

## STATEMENT OF BASIS

For the issuance of Air Permit # 1986-AR-6 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:

Kyle Crane

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Other Animal Food Manufacturing  
NAICS Code: 311119

5. ALL SUBMITTALS:

The following is a list of ALL permit applications included in this permit revision.

Date of Application	Type of Application (New, Renewal, Modification, Deminimis/Minor Mod, or Administrative Amendment)	Short Description of Any Changes That Would Be Considered New or Modified Emissions
5/21/2018	Deminimis	Installation of central vacuum system (SN-09) and addition of filter bag system to truck loadout (SN-06)
5/21/2018	Modification	Addition of methanol emissions to SN-05 and SN-06

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:

- Install a truck loadout bag filter at SN-06

- Install a central vacuum system as SN-09
- Add methanol emissions to SN-05 and SN-06
- Add a formaldehyde tank as an A-3 insignificant activity

The permit's general conditions were also updated. Annual permitted emissions increase by 0.2 tons per year (tpy) of PM and 0.1 tpy of PM<sub>10</sub>. Annual permitted emissions decrease by 1.6 tpy of VOC and 0.521 tpy of Total HAP.

Dispersion modeling was performed with Lakes Environmental AERMOD View 9.5.0.

7. COMPLIANCE STATUS:

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

The facility was last inspected on March 15, 2018 and was found to be in compliance. ECHO shows "Unknown" and "Under Development" for Clean Air Act.

8. PSD/GHG APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N  
If yes, were GHG emission increases significant? 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 for 8(b), explain why this permit modification is not PSD.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

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

10. PERMIT SHIELD – TITLE V PERMITS ONLY:

Did the facility request a permit shield in this application? N

(Note - permit shields are not allowed to be added, but existing ones can remain, for minor modification applications or any Regulation 18 requirement.)

If yes, are applicable requirements included and specifically identified in the permit? N  
If not, explain why.

For any requested inapplicable regulation in the permit shield, explain the reason why it is not applicable in the table below.

Source	Inapplicable Regulation	Reason
N/A		

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

12. AMBIENT AIR EVALUATIONS:

The following are results for ambient air evaluations or modeling.

a) NAAQS

A NAAQS evaluation is not required under the Arkansas State Implementation Plan, National Ambient Air Quality Standards, Infrastructure SIPs and NAAQS SIP per Ark. Code Ann. § 8-4-318, dated March 2017 and the ADEQ Air Permit Screening Modeling Instructions.

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.

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 (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?
Formaldehyde	0.37	0.0407	0.40	No
Manganese	0.02	0.0022	0.005	No
Methanol	262.09	28.83	0.80	Yes

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?
Formaldehyde	15	9.12	Yes
Manganese	0.2	0.07048	Yes

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 Y  
 If exempt, explain: The facility does not emit H<sub>2</sub>S

13. 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 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 PM <sub>10</sub> – 0.075 lb/ton	Cyclone		Emission factors are controlled  0.075% of total feed is trace mineral and 24% is

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
					manganese
06		PM – 0.0033 lb/ton PM <sub>10</sub> – 0.0008 lb/ton	None	N/A	Emission factors are uncontrolled  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> SO <sub>2</sub> – 0.6 lb/10 <sup>6</sup> ft <sup>3</sup> VOC – 5.5 lb/10 <sup>6</sup> ft <sup>3</sup> CO – 84 lb/10 <sup>6</sup> ft <sup>3</sup> NO <sub>x</sub> – 100 lb/10 <sup>6</sup> ft <sup>3</sup> Total HAP – 1.88 lb/10 <sup>6</sup> ft <sup>3</sup>	None	N/A	Emission factors are uncontrolled
08		PM – 0.061 lb/ton PM <sub>10</sub> – 0.034 lb/ton	None	N/A	Emission factors are uncontrolled  0.075% of total feed is trace mineral and 24% is manganese
09	Manufacturer Data	PM/ PM <sub>10</sub> – 0.00015 lb/ton Mn – 0.626 lb/ton	Baghouse on vacuum exhaust	99.93%	
Facility	Testing	Formaldehyde – 0.001 lb emitted/lb feed produced	None	N/A	

14. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
N/A				

15. 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				

16. 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	Finished Feed	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 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  §63.11624(c)	N/A	As Required by Subpart	As Required by Subpart

17. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01, 02, 03, 04, 08, 09	10%	Department Guidance	Control Equipment Operation
05, 06	20%	Department Guidance	Control Equipment Operation
07	5%	Department Guidance	Natural Gas Fuel

18. DELETED CONDITIONS:

Former SC	Justification for removal
	None

19. GROUP A INSIGNIFICANT ACTIVITIES:

The following is a list of Insignificant Activities including revisions by this permit.

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
Formaldehyde Tank	A-3	-	-	1.56	-	-	1.56	1.56

20. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

The following is a list of all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
1986-AR-5



## APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

## Fee Calculation for Minor Source

Revised 03-11-16

Facility Name: Cobb-Vantress, Inc. -  
 Siloam Springs Feed Mill  
 Permit Number: 1986-AR-6  
 AFIN: 04-00540

			Old Permit	New Permit
\$/ton factor	23.93	Permit Predominant Air Contaminant	17.7	17.9
Minimum Fee \$	400	Net Predominant Air Contaminant Increase	0.2	
Minimum Initial Fee \$	500			
Check if Administrative Amendment	<input type="checkbox"/>	Permit Fee \$	400	
		Annual Chargeable Emissions (tpy)	17.9	

Pollutant (tpy)	Old Permit	New Permit	Change
PM	17.7	17.9	0.2
PM <sub>10</sub>	10.1	10.2	0.1
PM <sub>2.5</sub>	0	0	0
SO <sub>2</sub>	0.1	0.1	0
VOC	4.8	3.2	-1.6
CO	3.7	3.7	0
NO <sub>x</sub>	4.7	4.7	0
Formaldehyde	4.5	1.2	-3.3
Manganese	0.03	0.009	-0.021
Methanol	0	2.8	2.8
Total HAP	4.53	4.009	-0.521