

STATEMENT OF BASIS

for the issuance of Draft Air Permit # 1672-AR-2

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, Arkansas 72015

3. PERMIT WRITER: David Triplett

4. PROCESS DESCRIPTION AND NAICS:

NAICS Description: Brick and structural clay tile (except slumped brick), structural clay product, pottery product NEC, and nonclay refractories.
NAICS: 327121, 32331, 327123, 327112, and 327125.

5. SUBMITTALS: May 28, 2004.

REVIEWER'S NOTES:

This permit modification is issued to the facility in order to allow for the following changes:

- The installation of new milling operations to include a new press and sandblasting operations.
- The installation of four (4) new baghouses for the purposes of emissions control on the new milling operations. Three of the new baghouses (SN-16, SN-17, SN-18) will be Torit baghouses with 5,000 cfm blowers. These units will be similar to the existing SN-12, SN-13, and SN-14 baghouses. The fourth new baghouse will utilize a 500 cfm blower (SN-19). This unit is similar to the existing SN-10 and SN-11 baghouses.
- The facility will also install one (1) additional electric vacuum furnace, to be included in SN-08.
- The facility will also be increasing the amount of SC30 binder allowable for use in a 12-month period. This limit is increased from 70,000 lb/yr to 625,000 lb/yr. The allowable VOC content of the binder remains unchanged at 7% by weight.

With these changes, total permitted emissions of particulate matter (PM/PM₁₀) will increase by 0.4 tpy, and permitted emissions of volatile organic compounds (VOC) will increase by 19.4 tpy.

6. COMPLIANCE STATUS:

There are no current enforcement actions against this facility.

7. 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?	Y/N	N
≥ 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.

8. EMISSION CHANGES:

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

Plant Wide Permitted Emissions (ton/yr)			
Pollutant	Air Permit [Previous Permit, 1672-AR-1]	Air Permit [Permit 1672-AR-2]	Change
PM/PM ₁₀	5.5	5.9	+0.4
SO ₂	8.9	8.9	0
VOC	30.4	49.8	+19.4
CO	35.8	35.8	0

Plant Wide Permitted Emissions (ton/yr)			
Pollutant	Air Permit [Previous Permit, 1672-AR-1]	Air Permit [Permit 1672-AR-2]	Change
NO _x	15.5	15.5	0
Ammonia	0.2	0.2	0
Glycol Butyl Ether	1.0	1.0	0

9. MODELING:

10. 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/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?
Glycol Butyl Ether	96.67	10.63	1.0	Yes

11. 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 and 02	Stack testing	18 lb PM ₁₀ per MM cf 18 lb PM per MM cf 31 lb SO ₂ per MM cf	N.A.	-	Periodic Kilns. Emissions factor are higher than AP-42 because of the VOC contained in the green

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)
		263 lbVOC per MM cf 735 lb CO per MM cf 232 lb NO _x per MM cf			product burned during the sintering process.
03	Mass Balance	-	N.A.	-	-
04, 05, 06, and 07	Stack testing	79 lb PM ₁₀ per MM cf 79 lb PM per MM cf 148 lb SO ₂ per MM cf 370 lbVOC per MM cf 239 lb CO per MM cf 152 lb NO _x per MM cf	N.A.	-	Tunnel kilns. Emissions factor are higher than AP-42 because of the VOC contained in the green product burned during the sintering process.
08	Mass Balance	-	N.A.	-	-
10 -19	Mass Balance	-	Baghouse	99.99%	Mass balance calculated then multiplied by control efficiency.

12. TESTING REQUIREMENTS:

None.

13. MONITORING OR CEMS

None.

14. 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	60,000 pounds per year	Monthly	N
08	SC30	625,000 pounds per year (no more than 7 wt% organic binder)	Monthly	N
09	BD-20	37,950 pounds per year (less than 5 wt% of glycol butyl ether)	Monthly	N

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

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

15. OPACITY

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism (daily observation, weekly, control equipment operation, etc)
01, 02, 03, 04, 05, 06, 07, and 10 – 19.	5%	Department Guidance.	Inspector's observation.

16. DELETED CONDITIONS:

The previous permit contained the following deleted Specific Conditions.

Former SC	Justification for removal
N/A	No former Specific Conditions were deleted

17. VOIDED, SUPERSEDED OR SUBSUMED PERMITS

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

Permit #
1672-AR-1

18. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

Lyndon Poole, P.E.