Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007AI

Administrative Information

___ Section AI.1: Source Information

___ Section AI.2: Applicant Information

___ Section AI.3: Owner Information

___ Section AI.4: Type of Application

___ Section AI.5: Other Required Information

___ Section AI.6: Signature Block

___ Section AI.7: Notes, Comments, and Explanations

Additional Documentation

___ Additional Documentation attached

Source Name: **Cobb-Vantress Feed Mill**

KY EIS (AFS) #: **21- 053-00007**

Permit #: **S-13-100-R3**

Agency Interest (AI) ID: **119204**

Date: **2-Jun-23**

Section AI.1: Source Information

Physical Location Address:	**Street:**	1475 Burkesville Road				
	City:	Albany	**County:**	Clinton	**Zip Code:**	42602
Mailing Address:	**Street or P.O. Box:**	1475 Burkesville Road				
	City:	Albany	**State:**	KY	**Zip Code:**	42602

Standard Coordinates for Source Physical Location

Longitude: -85.16188 (decimal degrees) **Latitude:** 36.69995 (decimal degrees)

Primary (NAICS) Category: Other Animal Feed Manufacturing **Primary NAICS #:** 311119

Classification (SIC) Category: Prepared Feeds and Feed Ingredients **Primary SIC #:** 2048

Briefly discuss the type of business conducted at this site: Feed Mill

Description of Area Surrounding Source: ☑ Rural Area ☐ Industrial Park ☐ Residential Area ☐ Urban Area ☐ Industrial Area ☐ Commercial Area

Is any part of the source located on federal land? ☐ Yes ☑ No

Number of Employees: 15

Approximate distance to nearest residence or commercial property: 200 yards

Property Area: 17 Acres

Is this source portable? ☐ Yes ☑ No

What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?

NPDES/KPDES:	☑ Currently Hold	☐ Need	☐ N/A
Solid Waste:	☐ Currently Hold	☐ Need	☑ N/A
RCRA:	☐ Currently Hold	☐ Need	☑ N/A
UST:	☐ Currently Hold	☐ Need	☑ N/A

Type of Regulated Waste Activity:

☐ Mixed Waste Generator ☑ Generator ☐ Recycler ☐ Other: _____

☐ U.S. Importer of Hazardous Waste ☐ Transporter ☐ Treatment/Storage/Disposal Facility ☐ N/A

Section AI.2: Applicant Information

Applicant Name: Cobb Vantress Feed Mill - Albany KY

Title: (if individual)

Mailing Address:
Street or P.O. Box: 1475 Burkesville Road
City: Albany **State:** KY **Zip Code:** 42602

Email: (if individual) NA

Phone:

Technical Contact

Name: Rechelle Hollowaty

Title: Sr. Environmental Manager

Mailing Address:
Street or P.O. Box: 7136 Harrison Hill Trail
City: Chanhassen **State:** MN **Zip Code:** 55317

Email: Rechelle Hollowaty@tyson.com

Phone: (479) 290-2506

Air Permit Contact for Source

Name: Lauren Luttrell

Title: EHS Manager

Mailing Address:
Street or P.O. Box: 1475 Burkesville Road
City: Albany **State:** KY **Zip Code:** 42602

Email: Lauren.Luttrell@cobbvantress.com

Phone: (606) 340-2705

Section AI.3: Owner Information

☑ **Owner same as applicant**

Name:

Title:

Mailing Address: **Street or P.O. Box:**

City: **State:** **Zip Code:**

Email:

Phone:

List names of owners and officers of the company who have an interest in the company of 5% or more.

Name	Position
Information submitted in previous applications has not changed	

Section AI.4: Type of Application

Current Status: ☐ Title V ☐ Conditional Major ☑ State-Origin ☐ General Permit ☐ Registration ☐ None

Requested Action: *(check all that apply)*

☐ Name Change	☐ Initial Registration	☐ Significant Revision	☐ Administrative Permit Amendment
☑ Renewal Permit	☐ Revised Registration	☐ Minor Revision	☐ Initial Source-wide OperatingPermit
☐ 502(b)(10)Change	☐ Extension Request	☐ Addition of New Facility	☐ Portable Plant Relocation Notice
☐ Revision	☐ Off Permit Change	☐ Landfill Alternate Compliance Submittal	☑ Modification of Existing Facilities
☐ Ownership Change	☐ Closure		

Requested Status: ☐ Title V ☑ Conditional Major ☐ State-Origin ☐ PSD ☐ NSR ☐ Other: _____

