

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 2004-AOP-R4 AFIN: 16-00002

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Acme Brick Company - Wheeler Plant  
2905 Dan Avenue  
Jonesboro, Arkansas 72401

3. PERMIT WRITER:

Derrick Brown

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Clay Building Material and Refractories Manufacturing  
NAICS Code: 327120

5. ALL SUBMITTALS:

The following is a list of ALL permit applications included in this permit revision.

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
5/11/2018	Modification	Incorporation of test results.

6. REVIEWER'S NOTES:

Acme Brick Company owns and operates a clay brick manufacturing facility located at 2905 Dan Avenue in Jonesboro, Arkansas. This facility manufactures hard fired clay brick for use in the construction of commercial and residential structures. This modification incorporates the results of performance testing performed in 2016 and 2017, and also incorporates the requirements of 40 C.F.R. § 63, Subpart JJJJ, and 40 C.F.R. § 60, Subpart OOO. This modification increases permitted emissions by 5.4 tpy of PM/PM<sub>10</sub>, 14.6 tpy of SO<sub>2</sub>, 14.8 tpy of VOC, 179.8 tpy of CO, 0.5 tpy of NO<sub>x</sub>, 12.03 tpy of HF, and 8.67 tpy of HCl.

7. COMPLIANCE STATUS:

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

The facility tested the kiln (SN-02) in 2016 and 2017 and possibly exceeded permitted emission rates for SO<sub>2</sub>, VOC, CO, NO<sub>x</sub>, HF, and HCl. The issue has been forwarded to enforcement on August 14, 2018.

8. PSD/GHG APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N  
If yes, were GHG emission increases significant? N/A

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 for 8(b), explain why this permit modification is not PSD.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
02	HF, HCl, Cl <sub>2</sub> , PM	40 C.F.R. § 63, Subpart JJJJJ
04	Opacity	40 C.F.R. § 60, Subpart OOO
03	HAPs	40 C.F.R. § 63, Subpart ZZZZ

10. PERMIT SHIELD – TITLE V PERMITS ONLY:

Did the facility request a permit shield in this application? N

(Note - permit shields are not allowed to be added, but existing ones can remain, for minor modification applications or any Regulation 18 requirement.)

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

12. AMBIENT AIR EVALUATIONS:

The following are results for ambient air evaluations or modeling.

a) NAAQS

A NAAQS evaluation is not required under the Arkansas State Implementation Plan, National Ambient Air Quality Standards, Infrastructure SIPs and NAAQS SIP per Ark. Code Ann. § 8-4-318, dated March 2017 and the ADEQ Air Permit Screening Modeling Instructions.

b) Non-Criteria Pollutants:

Hydrogen Fluoride and Hydrogen Chloride are both permitted at annual emissions greater than 10 tons/year.

The following is the facility’s response for a request to submit address the Departments Non-Criteria pollutant strategy review for HF and HCl:

On October 26, 2015, the Federal Register (Vol. 80, No. 206) published the United States Environmental Protection Agency’s (EPA’s) final rule for the National Emission Standards for Hazardous for Air Pollutants (NESHAP) for Brick and Structural Clay Products (BSCP) Manufacturing (NESHAP JJJJJ) and NESHAP for Clay Ceramics Manufacturing (NESHAP KKKKK). Acme is subject to NESHAP JJJJJ.

These two NESHAP rules were developed using health based standards for the emissions of HF and HCl. The background for these health based standards are discussed at length in the preamble to the rule (pp. 65487-65506). Since the only HAPs of concern at Acme are HF and HCl and the NESHAP JJJJJ standards are health based, Acme believes that compliance with these emission standards reasonably demonstrates that the requirements of the Arkansas Department of Environmental Quality’s (ADEQ’s) Non-Criteria Pollutant Control Strategy (NCPCS) are met.

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

13. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	Mfr’s data	7.6lbPM/PM <sub>10</sub> /MMscf			
	Plant (Ouachita)Testing	0.571lbPM/PM <sub>10</sub> lb/hr			
02	§63, Subpart JJJJJ, Table 1	0.37 lbPM/PM <sub>10</sub> /ton 3.3E-4lbHg/ton			
	Testing at SN-02	1.11 lbSO <sub>2</sub> /ton 0.44lbVOC/ton 4.71lbCO/ton			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		0.1lbNO <sub>x</sub> /ton 1.11E-3lbCl/ton 0.78lbHF/ton			
	AP-42 Table 11.3-6&7	HAPs (varies)			
03	Vendor	0.4 gPM/PM <sub>10</sub> /bhp-hr 0.65 gSO <sub>2</sub> /bhp-hr 1.0gVOC/bhp-hr 8.5gCO/bhp-hr 6.9bNO <sub>x</sub> /bhp-hr			
04 & 05	AP-42 11.19.2-2	0.0012lbPM/ton 0.00054lbPM <sub>10</sub> /ton			

14. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
02	HF, HCl, Cl <sub>2</sub> , PM or non-Hg HAP metal, Hg emissions	As specified	One-time	Part 63, Subpart JJJJ
	Opacity	Method 22	Annual	Facility requested.

