

STATEMENT OF BASIS

for issuance of Draft Air Permit No. 2004-AOP-RI

1. PERMITTING AUTHORITY:

Arkansas Department of Pollution Control and Ecology
8001 National Drive
Post Office Box 8913
Little Rock, Arkansas 72219-8913.

2. APPLICANT:

Wheeler Brick Company
2905 Dan Avenue
Jonesboro, AR 72403

3. PERMIT WRITER:

Shane Byrum

4. PROCESS DESCRIPTION AND SIC CODE:

Brick Manufacturing
SIC Code: 3251

5. SUBMITTALS:

October 20, 1999

6. REVIEWER'S NOTES:

This permit is a minor modification which involves increasing the heat input of the kiln from 12.5 to 19 MMBtu/hr. No physical changes were involved. The original heat input was underestimated, however none of the emission calculations change because the emissions are based on brick throughput of 7.7 tons per hours, which remains unchanged.

7. APPLICABLE REGULATIONS:

NSPS (Y/N) No If yes, subpart _____

NESHAP (Y/N) No If yes, subpart _____

PSD applicability (Y/N) No

Is facility on 28 list (100 tpy)? (Y/N) No

Was netting performed to avoid PSD review (Y/N) N/A

Subject to 112 (g) requirements (Y/N) No

Subject to CAM requirements (Y/N) No

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Other applicable regulations Regulation 18 and 19

8. EMISSION CHANGES:

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

Plantwide Permitted Emissions (ton/yr)			
Pollutant	Air Permit 2004-AOP-R0	Air Permit 2004-AOP-R1	Change
PM/PM ₁₀	32.4	32.4	0
PM ₁₀	29.4	29.4	0
SO ₂	26.3	26.3	0
VOC	0.8	0.8	0
CO	40.5	40.5	0
NO _x	11.8	11.8	0
HF	16.63	16.63	0
Non HF Flourides	9.89	9.89	0
HCl	5.74	5.74	0
Manganese	0.44	0.44	0

9. MODELING:

A. Criteria Pollutants

Total criteria pollutant emissions were not modeled, because the total emission rates for all the criteria pollutants as estimated in the calculations did not indicate a potential threat to the National Ambient Air Quality Standards (NAAQS).

B. Non-Criteria Pollutants

1st Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The PAER was deemed by the Department to be the product, in lb/hr, of 0.11 and the Threshold Limit Value (mg/m³), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
HF	2.3	0.253	3.8	No
Non HF Flourides	2.5	0.275	2.26	No
HCl	7.5	0.825	1.31	No
Manganese	0.2	0.022	0.1	No

2nd Tier Screening (PAIL)

SCREEN3 air dispersion modeling was performed on the estimated hourly emissions from the following sources, in order to predict ambient concentrations beyond the property boundary. The Presumptively Acceptable Impact Level (PAIL) for each compound was deemed by the Department to be one one-hundredth of the Threshold Limit Value, as listed by the ACGIH.

Pollutant	(PAIL, µg/m ³) = 1/100 of Threshold Limit Value	Modeled Concentration (µg/m ³)	Pass?
HF	23.0	5.236	Yes
Non HF Flourides	25.0	3.1768	Yes
HCl	75.0	1.80	Yes
Manganese	2.0	0.1377	Yes

10. 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)
01	AP-42	lb/ton of fired bricks	N/A	N/A	

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)
02	AP-42	lb/ton of fired bricks	N/A	N/A	Flouride chemical analysis done on an unfired sample of brick and a Fired sample of brick. Emission factor derived from the difference in the amount of flouride present.
	Flouride Analysis	lb/ton of fired bricks			
03	AP-42	lb/ton of fired bricks	N/A	N/A	AP-42 factors for processing wet material were used due to the moisture content of the clay.

11. 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)**
02	Annual Brick Production	67,450 tons	Monthly	Y

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

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

12. OPACITY

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism (daily observation, weekly, control equipment operation, etc)
02	20	Dept Guidance	Daily Observations

13. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

Steve Patrick, P.E.