Is the source requesting a limitation of potential emissions? ☑ Yes ☐ No

Pollutant:	Requested Limit:	Pollutant:	Requested Limit:
☑ Particulate Matter	less than 100 tpy	☑ Single HAP	less than 10 tpy
☑ Volatile Organic Compounds (VOC)	less than 100 tpy	☑ Combined HAPs	less than 25 tpy
☐ Carbon Monoxide		☐ Air Toxics (40 CFR 68, Subpart F)	
☐ Nitrogen Oxides		☐ Carbon Dioxide	
☐ Sulfur Dioxide		☐ Greenhouse Gases (GHG)	
☐ Lead		☐ Other	

For New Construction:

Proposed Start Date of Construction: *(MM/YYYY)* _____ **Proposed Operation Start-Up Date:** *(MM/YYYY)* _____

For Modifications:

Proposed Start Date of Modification: *(MM/YYYY)* _____ **Proposed Operation Start-Up Date:** *(MM/YYYY)* _____

Applicant is seeking coverage under a permit shield. ☑ **Yes** ☐ **No** **Identify any non-applicable requirements for which permit shield is sought on a separate attachment to the application.**

Section AI.5 Other Required Information

Indicate the documents attached as part of this application:

- ☐ DEP7007A Indirect Heat Exchangers and Turbines
- ☑ DEP7007B Manufacturing or Processing Operations
- ☐ DEP7007C Incinerators and Waste Burners
- ☐ DEP7007F Episode Standby Plan
- ☐ DEP7007J Volatile Liquid Storage
- ☐ DEP7007K Surface Coating or Printing Operations
- ☑ DEP7007L Mineral Processes
- ☐ DEP7007M Metal Cleaning Degreasers
- ☑ DEP7007N Source Emissions Profile
- ☐ DEP7007P Perchloroethylene Dry Cleaning Systems
- ☐ DEP7007R Emission Offset Credit
- ☐ DEP7007S Service Stations
- ☐ DEP7007T Metal Plating and Surface Treatment Operations
- ☑ DEP7007V Applicable Requirements and Compliance Activities
- ☐ DEP7007Y Good Engineering Practice and Stack Height Determination
- ☐ DEP7007AA Compliance Schedule for Non-complying Emission Units
- ☐ DEP7007BB Certified Progress Report
- ☑ DEP7007CC Compliance Certification
- ☐ DEP7007DD Insignificant Activities
- ☐ DEP7007EE Internal Combustion Engines
- ☐ DEP7007FF Secondary Aluminum Processing
- ☐ DEP7007GG Control Equipment
- ☐ DEP7007HH Haul Roads
- ☐ Confidentiality Claim
- ☐ Ownership Change Form
- ☐ Secretary of State Certificate
- ☐ Flowcharts or diagrams depicting process
- ☐ Digital Line Graphs (DLG) files of buldings, roads, etc.
- ☐ Site Map
- ☐ Map or drawing depicting location of facility
- ☐ Safety Data Sheet (SDS)
- ☐ Emergency Response Plan
- ☑ Other: _____

Section AI.6: Signature Block

I, the undersigned, hereby certify under penalty of law, that I am a responsible official*, and that I have personally examined, and am familiar with, the information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.

Randy Harrington

Authorized Signature

6-2-2023

Date

Randy Harrington

Type or Printed Name of Signatory

Senior Feed Mill Manager

Title of Signatory

*Responsible official as defined by 401 KAR 52:001.

September 14, 2022

Authorization to Sign/Submit Environmental Documents

To Whom It May Concern,

Pursuant to my authority as a corporate officer of Cobb-Vantress Inc., I hereby authorize the facility manager to sign as a 'Responsible Corporate Official", "Cognizant Official", or a capacity substantially similar thereto, on all reports, applications and documents relating to the Environmental Programs at the facilities listed below for which the signature of a Responsible Corporate Official, Cognizant Official, or person in a capacity substantially similar thereto is required.

The facilities covered under this authorization include:

Kentucky

Kentucky R&D Farm

Kentucky Production

Kentucky Hatchery

Kentucky Feed Mill

Tennessee

Tennessee Pedigree Complex

Tennessee Hatchery

Tennessee Production

Questions about the foregoing may be directed to Adam Prater, Environmental Health and Safety Director, Cobb-Vantress Inc. 479-549-2844

Company Officer:

Ray Ables

Vice President Live Production North America

Cobb-Vantress LLC.

X Ray Ables

Section AI.7: Notes, Comments, and Explanations
Included in this application submittal is the Delegated Signatory Authority Letter as well as the PTE calculations.
List of Owners has not changed since that last submittal and thus is not included in this renewal.

