

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1986-AR-5 AFIN: 04-00540

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Cobb-Vantress, Inc. - Siloam Springs Feed Mill  
2125 Country Club Road  
Siloam Springs, Arkansas 72761

3. PERMIT WRITER:

Ann Sudmeyer

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Other Animal Food Manufacturing  
NAICS Code: 311119

5. SUBMITTALS:

| Date of Application | Type of Application<br>(New, Renewal, Modification,<br>Deminimis/Minor Mod, or<br>Administrative Amendment) | Short Description of Any Changes<br>That Would Be Considered New or<br>Modified Emissions |
|---------------------|---|---|
| 10/2/2014           | Modification  | Permit manganese emissions since<br>subject to 40 CFR Part 63, Subpart<br>DDDDDDD         |

6. REVIEWER'S NOTES:

Tyson Foods, Inc. owns a feed mill located at 2125 Country Club Road in Siloam Springs and it will be operated by its wholly owned subsidiary, Cobb-Vantress. This permitting action is necessary to:

1. Permit the applicable requirements of 40 CFR Part 63, Subpart DDDDDDD – *National Emission Standards for Hazardous Air Pollutants for Area Sources: Prepared Feeds Manufacturing*;
2. Update language throughout the permit; and

3. Add a specific condition for replacement cyclones.

The total annual permitted emission rate limits increases associated with this modification include: 0.1 tons per year (tpy) PM/PM<sub>10</sub>, 0.4 tpy VOC, and 0.03 tpy manganese.

7. COMPLIANCE STATUS:

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

The inspection conducted on February 10, 2014 indicated the facility to be in compliance at that time. There are currently no enforcement actions against this facility.

8. PSD APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N

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, explain why this permit modification is not PSD.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

| Source   | Pollutant   | Regulation<br>(NSPS, NESHAP or PSD) |
|----------|---|-------------------------------------|
| SN-07    | NO <sub>x</sub> , SO <sub>2</sub><br>(recordkeeping only) | NSPS Subpart Dc                     |
| Facility | Manganese   | NESHAP DDDDDDD                      |

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. AMBIENT AIR EVALUATIONS:

a) Reserved.

b) Non-Criteria Pollutants:

The non-criteria pollutants listed below were evaluated. Based on Department procedures for review of non-criteria pollutants, emissions of all other non-criteria pollutants are below thresholds of concern or were not modified with this permitting action.

1<sup>st</sup> Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The Department has deemed the PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value ( $\text{mg}/\text{m}^3$ ), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

| Pollutant | TLV ( $\text{mg}/\text{m}^3$ ) | PAER (lb/hr) = $0.11 \times \text{TLV}$ | Proposed lb/hr | Pass? |
|-----------|--------------------------------|---|----------------|-------|
| Manganese | 0.02                           | 0.0022                                  | 0.0015         | Y     |

2<sup>nd</sup> Tier Screening (PAIL)

AERMOD 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 has been deemed by the Department to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

| Pollutant | PAIL ( $\mu\text{g}/\text{m}^3$ ) = 1/100 of Threshold Limit Value | Modeled Concentration ( $\mu\text{g}/\text{m}^3$ ) | Pass? |
|-----------|--|--|-------|
| N/A       |  |  |       |

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

A.C.A. §8-3-103 requires hydrogen sulfide emissions to meet specific ambient standards. Many sources are exempt from this regulation, refer to the Arkansas Code for details.

Is the facility exempt from the H<sub>2</sub>S Standards N/A

If exempt, explain: \_\_\_\_\_

| Pollutant        | Threshold value  | Modeled Concentration (ppb) | Pass? |
|------------------|--|-----------------------------|-------|
| H <sub>2</sub> S | 20 parts per million (5-minute average*)               | N/A                         | N/A   |
|                  | 80 parts per billion (8-hour average) residential area | N/A                         | N/A   |
|                  | 100 parts per billion                                  | N/A                         | N/A   |

| Pollutant | Threshold value                      | Modeled Concentration (ppb) | Pass? |
|-----------|--------------------------------------|-----------------------------|-------|
|           | (8-hour average) nonresidential area |                             |       |

\*To determine the 5-minute average use the following equation

$$C_p = C_m (t_m/t_p)^{0.2} \text{ where}$$

$C_p$  = 5-minute average concentration

$C_m$  = 1-hour average concentration

$t_m$  = 60 minutes

$t_p$  = 5 minutes

12. CALCULATIONS:

| SN | Emission Factor Source (AP-42, testing, etc.) | Emission Factor (lb/ton, lb/hr, etc.)   | Control Equipment | Control Equipment Efficiency | Comments  |
|----|---|---|-------------------|------------------------------|---|
| 01 | AP-42   | PM – 0.17 lb/ton<br>PM <sub>10</sub> – 0.025 lb/ton   | Baghouse          | 90%                          | Emission factors are controlled   |
| 02 |   | PM/PM <sub>10</sub> – 0.02 gr/dscf  | Baghouse          | 90%                          | Emission factors are controlled   |
| 03 |   | PM/PM <sub>10</sub> – 0.02 gr/dscf  | Baghouse          | 90%                          | Emission factors are controlled   |
| 04 |   | PM/PM <sub>10</sub> – 0.012 lb/ton  | Baghouse          | 90%                          | Emission factors are controlled   |
| 05 |   | PM – 0.15 lb/ton<br>PM <sub>10</sub> – 0.075 lb/ton   | Cyclone           |                              | Emission factors are controlled<br>0.075% of total feed is trace mineral and 24% is manganese   |
| 06 |   | PM – 0.0033 lb/ton<br>PM <sub>10</sub> – 0.0008 lb/ton  | None              | N/A                          | Emission factors are uncontrolled<br>0.075% of total feed is trace mineral and 24% is manganese |
| 07 |   | PM <sub>10</sub> – 7.6 lb/10 <sup>6</sup> ft <sup>3</sup><br>SO <sub>2</sub> – 0.6 lb/10 <sup>6</sup> ft <sup>3</sup><br>VOC – 5.5 lb/10 <sup>6</sup> ft <sup>3</sup> | None              | N/A                          | Emission factors are uncontrolled   |

