

## STATEMENT OF BASIS

for the issuance of Draft Air Permit #: 1672-AR-3

**1. PERMITTING AUTHORITY:**

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

**2. APPLICANT:**

CoorsTek Arkansas Operations  
3315 Boone Road  
Benton, AR 72015

**3. PERMIT WRITER:** Patty Campbell

**4. PROCESS DESCRIPTION AND NAICS CODE:**

NAICS Description: Brick and structural clay tile, structural product, pottery product,  
nonclay refractories  
NAICS Code: 327121, 32331, 327123, 327112, 327125

**5. SUBMITTALS:** February 6, 2007 and April 12, 2007

**6. REVIEWER'S NOTES:**

CoorsTek Arkansas Operations (CoorsTek) owns and operates a high tech ceramic manufacturing plant located at 3315 Boone Road, Benton, Saline County, AR 72015. With this permit modification CoorsTek will replace periodic ceramic kiln #1 (SN-02) with a periodic ceramic kiln (SN-20) from another facility and increase the maximum limit on Aquadag processing from 60,000 pounds to 120,000 pounds per consecutive 12-month period. The replacement kiln (SN-20) is smaller than kiln #1 and is rated at 1.34 MMBtu/hour. Permitted annual emissions associated with the replacement kiln (SN-20) and the increased Aquadag processing are: 0.2 tpy PM, 0.2 tpy PM<sub>10</sub>, 0.2 tpy SO<sub>2</sub>, 1.2 tpy VOC, 3.4 tpy CO, 1.1 tpy NO<sub>x</sub>, and 0.2 tpy NH<sub>3</sub>.

**7. COMPLIANCE STATUS:**

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

None.

**8. APPLICABLE REGULATIONS:**

**PSD Applicability**

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

**PSD Netting**

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

If so, indicate increases and decreases used in netting for PSD purposes only.

Source and Pollutant Specific Regulatory Applicability Regulation [NSPS, NESHAP (Part 61 & Part 63), or PSD only] - None

**9. EMISSION CHANGES:**

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

Plant Wide Permitted Emissions (ton/yr)			
Pollutant	Air Permit #1672-AR-2	Air Permit #1672-AR-3	Change*
PM/PM <sub>10</sub>	5.9	5.7	-0.2
SO <sub>2</sub>	8.9	8.2	-0.7
VOC	49.8	45.5	-4.3
CO	35.8	23.8	-12.0
NO <sub>x</sub>	15.5	11.7	-3.8
Ammonia	0.2	0.4	0.2
Glycol Butyl Ether	1.0	1.0	0.0

\* Emissions decreased because the new replacement kiln (SN-20) was smaller than the removed kiln (SN-02).

**10. MODELING:**

**Criteria Pollutants**

Examination of the source type, location, plot plan, land use, emission parameters, and other available information indicate that modeling is *not* warranted at this time.

**11. 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 Department deemed PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value (mg/m<sup>3</sup>), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m <sup>3</sup> )	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
Glycol Butyl Ether	96.67	10.63	1.0	Yes

**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)
01 & 20	Stack testing, dated 10/14-18/1996	18 lb PM <sub>10</sub> /MMscf 18 lb PM/MMscf 31 lb SO <sub>2</sub> /MMscf 263 lb VOC/MMscf 735 lb CO/MMscf 232 lb NO <sub>x</sub> /MMscf	NA	NA	Periodic Kilns Emission factors are from an actual stack test in 1996 at Colorado facility
03	Mass Balance		NA	NA	
04, 05, 06, & 07	Stack Testing	79 lb PM <sub>10</sub> /MMscf 79 lb PM/MMscf 148 lb SO <sub>2</sub> /MMscf 370 lb VOC/MMscf 239 lb CO/MMscf	NA	NA	Tunnel Kilns Emission factors are higher than AP-42 because of the VOC

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)
		152 lb NO <sub>x</sub> /MMscf			contained in green product burns during the sintering process
08	Mass Balance		NA	NA	
10-19	Mass Balance		Baghouse	99.99%	Mass balance calculated X control efficiency

**13. TESTING REQUIREMENTS:**

None.

**14. MONITORING OR CEMS:**

None.

**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)**
03	Aquadag	120,000 lbs /rolling 12 months	Monthly	N
08	SC30	625,000 lbs (w/no more than 7% by wt organic binder) /rolling 12 months	Monthly	N
09	BD20	37,950 lbs (w/less than 5% by wt of glycol butyl ethers	Monthly	N

\* 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)
01, 03, 04, 05, 06, 07, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	5	§18.501	Observation

**17. DELETED CONDITIONS:**

No Specific Condition was deleted from the prior permit.

**18. VOIDED, SUPERSEDED OR SUBSUMED PERMITS:**

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

Permit #
1672-AR-2

**19. CONCURRENCE BY:**

The following Supervisor concurs with the permitting decision:

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David Triplett, P.E.