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DEP7007B

Manufacturing or Processing Operations

___ Section B.1: Process Information
___ Section B.2: Materials and Fuel Information
___ Section B.3: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI, DEP7007N, DEP7007V, and DEP7007GG.
___ Attach a flow diagram
___ Attach SDS

Source Name: **Cobb-Vantress Feed Mill**
KY EIS (AFS) #: **21- 053-00007**
Permit #: **S-13-100-R3**
Agency Interest (AI) ID: **119204**
Date: **2-Jun-23**

Section B.1: Process Information

Emission Unit #	Emission Unit Name	Describe Emission Unit	Process ID	Process Name	Manufacturer	Model No.	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	Is the Process Continuous or Batch?	Number of Batches per 24 Hours *(if applicable)*	Hours per Batch *(if applicable)*
017	Pelleting System	Pellet Mill and Cooler	017	Pelleting	CPM	7 932-12	9/2013	Continuous		
020	Truck Loadout	Loadout	020	Loadout	Todd and Sargent	NA	9/2013	Batch (loads)	~40 loads	0.12

Section B.2: Materials and Fuel Information

**Maximum yearly fuel usage rate only applies if applicant request operating restrictions through federally enforceable limitations.*

Emission Unit #	Emission Unit Name	Name of Raw Materials Input	Maximum Quantity of Each Raw Material Input		Total Process Weight Rate for Emission Unit *(tons/hr)*	Name of Finished Materials	Maximum Quantity of Each Finished Material Output		Fuel Type	Maximum Hourly Fuel Usage Rate		Maximum Yearly Fuel Usage Rate		Sulfur Content *(%)*	Ash Content *(%)*
				(Specify Units/hr)				*(Specify Units/hr)*			*(Specify Units)*		*(Specify Units)*		
017	Pelleting System	Mash Feed	40	tons	40	Finished Feed	40	tons	NA	NA	NA	NA	NA	NA	NA
020	Truck Loadout	Finished Feed	200	tons	200	Finished Feed	200	tons	NA	NA	NA	NA	NA	NA	NA

Section B.3: Notes, Comments, and Explanations

Pelleting system operation is by batches but the system is operated batch after batch thus continuous batches.

Division for Air Quality

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DEP7007L

Mineral Processes

__ Section L.1: Source Operating Information
__ Section L.2: Concrete Operations
__ Section L.3: Asphalt Operations
__ Section L.4: Coal Operations
__ Section L.5: Aggregate Processing Operations
__ Section L.6: Feed, Corn, and Flour Operations
__ Section L.7: Grain Elevators
__ Section L.8: Fertilizer Operations
__ Section L.9: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI, DEP7007N, DEP7007V, and DEP7007GG.

___ Attach flow diagram

Source Name: **Cobb-Vantress Feed Mill**

KY EIS (AFS) #: **21- 053-00007**

Permit #: **S-13-100-R3**

Agency Interest (AI) ID: **119204**

Date: **2-Jun-23**

Section L.1: Source Operating Information

Type of Plant: ☐ Concrete ☐ Asphalt ☐ Coal ☐ Fertilizer ☑ Feed Corn Flour ☐ Grain Elevators ☐ Aggregate Processing

Operating Schedule:	24	Hours/Day:	7	Days/Week:	52	Weeks/Year:

Percent Annual Throughput:

Dec.-Feb.: 25 % Mar.-May: 25 % Jun.-Aug.: 25 % Sep.-Nov.: ____ %

Maximum Rated Source Capacity: 40 tons/hour 350,400 tons/year

Combustion Equipment:

Is there a generator located on site? ☑ Yes ☐ No

Is it possible for the generator to remain at one site longer than twelve months? ☑ Yes ☐ No

Is there a hot water heater located on site? ☐ Yes ☑ No

Is there a dryer located on site? ☐ Yes ☑ No

Is there a hot oil heater (asphalt heater) located on site? ☐ Yes ☑ No

Describe briefly the disposal of particulates collected in the baghouse and/or other waste generated at the site:

Disposal via landfill.

Is there additional information attached to support the data required in this form ☑ Yes ☑ No

Brief description of additional information included: *Calculations*

Total number of additional pages, including drawings, maps, and diagrams: *17*

Section L.6: Feed, Corn, and Flour Operations

Type of Operation: ☑ Feed ☐ Corn ☐ Flour ☐ Other: _____

New Source Performance Standard/MACT Applicability

Are any emission units for the operation subject to: ☑ MACT, Subpart DDDDDDD ☐ None ☐ Other: _____

Complete the Table:

Emission Unit #	Affected Facility	Maximum Rated Capacity		Control Method or Equipment	Control Efficiency *(% removal)*	SCC Code	Pollutant	Emission Factor *(lb/SCC unit)*	Source of Emission Factor	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	Installation Date of Each Unit	Is the Unit Subject to NSPS/MACT? *(Yes or No)*
		(tons/hr)	*(tons/yr)*									
017	Pellet Mill/Cooler (1)	40	350,400	Dual Cyclone	95	30200806	PM	0.15	AP-42	9/2013	2013	Yes
017	Pellet Mill/Cooler (1)	40	350,400	Dual Cyclone	95	30200806	PM10	0.075	AP-42	9/2013	2013	Yes
017	Pellet Mill/Cooler (1)	40	350,400	Dual Cyclone	95	30200806	PM2.5	0.0375	AP-42	9/2013	2013	Yes
017	Pellet Mill/Cooler (1)	40	350,400	Dual Cyclone	NA	30200806	Formaldehyde	7.43E-02	Stack Testing	9/2013	2013	Yes
017	Pellet Mill/Cooler (1)	40	350,400	Dual Cyclone	NA	30200806	Methanol	0.46	Stack Testing	9/2013	2013	Yes
017	Pellet Mill/Cooler (1)	40	350,400	Dual Cyclone	95	30200806	Manganese	6.97E-04	Material Balance	9/2013	2013	Yes
017	Pellet Mill/Cooler (1)	40	350,400	Dual Cyclone	NA	30200806	VOC	5.34E-01	Stack Testing	9/2013	2013	Yes

Emission Unit #	Affected Facility	Maximum Rated Capacity		Control Method or Equipment	Control Efficiency *(% removal)*	SCC Code	Pollutant	Emission Factor *(lb/SCC unit)*	Source of Emission Factor	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	Installation Date of Each Unit	Is the Unit Subject to NSPS/MACT? *(Yes or No)*
		(tons/hr)	*(tons/yr)*									
020	Truck Loadout	200	350,400	Baghouse	99	30200812	PM	0.0033	AP-42	9/2013	2013	Yes
020	Truck Loadout	200	350,400	Baghouse	99	30200812	PM10	0.0008	AP-42	9/2013	2013	Yes
020	Truck Loadout	200	350,400	Baghouse	99	30200812	PM2.5	0.0004	AP-42	9/2013	2013	Yes
020	Truck Loadout	200	350,400	Baghouse	NA	30200812	Formaldehyde	5.44E-06	Material Balance	9/2013	2013	Yes
020	Truck Loadout	200	350,400	Baghouse	NA	30200812	Methanol	1.27E-04	Stack Testing	9/2013	2013	Yes
020	Truck Loadout	200	350,400	Baghouse	99	30200812	Manganese	7.66E-07	Material Balance	9/2013	2013	Yes
020	Truck Loadout	200	350,400	Baghouse	NA	30200812	VOC	1.32E-04	Stack Testing	9/2013	2013	Yes

Emission Unit #	Affected Facility	Maximum Rated Capacity		Control Method or Equipment	Control Efficiency *(% removal)*	SCC Code	Pollutant	Emission Factor *(lb/SCC unit)*	Source of Emission Factor	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	Installation Date of Each Unit	Is the Unit Subject to NSPS/MACT? *(Yes or No)*
		(tons/hr)	*(tons/yr)*									

Section L.9: Notes, Comments, and Explanations

Emission Units 017 and 020 were built in 2013, started operating in 2015 but didn't have any Formaldehyde or Methanol emissions until 9/2018 when the

formaldehyde solution (Termin-8/SalCurb) was permitted.

Testing report the formaldehdye and methanol emissions are based on has already been submitted to the agency and will be resubmitted upon request.

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DEP7007N

Source Emissions Profile

__ Section N.1: Emission Summary
__ Section N.2: Stack Information
__ Section N.3: Fugitive Information
__ Section N.4: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI

Source Name: Cobb-Vantress Feed Mill
KY EIS (AFS) #: 21- 053-00007
Permit #: S-13-100-R3
Agency Interest (AI) ID: 119204
Date: 2-Jun-23

N.1: Emission Summary

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity *(SCC Units/hour)*	Pollutant	Uncontrolled Emission Factor *(lb/SCC Units)*	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency *(%)*	Control Efficiency *(%)*	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential *(lb/hr)*	Controlled Potential *(lb/hr)*	Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*
017	Pelleting System	017	Pelleting	Cyclone	017C	017	40 tons	PM	0.15	AP-42, includes control efficiency (lbs/ton finished feed)	100%	95%	120.00	6.00	525.60	26.28
017	Pelleting System	017	Pelleting	Cyclone	017C	017	40 tons	PM	0.075	AP-42, includes control efficiency (lbs/ton finished feed)	100%	95%	60.00	3.00	262.80	13.14
017	Pelleting System	017	Pelleting	Cyclone	017C	017	40 tons	PM2.5	0.0375	AP-42, includes control efficiency (lbs/ton finished feed)	100%	95%	30.00	1.50	131.40	6.57
017	Pelleting System	017	Pelleting	Cyclone	017C	017	40 tons	Formaldehyde	7.43E-02	Stack Testing (lbs/fton finished feed)	100%	NA	2.97	2.97	13.02	13.02
017	Pelleting System	017	Pelleting	Cyclone	017C	017	40 tons	Methanol	0.46	Stack Testing (lbs/fton finished feed)	100%	NA	21.47	21.47	94.02	94.02
017	Pelleting System	017	Pelleting	Cyclone	017C	017	40 tons	Manganese	6.97E-04	Mass Balance (lbs/ton finished feed)	100%	95%	0.03	1.39E-03	0.12	6.10E-03