15. 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)
None				

16. 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)
03	hours of operation	500 hr/yr	Monthly	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
04, 05	Ground material	75,000 tons/yr	Monthly	N

17. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01	20%	Reg.19.503 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311	Inspector Observation
02	None	40 C.F.R. § 63.8405(b) & § 63 Subpart JJJJ Table 2	Inspector Observation
03	20%	Reg.19.503 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311	Inspector Observation
04,05	7%	40 C.F.R. § 60.675(a, c)	Inspector Observation

18. DELETED CONDITIONS:

Former SC	Justification for removal
	None

19. GROUP A INSIGNIFICANT ACTIVITIES:

The following is a list of Insignificant Activities including revisions by this permit.

Source Name	Group A Cat.	Emissions (tpy)						
		PM/PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs	
							Single	Total
IA-2, Bat Loss Drop	A-13	0.00054						
IA-4, Brick / Refractory Saw	A-13	0.0023704						
IA-8, Additive Storage	A-13	0.00012						
IA-11, Holding Room Exhausts	A-13	0.761244						
Hammermill, Grinding Building	A-13	1.340625						
IA-13, Kiln Car Cleaner	A-13	0.0072						
IA-17, Plant Vacuum System	A-13	0.0029						
IA-18, Primary Crushing	A-13	1.340625						
Road Diesel Tank, 8500 Gallons, 0.0074 psi vapor pressure at STP	A-3			0.00316				
Off Road Diesel Tank, 8500 Gallons, 0.0074 psi vapor pressure at STP	A-3			0.00316				
Waste Oil, 500 Gallons, <0.01 psi vapor pressure at STP	A-3			0.00316				
Hydraulic Reservoir, 600 gallons,	A-3			0				

<0.01 psi vapor pressure at STP								
Hydraulic Reservoir, 80 gallons, <0.01 psi vapor pressure at STP	A-3			0				
Hydraulic Reservoir, 30 gallons, <0.01 psi vapor pressure at STP				0				
Hydraulic Reservoir, 30 gallons, <0.01 psi vapor pressure at STP				0				
Hydraulic Reservoir, 30 gallons, <0.01 psi vapor pressure at STP				0				
Hydraulic Reservoir, 30 gallons, <0.01 psi vapor pressure at STP				0				
Die Lube Reservoir, 250 gallons, <0.01 psi vapor pressure at STP				0				
Vacuum Pump Reservoir, 210 gallons, <0.01 psi vapor pressure at STP				0				
Motor Oil, 55 gallons, <0.01 psi vapor pressure at STP				0				
Gear Oil, 55 gallons, <0.1 psi vapor pressure at STP				0				
Transmission Oil, 55 gallons, <0.01 psi vapor pressure at STP				0				
Antifreeze, 55 gallons, <0.01 psi vapor pressure at STP				0				
Hydraulic Fluid, 55 gallons, <0.01 psi vapor pressure at STP				0				
Lignosulfanate (Additive A) Tanks (3), 9500 gallons, <0.01 psi vapor pressure at STP				0				

20. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

The following is a list of all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
2004-AOP-R3

## APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

## Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Acme Brick Company  
 Permit Number: 2004-AOP-R4  
 AFIN: 16.00002

\$/ton factor	23.93	Annual Chargeable Emissions (tpy)	151.6
Permit Type	Modification	Permit Fee \$	1341.9944

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)	56.08
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		14	19.3	5.3		
PM <sub>10</sub>		14	19.3	5.3	5.3	19.3
PM <sub>2.5</sub>		0	0	0		
SO <sub>2</sub>		35.55	50.2	14.65	14.65	50.2
VOC		5.35	20.2	14.85	14.85	20.2
CO		34.95	214.8	179.85		
NO <sub>x</sub>		14.52	15.1	0.58	0.58	15.1
Hydrogen Fluoride	<input checked="" type="checkbox"/>	23.07	35.1	12.03	12.03	35.1