| SN       | Emission Factor Source (AP-42, testing, etc.) | Emission Factor (lb/ton, lb/hr, etc.)  | Control Equipment | Control Equipment Efficiency | Comments  |
|----------|---|--|-------------------|------------------------------|---|
|          |   | CO – 84 lb/10 <sup>6</sup> ft <sup>3</sup><br>NO <sub>x</sub> – 100 lb/10 <sup>6</sup> ft <sup>3</sup> |                   |                              |   |
| 08       |   | PM – 0.061 lb/ton<br>PM <sub>10</sub> – 0.034 lb/ton   | None              | N/A                          | Emission factors are uncontrolled<br><br>0.075% of total feed is trace mineral and 24% is manganese |
| Facility | Testing                                       | Formaldehyde – 0.001 lb emitted/lb feed produced   | None              | N/A                          |   |

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

| SN  | Pollutants | Test Method | Test Interval | Justification |
|-----|------------|-------------|---------------|---------------|
| N/A |            |             |               |               |

14. 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) |
|-----|--|------------------------------------|-----------|--------------|
| N/A |  |                                    |           |              |

15. 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) |
|----------|---------------|----------------------------------|-----------|--------------|
| Facility | Grain         | 200,000 tons per 12 month period | Monthly   | N            |

| SN       | Recorded Item   | Permit Limit  | Frequency              | Report (Y/N)           |
|----------|---|---|------------------------|------------------------|
| 07       | Gas Fuel Usage  | None<br>Subpart Dc Requirement                              | Monthly                | N                      |
| Facility | Formaldehyde Usage  | 138,100 gallons<br>37% aqueous solution per 12 month period | Monthly                | N                      |
| Facility | Subpart DDDDDDD Notifications, Annual Compliance Certifications, Monthly inspections of device used to reduce fugitive emissions from bulk loading, Quarterly inspections of cyclone, Weekly visual inspection of cyclone<br>§63.11624(c) | N/A   | As Required by Subpart | As Required by Subpart |

16. OPACITY:

| SN                 | Opacity | Justification for limit | Compliance Mechanism        |
|--------------------|---------|-------------------------|-----------------------------|
| 01, 02, 03, 04, 08 | 10%     | Department Guidance     | Control Equipment Operation |
| 05, 06             | 20%     | Department Guidance     | Control Equipment Operation |
| 07                 | 5%      | Department Guidance     | Natural Gas Fuel            |

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17. DELETED CONDITIONS:

| Former SC | Justification for removal |
|-----------|---------------------------|
| N/A       |                           |

18. GROUP A INSIGNIFICANT ACTIVITIES:

| Source Name | Group A Category | Emissions (tpy)     |                 |     |    |                 |        |       |
|-------------|------------------|---------------------|-----------------|-----|----|-----------------|--------|-------|
|             |                  | PM/PM <sub>10</sub> | SO <sub>2</sub> | VOC | CO | NO <sub>x</sub> | HAPs   |       |
|             |                  |                     |                 |     |    |                 | Single | Total |
| N/A         |                  |                     |                 |     |    |                 |        |       |

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

| Permit #  |
|-----------|
| 1986-AR-4 |





## APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

## Fee Calculation for Minor Source

Revised 08-25-14

Cobb-Vantress, Inc. - Siloam Springs  
 Feed Mill  
 Permit #: 1986-AR-5  
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|                                   |                          |  |                   |                   |
|-----------------------------------|--------------------------|--|-------------------|-------------------|
|                                   |                          |  | <b>Old Permit</b> | <b>New Permit</b> |
| \$/ton factor                     | 23.89                    | Permit Predominant Air Contaminant       | 17.6              | 17.7              |
| Minimum Fee \$                    | 400                      | Net Predominant Air Contaminant Increase | 0.1               |                   |
| Minimum Initial Fee \$            | 500                      |  |                   |                   |
| Check if Administrative Amendment | <input type="checkbox"/> | Permit Fee \$                            | 400               |                   |
|                                   |                          | Annual Chargeable Emissions (tpy)        | 17.7              |                   |

| Pollutant (tpy)  | Old Permit | New Permit | Change |
|------------------|------------|------------|--------|
| PM               | 17.6       | 17.7       | 0.1    |
| PM <sub>10</sub> | 10         | 10.1       | 0.1    |
| SO <sub>2</sub>  | 0.1        | 0.1        | 0      |
| VOC              | 4.4        | 4.8        | 0.4    |
| CO               | 3.7        | 3.7        | 0      |
| NO <sub>x</sub>  | 4.7        | 4.7        | 0      |
| Formaldehyde     | 4.5        | 4.5        | 0      |
| Manganese        | 0          | 0.03       | 0.03   |