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity *(SCC Units/hour)*	Pollutant	Uncontrolled Emission Factor *(lb/SCC Units)*	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency *(%)*	Control Efficiency *(%)*	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential *(lb/hr)*	Controlled Potential *(lb/hr)*	Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*
017	Pelleting System	017	Pelleting	Cyclone	017C	017	40 tons	VOC	5.34E-01	Mass Balance (lbs/ton finished feed)	100%	NA	25.48	25.48	111.60	111.60
020	Truck Loadout	020	Loadout	Baghouse	020C	020	200 tons	PM	0.0033	AP-42 (lbs/ton finished feed)	100%	99%	0.66	0.01	0.58	5.78E-03
020	Truck Loadout	020	Loadout	Baghouse	020C	020	200 tons	PM10	0.0008	AP-42 (lbs/ton finished feed)	100%	99%	0.16	1.60E-03	0.14	1.40E-03
020	Truck Loadout	020	Loadout	Baghouse	020C	020	200 tons	PM2.5	0.0004	AP-42 (lbs/ton finished feed)	100%	99%	0.08	8.00E-04	7.01E-02	7.01E-04
020	Truck Loadout	020	Loadout	Baghouse	020C	020	200 tons	Formaldehyde	5.44E-06	Stack Testing (lbs/fton feed loaded out)	100%	NA	1.09E-03	1.09E-03	9.53E-04	9.53E-04
020	Truck Loadout	020	Loadout	Baghouse	020C	020	200 tons	Methanol	1.27E-04	Stack Testing (lbs/fton feed loaded out)	100%	NA	0.03	0.03	0.03	0.03
020	Truck Loadout	020	Loadout	Baghouse	020C	020	200 tons	Manganese	7.66E-07	Mass Balance (lbs/ton feed)	100%	99%	3.07E-05	3.07E-07	1.34E-04	1.34E-06
020	Truck Loadout	020	Loadout	Baghouse	020C	020	200 tons	VOC	1.32E-04	Mass Balance (lbs/ton loadout feed)	100%	NA	1.07	1.07	4.58	4.58

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity *(SCC Units/hour)*	Pollutant	Uncontrolled Emission Factor *(lb/SCC Units)*	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency *(%)*	Control Efficiency *(%)*	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential *(lb/hr)*	Controlled Potential *(lb/hr)*	Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*

Section N.2: Stack Information

UTM Zone:

Stack ID	Identify all Emission Units (with Process ID) and Control Devices that Feed to Stack	Stack Physical Data			Stack UTM Coordinates		Stack Gas Stream Data		
		Equivalent Diameter *(ft)*	Height *(ft)*	Base Elevation *(ft)*	Northing *(m)*	Easting *(m)*	Flowrate *(acfm)*	Temperature *(° F)*	Exit Velocity *(ft/sec)*
17	Pelleting System Cyclone	2.83	177	989	664236	4063158	23,290	140	57.96
20	Truck Loadout Baghouse	0.83	12	989	664237	4063167	1,020	Amb	31.14

Section N.4: Notes, Comments, and Explanations
Emissions shown on N.1 are unlimited. Cobb is requesting a limit of less than 10 tpy for any single HAP and 25 tpy for total HAPs.
VOC emissions include Formaldehyde, Methanol, and Propionic Acid.
Since the emission control equipment for the 017C and 020C hasn't changed Forms GG have not been submitted.
Testing report the formaldehdye and methanol emissions are based on has already been submitted to the agency and will
be resubmitted on request.
Pleae note that uncontrolled particulate emsision for the pelleting are shown without the cyclone but the unit is integral
to the system and the pellet operations can never operate without the cyclone.

Division for Air Quality

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DEP7007V
Applicable Requirements and Compliance Activities

___ Section V.1: Emission and Operating Limitation(s)
___ Section V.2: Monitoring Requirements
___ Section V.3: Recordkeeping Requirement
___ Section V.4: Reporting Requirements
___ Section V.5: Testing Requirements
___ Section V.6: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI

Source Name: Cobb-Vantress Feed Mill
KY EIS (AFS) #: 21- 053-00007
Permit #: S-13-100-R3
Agency Interest (AI) ID: 119204
Date: 2-Jun-23

Section V.1: Emission and Operating Limitation(s)

