612.BF1, 612.BF2, 612.BF3, 612.BF4, 612.BF5, 621.BF1, 621.BF2, 621.BF3, 621.BF5, 621.BF6(E), 621.BF7(W), 621.BF8, 621.BF9, 631.BF10, 631.BF15, 631.BF20, 631.BF25, 631.BF30, 409.BF10, 449.BF10, 449.BF15, 449.BF20, 449.BF30, 449.BF31, 449.BF40, 449.BF50, 449.BF60, 449.BF70, 513.BF1, 521.BF1, 521.BF2, 523.BF2, 531.BF10, 531.BF20, 533.BF10, 533.BF20, 534.BF10, 534.BF20, 535.BF10, 535.BF20, 44C.BF10, 44M.BF10, 327.BF30, 442.BF10	10	NESHAP Subpart LLL	Monthly observation
40F.TX1 & 45F.TX10	10	Department Guidance	Natural gas only

SN	Opacity	Justification for limit	Compliance Mechanism
41A.BF10, 41A.BF20, 41A.T2, 41A.T10, 44A.T10, 44A.BF10, 44B.BF10	10	NSPS Subpart Y	Weekly observation
41A.BF10, 41A.BF20, 44A.BF10, 213.BF10, 213.BF20, 213.T2, 213.T3, 221.BF10, 323.BF10, 325.BF10, 325.BF20, 325.BF30, 41A.T1, 111.T10, 111.T12, 213.T1, 221.CH01, 221.RMB1, 221.T1, 321.CH01, 323.T1	Various	NSPS Subpart OOO	Weekly observation
403.P1, 449.P1, 41A.P1, 41A.P2, 41A.P3, 41A.P5, 41A.P6, 211.BF1, 213.P1, 213.P2, 311.BF1, 311.CH10, 311.CH11, 311, CH15, 311.CH16, 403.T1, 403.T2, 449.CR10, 449.T1, 449.T4	20	Department Guidance	Weekly observation
311.CH1, 311.CHC	40	Department Guidance	Weekly observation

17. DELETED CONDITIONS:

Former SC	Justification for removal
	N/A

18. GROUP A INSIGNIFICANT ACTIVITIES:

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
250 gal grinding aid tanks	A-2			<1.0			<1.0	<1.0
Less than 15 gallon DOT Containers	A-2			<1.0			<1.0	<1.0
10,000 gal diesel UST x 3	A-3	See A-3 total.						
10,000 gal Masonry air entraining agent tank	A-3							
1,000 gal used oil UST	A-3							
550 gal motor oil and/or hydraulic fluid UST x 4	A-3							
350 gal used oil tanks x 2	A-3							
Total	A-3			<10			<5	<5
Piles associated with clean-up	A-13	See A-13 total.						
10,000 gallon oil tank	A-13							
12,000 gallon oil tank	A-13							
10,000 gallon unleaded UST	A-13							
30,000 gallon grinding aid tank	A-13							
Total	A-13	<5		<5			<1	<1

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
0075-AOP-R18

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Ash Grove Cement Company
 Permit Number: 0075-AOP-R19
 AFIN: 41-00001

\$/ton factor	23.93	Annual Chargeable Emissions (tpy)	6635.6
Permit Type	Minor Mod	Permit Fee \$	500

Minor Modification Fee \$	500
Minimum Modification Fee \$	1000
Renewal with Minor Modification \$	500
Check if Facility Holds an Active Minor Source or Minor Source General Permit	<input type="checkbox"/>
If Hold Active Permit, Amt of Last Annual Air Permit Invoice \$	0
Total Permit Fee Chargeable Emissions (tpy)	5.1
Initial Title V Permit Fee Chargeable Emissions (tpy)	

HAPs not included in VOC or PM: Chlorine, Hydrazine, HCl, HF, Methyl Chloroform, Methylene Chloride, Phosphine, Tetrachloroethylene, Titanium Tetrachloride

Air Contaminants: All air contaminants are chargeable unless they are included in other totals (e.g., H2SO4 in condensable PM, H2S in TRS, etc.)

