

Permit #:1986-AR-4
AFIN: 04-00540
Page 1 of 8

STATEMENT OF BASIS

for the issuance of Draft Air Permit # 1986-AR-4

PERMITTING AUTHORITY:

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

APPLICANT:

Tyson Foods, Inc. / Cobb Feed Mill
2125 Country Club Road
Siloam Springs, Arkansas 72761

PERMIT WRITER:

Paul Osmon

PROCESS DESCRIPTION AND SIC CODE:

SIC Description: Prepared Feed and Feed Ingredients for Animals and Fowl
SIC Code: 2048

SUBMITTALS:

October 28, 2005

REVIEWER'S NOTES:

This permit modification raises the allowed concentrations of formaldehyde in the feed additive solution to 37 per cent.

COMPLIANCE STATUS:

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

There are no known active/pending enforcement actions and recent compliance activities.

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? N Permit#

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

 ≥ 250 tpy all other Y/N

PSD Netting

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

Source and Pollutant Specific Regulatory Applicability

| Source | Pollutant | Regulation [NSPS, NESHAP (Part 61 & Part 63), or PSD <u>only</u>] |
|--------|--|--|
| SN-07 | NO _x , SO ₂ (record keeping only) | NSPS Subpart Dc |

EMISSION CHANGES:

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

| Plant Wide Permitted Emissions (ton/yr) | | | |
|---|-----------------------|-----------------------|--------|
| Pollutant | Air Permit #1986-AR-3 | Air Permit #1986-AR-4 | Change |
| PM | 17.6 | 17.6 | 0 |
| PM ₁₀ | 10.0 | 10.0 | 0 |
| SO ₂ | 0.1 | 0.1 | 0 |
| VOC | 4.4 | 4.4 | 0 |
| CO | 3.7 | 3.7 | 0 |
| NO _x | 4.7 | 4.7 | 0 |
| Formaldehyde | 4.1 | 4.5 | 0.4 |

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.

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? |
|-------------|--------------------------|-------------------------|----------------|-------|
| Formaldehyd | 1.5 | 0.165 | 2.9 | N |

| Pollutant | TLV (mg/m ³) | PAER (lb/hr) = 0.11*TLV | Proposed lb/hr | Pass? |
|-----------|-----------------------------|----------------------------|----------------|-------|
| e | | | | |

2nd Tier Screening (PAIL)

ISCST3 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? |
|--------------|--|---|-------|
| Formaldehyde | 15 | 2.9 | Y |

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 | PM – 0.17 PM ₁₀ – 0.025 | Baghouse | 90% | Emission factors are in lb/ton and controlled |
| 02 | | PM/ PM ₁₀ – 0.02 | Baghouse | 90% | Emission factors in gr/dscf and controlled |
| 03 | | PM/ PM ₁₀ – 0.02 | Baghouse | 90% | Emission factors in gr/dscf and controlled |
| 04 | | PM/ PM ₁₀ – 0.012 | Baghouse | 90% | Emission factors in lb/ton and controlled |

| | | | | | |
|----------|---------|--|---------|----|--|
| 05 | AP-42 | PM – 0.15 PM ₁₀ – 0.075 | Cyclone | | Emission factors are in lb/ton and controlled |
| 06 | | PM – 0.0033 PM ₁₀ – 0.0008 | None | NA | Emission factors are in lb/ton and uncontrolled |
| 07 | | PM ₁₀ – 7.6 SO ₂ – 0.6 VOC – 5.5 CO – 84 NO _x - 100 | None | NA | Emission factors are in lb/10 ⁶ cubic feet and uncontrolled |
| Facility | Testing | 0.001 | None | NA | Emission factor is in lbs formaldehyde emitted per lb feed produced. |

TESTING REQUIREMENTS:

This permit requires stack testing of the following sources.

| SN(s) | Pollutant | Test Method | Test Interval | Justification For Test Requirement |
|--|-----------|-------------|---------------|------------------------------------|
| No testing requirements in this permit | | | | |

MONITORING OR CEMS

The permittee must monitor the following parameters with CEMs or other monitoring equipment (temperature, pressure differential, etc), frequency of recording and the need for records included in any annual, semiannual or other reports.

| SN | Parameter or Pollutant to be Monitored | Method of Monitoring (CEM, Pressure Gauge, etc) | Frequency* | Report (Y/N)** |
|---------------------------------------|--|---|------------|----------------|
| No monitoring or CEMS in this permit. | | | | |

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

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

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)** |
|----------|--------------------|---------------------------------------|------------|----------------|
| Facility | Feed produced | 200,000 tons per 12 month period | Monthly | N |
| 07 | Gas fuel Usage | None Subpart Dc Requirement | Monthly | N |
| Facility | Formaldehyde Usage | 138,100 gallons 37 % aqueous solution | Monthly | N |

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

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

OPACITY

| SN | Opacity % | Justification (NSPS limit, Dept. Guidance, etc) | Compliance Mechanism (daily observation, weekly, control equipment operation, etc) |
|---------------|-----------|---|--|
| 05, 06 | 20% | Department Guidance | Control Equipment Operation |
| 01,02, 03, 04 | 10% | Department Guidance | Control Equipment Operation |
| 07 | 5% | Department Guidance | Natural Gas Fuel |

DELETED CONDITIONS:

The previous permit contained the following deleted Specific Conditions.

| Former SC | Justification for removal |
|-----------|---------------------------|
| | No S.C.'s removed |

VOIDED, SUPERSEDED OR SUBSUMED PERMITS

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

| |
|-----------|
| Permit # |
| 1986-AR-3 |

Permit #:1986-AR-4
AFIN: 04-00540
Page 8 of 8

CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

Thomas Rheume, P.E.