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
Total Facility	Facility limit	401 KAR 52:030, Section 1; Section 11	Single HAP	<10	<10	NA	Monthly emission calcs and 12 month rolling total
Total Facility	Facility limit	401 KAR 52:030, Section 1; Section 11	Total HAPs	<25	<25	NA	Monthly emission calcs and 12 month rolling total
Total Facility	Facility limit	401 KAR 52:030, Section 1; Section 11	PM10	<100	<100	NA	Monthly emission calcs and 12 month rolling total
Total Facility	Facility limit	401 KAR 52:030, Section 1; Section 11	VOC	<100	<100	NA	Monthly emission calcs and 12 month rolling total

Emission Unit #	**Emission Unit Description**	**Applicable Regulation or Requirement**	**Pollutant**	**Emission Limit** (if applicable)	**Voluntary Emission Limit or Exemption** (if applicable)	**Operating Requirement or Limitation** (if applicable)	**Method of Determining Compliance with the Emission and Operating Requirement(s)**

Section V.3: Recordkeeping Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Recorded	Description of Recordkeeping
Total Facility	Facility limit	Single HAP	401 KAR 52:030 Section 3 and 5	Formaldehyde Soltuion Type and Monthly Receiving and Usage Rate, Fuel for Boiler, Emergency Generator	Facility will track the monthly amount of SalCurb and/or Termin-8 received, the monthly usage rate of SalCurb and/or Termin-8, monthly gas and/or fuel oil.
Total Facility	Facility limit	Total HAPs	401 KAR 52:030 Section 3 and 5	Formaldehyde Soltuion Type and Monthly Receiving and Usage Rate, Fuel for Boiler, Emergency Generator	Facility will track the monthly amount of SalCurb and/or Termin-8 received, the monthly usage rate of SalCurb and/or Termin-8, monthly gas and/or fuel oil.
Total Facility	Facility limit	PM10	401 KAR 52:030 Section 3 and 5	Feed Production	Facility will track the monthly produciton of feed
Total Facility	Facility limit	VOC	401 KAR 52:030 Section 3 and 5	Formaldehyde Soltuion Type and Monthly Receiving and Usage Rate, Fuel for Boiler, Emergency Generator	Facility will track the monthly amount of SalCurb and/or Termin-8 received, the monthly usage rate of SalCurb and/or Termin-8, monthly gas and/or fuel oil.

Section V.4: Reporting Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Reported	Description of Reporting
Facility limit	Facility limit	Single HAP	401 KAR 52:030 Section 21 and 22	Single HAPs monthly and 12 month rolling	Annual Compliance Certification
Facility limit	Facility limit	Total HAPs	401 KAR 52:030 Section 21 and 22	Total HAPss monthly and 12 month rolling	Annual Compliance Certification
Facility limit	Facility limit	PM10	401 KAR 52:030 Section 21 and 22	PM10s monthly and 12 month rolling	Annual Compliance Certification
Facility limit	Facility limit	VOC	401 KAR 52:030 Section 21 and 22	VOCs monthly and 12 month rolling	Annual Compliance Certification

Section V.6: Notes, Comments, and Explanations
New regulatory requirements as applicable to the facility limits are shown in V forms. All other requirements
applicable to the faciility will remain in place.

Division for Air Quality

Submit to the Regional Office identified in your permit

DEP7007CC

Compliance Certification

____ Section CC.1: Source Information

____ Section CC.2: Signature Block

____ Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

____ Section CC.4: Notes, Comments, and Explanations

Section CC.1: Source Information

1) Source Name
Cobb-Vantress Feed Mill

2) Agency Interest (AI) ID
119204

3) Source Location Address (street, city, state, zip)
1475 Burkesville Rd, Albany, KY 42602

4) Technical Contact (name, e-mail, phone #)
Rechelle Holloway; rechelle.holloway@tyson.com, (479) 290-2506

5) Permit Number(s)
S-13-100-R3

6) County
Clinton

7) KY EIS (AFS) #
21- 053-00007

8) Submittal Information

Are you certifying any requirement(s) as "not in continuous compliance?" ☑ **Yes** ☐ **No**

What is the reporting period? 09 (mm/) 01 (dd/) 2019 (yy) **TO** 11 (mm/) 01 (dd/) 2022 (yy)

Section CC.2: Signature Block

9) CERTIFICATION SIGNATURE

I, THE UNDERSIGNED, HEREBY CERTIFY UNDER PENALTY OF LAW, THAT I AM A RESPONSIBLE OFFICIAL, AND THAT I HAVE PERSONALLY EXAMINED, AND AM FAMILIAR WITH, THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ITS ATTACHMENTS. BASED ON MY INQUIRY OF THOSE INDIVIDUALS WITH PRIMARY RESPONSIBILITY FOR OBTAINING THE INFORMATION, I CERTIFY THAT THE STATEMENTS AND INFORMATION IS ON KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE OR INCOMPLETE INFORMATION, INCLUDING THE POSSIBILITY OF FINE OR IMPRISONMENT.