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
PM		326.4	324.4	-2	-2	324.4
PM ₁₀		260.7	257	-3.7		
PM _{2.5}		0	0	0		
SO ₂		2699.7	2701.4	1.7	1.7	2701.4
VOC		214.3	219.7	5.4	5.4	219.7
CO		1718.1	1722.9	4.8		
NO _x		2973.5	2978.9	5.4	5.4	2978.9
1. (The following HAPs are bubbled together)	<input type="checkbox"/>	0	0	0		
1,1,1-Trichloroethane*	<input type="checkbox"/>	195.96	195.96	0		
1,1,2,2-Tetrachloroethane*	<input type="checkbox"/>	0	0	0		
1,1,2-Trichloroethane*	<input type="checkbox"/>	0	0	0		
1,1-Dichloroethane*	<input type="checkbox"/>	0	0	0		
1,2-Dichloroethane*	<input type="checkbox"/>	0	0	0		
1,2-Dichloropropane*	<input type="checkbox"/>	0	0	0		
Acrylonitrile*	<input type="checkbox"/>	0	0	0		
Allyl Chloride*	<input type="checkbox"/>	0	0	0		
Benzene*	<input type="checkbox"/>	0	0	0		
Bromoform*	<input type="checkbox"/>	0	0	0		
Bromomethane*	<input type="checkbox"/>	0	0	0		
Carbon disulfide*	<input type="checkbox"/>	0	0	0		
Carbon tetrachloride*	<input type="checkbox"/>	0	0	0		
Chlorobenzene*	<input type="checkbox"/>	0	0	0		
Chloroform*	<input type="checkbox"/>	0	0	0		
Chloromethane*	<input type="checkbox"/>	0	0	0		
Cumene*	<input type="checkbox"/>	0	0	0		
Diethanolamine*	<input type="checkbox"/>	0	0	0		
Ethyl Acrylate*	<input type="checkbox"/>	0	0	0		
Ethylbenzene*	<input type="checkbox"/>	0	0	0		
Ethylene Glycol*	<input type="checkbox"/>	0	0	0		
Iodomethane*	<input type="checkbox"/>	0	0	0		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Methyl Methacrylate*	<input type="checkbox"/>	0	0	0		
Methyl tert-butyl ether*	<input type="checkbox"/>	0	0	0		
Methylene chloride*	<input type="checkbox"/>	0	0	0		
n-Hexane*	<input type="checkbox"/>	0	0	0		
Styrene*	<input type="checkbox"/>	0	0	0		
Toluene*	<input type="checkbox"/>	0	0	0		
trans-1,3-Dichloropropene*	<input type="checkbox"/>	0	0	0		
Vinyl acetate*	<input type="checkbox"/>	0	0	0		
Vinyl Bromide*	<input type="checkbox"/>	0	0	0		
Vinyl chloride*	<input type="checkbox"/>	0	0	0		
Xylene*	<input type="checkbox"/>	0	0	0		
1,2,4-Trichlorobenzene*	<input type="checkbox"/>	0	0	0		
1,4-Dichlorobenzene*	<input type="checkbox"/>	0	0	0		
1,4-Phenylenediamine*	<input type="checkbox"/>	0	0	0		
2,4,5-Trichlorophenol*	<input type="checkbox"/>	0	0	0		
2,4,6-Trichlorophenol*	<input type="checkbox"/>	0	0	0		
2,4-Dinitrophenol*	<input type="checkbox"/>	0	0	0		
2,4-Dinitrotoluene*	<input type="checkbox"/>	0	0	0		
3,3'-Dichlorobenzidine*	<input type="checkbox"/>	0	0	0		
4,4'-Methylenedianiline*	<input type="checkbox"/>	0	0	0		
4-Aminobiphenyl*	<input type="checkbox"/>	0	0	0		
4-Nitrobiphenyl*	<input type="checkbox"/>	0	0	0		
4-Nitrophenol*	<input type="checkbox"/>	0	0	0		
Aniline*	<input type="checkbox"/>	0	0	0		
Benzidine*	<input type="checkbox"/>	0	0	0		
bis(2-Chloroethyl) ether*	<input type="checkbox"/>	0	0	0		
bis(2-Ethylhexyl) phthalate*	<input type="checkbox"/>	0	0	0		
Dimethyl phthalate*	<input type="checkbox"/>	0	0	0		
Hexachlorobenzene*	<input type="checkbox"/>	0	0	0		
Hexachlorobutadiene*	<input type="checkbox"/>	0	0	0		
Hexachlorocyclopentadiene*	<input type="checkbox"/>	0	0	0		
Hexachloroethane*	<input type="checkbox"/>	0	0	0		
Hydroquinone*	<input type="checkbox"/>	0	0	0		
Isophorone*	<input type="checkbox"/>	0	0	0		
Napthalene*	<input type="checkbox"/>	0	0	0		
Nitrobenzene*	<input type="checkbox"/>	0	0	0		
o-Anisidine*	<input type="checkbox"/>	0	0	0		
o-Toluidine*	<input type="checkbox"/>	0	0	0		
Pentachloronitrobenzene*	<input type="checkbox"/>	0	0	0		
Pentachlorophenol*	<input type="checkbox"/>	0	0	0		
Phenol*	<input type="checkbox"/>	0	0	0		
-----	<input type="checkbox"/>	0	0	0		
Dioxin/Furan*	<input type="checkbox"/>	1.30E-06	1.30E-06	0		
-----	<input type="checkbox"/>	0	0	0		
(The following emissions are bubbled together)	<input type="checkbox"/>	0	0	0		
HCl	<input checked="" type="checkbox"/>	416.6	416.6	0	0	416.6
Chlorine	<input type="checkbox"/>	0	0	0		
-----	<input type="checkbox"/>	0	0	0		
Arsenic*	<input type="checkbox"/>	0.2	0.2	0		
Beryllium*	<input type="checkbox"/>	0.2	0.2	0		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Cadmium*	<input type="checkbox"/>	0.7	0.7	0		
Chromium*	<input type="checkbox"/>	0.2	0.2	0		
Lead*	<input type="checkbox"/>	0.7	0.7	0		
Mercury*	<input type="checkbox"/>	0.4	0.4	0		
-----	<input type="checkbox"/>	0	0	0		
(The following emissions are bubbled together)	<input type="checkbox"/>	0	0	0		
Antimony*	<input type="checkbox"/>	119.3	119.3	0		
Cobalt*	<input type="checkbox"/>	0	0	0		
Manganese*	<input type="checkbox"/>	0	0	0		
Nickel*	<input type="checkbox"/>	0	0	0		
Selenium*	<input type="checkbox"/>	0	0	0		
-----	<input type="checkbox"/>	0	0	0		
Single HAP	<input type="checkbox"/>	0.03	0	-0.03		
Total HAP	<input type="checkbox"/>	0.03	0.61	0.58		
-----	<input type="checkbox"/>	0	0	0		
NOx + VOC adjustment	<input checked="" type="checkbox"/>	0	-5.4	-5.4	-5.4	-5.4