BY: Randy Harrington
AUTHORIZED SIGNATURE

6-2-2023
DATE

Randy Harrington
TYPED OR PRINTED NAME OF SIGNATORY

Senior Feed Mill Manager
TITLE OF SIGNATORY

Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

Emission Units in Continuous Compliance

10a) Emission Units in Continuous Compliance. *The following emission units were in continuous compliance with each permit term or condition(s) and applicable requirements listed here, such as emission standards, emission control requirements, emission testing, court requirements, work practices, or enhanced monitoring, based on the compliance methods specified below. If additional space is required, reproduce this page as needed.*

Emission Unit/Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or requirement	Actual Emissions or status of requirement	The method used for determining compliance over the reporting period, and whether the method provided continuous or intermittent data. *(such as test methods, monitoring procedures, recordkeeping and reporting)*

Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

Emission Units Subject to Future Compliance Dates

10b) Emission Units Subject to Future Compliance Dates. *The following emission units will achieve compliance on a timely basis and maintain compliance with future compliance dates as they become applicable during the permit term. If additional space is required, reproduce this page as needed.*

Emission Unit/Permit ID#	Future Compliance Schedule	Emission Unit Description	Reason for Future Compliance Date
See CC.4			

Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

Emission Units Not in Continuous Compliance

10c)(1) Emission Units Not in Continuous Compliance. *The following emission units were not in continuous compliance with each permit term or condition and applicable requirements listed here, such as emission standards, emission control requirements, emission testing, court requirements, work practices, or enhanced monitoring, based on the compliance methods specified below. If additional space is required, reproduce this page as needed.*

Emission Unit/Permit ID#	Permit Term, Condition, or Applicable Regulation	Emission Unit Description	Permit Limit or Requirement	Actual Emissions or Status of Requirement	The method used for determining compliance over the reporting period, and whether compliance was continuous or intermittent. *(such as test methods, monitoring procedures, recordkeeping and reporting)*
017	401 KAR 52:030, Section 1	Pelleting System with Formaldehyde Solution single HAP (Methanol)	<10 tpy of Single HAP (Methanol)	Highest 12 month rolling during period listed above was 13.66 tpy	Recordkeeping and Reporting based on Stack Test results and past formaldehdye solution usage records starting 8/1/2018. Facility is now in compliance by reducing the formaldehyde solution usage such the emissions are less than 10 tpy for methanol from all sources.
Facility Wide	401 KAR 52:030, Section 1	Facility Wide single HAP (Methanol)	<10 tpy of Single HAP (Methanol)	Highest 12 month rolling during period listed above was 13.67 tpy	Recordkeeping and Reporting based on Stack Test results and past formaldehdye solution usage records starting 8/1/2018. Also includes methanol from other facility sources. Facility is now in compliance by reducing the formaldehyde solution usage such the emissions are less than 10 tpy for methanol from all sources.
Facility Wide	401 KAR 52:030, Section 1	Facility Wide Total HAPs	<25 tpy	There has been an actual exceedance of Total HAPs	Based on the new emission data for formaldehdye and methanol the potential to emit total HAPs for the site are calcualted at greater than 25 tpy. There has not be an actual exceedance of total HAP emissions.
Facility Wide	401 KAR 52:030, Section 1	Facility Wide VOC	<100 tpy	There was not an actual exceedance of VOC	Based on the new emission data for formaldehdye and methanol the potential to emit VOC emissions are calculated greater than 100 tpy. There has not be an actual exceedance of VOC emissions.

Section CC.3: Identification of Emission Units & Each Term or Condition of the Permit

Emission Units Not in Continuous Compliance (continued)

10c)(2) Emission Units Not in Continuous Compliance. *For the emission units and requirements listed in 10c)(1) that were not in continuous compliance since the last reporting period, state the duration, magnitude, and reason or reasons for non-compliance. Each row of 10c)(2) must relate to the corresponding row of 10c)(1). If additional space is required, reproduce this page as needed.*

Emission Unit/Permit ID#	Description of duration, magnitude, and reason(s) for non-compliance and corrective steps taken or planned.
017	Single HAP emissions from the pelleting system are calculated from the beginning of use of formaldehyde solution at the location. The highest 12 mo rolling of any single HAP (methanol) is 13.66 tpy, the exceedance of 10 tpy for methanol began in July 2019 thru Feb 2023 when the application rate of formaldehyde solution was reduced
Facility Wide	Total facility single HAP emissions (include processing and combustion) are calculated from the beginning of use of formaldehyde solution at the location. The highest 12 mo rolling of any single HAP (methanol) is 13.67 tpy, the exceedance of 10 tpy for methanol began in July 2019 thru Feb 2023 when the application rate of formaldehyde solution was reduced.
Facility Wide	There has not been an exceedance of total HAPs for the site above 25 tpy. The issue is the facility should have had a conditional major permit rather than a true minor including a limit of less than 25 tpy of total HAPs.
Facility Wide	There has not been an exceedance of total VOCs for the site above 100 tpy. The issue is the facility should have had a conditional major permit rather than a true minor including a limit of less than 100 tpy of VOCs.

Section CC.4: Notes, Comments, and Explanations

Not included in the compliance list is RSL formaldehyde exceedenance for which Cobb has already committed to erecting a new stack for the pelleting system.

Compliance records and calculations will be submitted upon request.

ALBANY, KY FEEDMILL
FACILITY-WIDE CONTROLLED POTENTIAL EMISSIONS, Reviewed 5/31/23

		Controlled Potential Emissions								
Source	SN #	PM tpy	PM_{10} tpy	$PM_{2.5}$ tpy	SO2 tpy	NOx tpy	VOCs tpy	CO tpy	CO2e tpy	HAP tpy
Truck/Rail Receiving (1) w/ Baghouse	002	2.66E-02	3.91E-03	1.95E-03						
Grain Silos (4)	003	0.00E+00	0.00E+00	0.00E+00						
Dry Ingredient Transfer to Silos w/ Baghouse	004	3.02E-02	1.68E-02	2.87E-03						
Salt Receiving w/ Baghouse	005	2.25E-04	1.25E-04	2.14E-05						
Hammer mill w/ Baghouse	006	1.28	1.28	0.64						
Ground Corn Silos (2)	007	0.00E+00	0.00E+00	0.00E+00						
Mash Rework Silo (1)	008	0.00E+00	0.00E+00	0.00E+00						
Major Dry Ingredient Scale (1)	009	0.00E+00	0.00E+00	0.00E+00						
Minor Dry Ingredient Scale (1)	010	0.00E+00	0.00E+00	0.00E+00						
Micro Bin System (16)	011	5.80E-02	3.23E-02	5.52E-03						2.48E-03
Micro Surge Bin (1)	012	0.00E+00	0.00E+00	0.00E+00						
Mixer (1)	013	0.00E+00	0.00E+00	0.00E+00						
Mixer Surge Bin (1)	014	0.00E+00	0.00E+00	0.00E+00						
Pellet Mash Bins (2)	015	0.00E+00	0.00E+00	0.00E+00						
Pellet Surge Bin (1)	016	0.00E+00	0.00E+00	0.00E+00						
Pellet Mill/Cooler (1) w/ Cyclone System	017	26.28	13.14	6.57			111.60			107.05
Pellet Bin Surge Hopper (1)	018	0.00E+00	0.00E+00	0.00E+00						
Finished Feed Silos (10)	019	0.00E+00	0.00E+00	0.00E+00						
Truck Loadout w/ Baghouse	020	5.78E-03	1.40E-03	7.01E-04			4.58			0.03
Alimet Tank	021	NA	NA	NA						
Choline Chloride Tank	022	NA	NA	NA						
Fat Tank	023	NA	NA	NA						
Formaldehyde Solution Storage Tank	025	NA	NA	NA			0.06			2.63E-02
Central Vac System	026	1.20E-01	1.20E-01	6.01E-02						
Natural Gas Emergency Generator	024	3.79E-03	3.79E-03	3.79E-03	2.35E-04	0.25	0.13	0.50	46.65	2.25E-02
250 HP Natural Gas Boiler	001	1.05	1.05	1.05	22.57	6.36	0.24	3.74	7,280.20	9.39E-02
Diesel Tank (1,000 gal)	IS						4.51E-04			
Heater	IS	1.33E-01	1.33E-01	1.33E-01	1.05E-02	0.88	0.10	1.47	2,048.17	3.31E-02
Total Facility-wide Emissions		**28.99**	**15.78**	**8.47**	**22.58**	**7.48**	**116.70**	**5.71**	**9,375**	**107.25**
Title V Threshold		100	100	100	100	100	100	100	N/A	25 / 10
Above Title V Threshold?		No	No	No	No	No	**Yes**	No	No	No

ALBANY, KY FEEDMILL
FACILITY-WIDE UNCONTROLLED POTENTIAL EMISSIONS, Updated 5/31/23

		Uncontrolled Potential Emissions								
Source	SN #	PM tpy	PM_{10} tpy	$PM_{2.5}$ tpy	SO2 tpy	NOx tpy	VOCs tpy	CO tpy	CO2e tpy	HAP tpy
Truck/Rail Receiving (1) w/ Baghouse	002	2.66	0.39	0.20						
Grain Silos (4)	003	0.00E+00	0.00E+00	0.00E+00						
Dry Ingredient Transfer to Silos w/ Baghouse	004	3.02	1.68	0.29						
Salt Receiving w/ Baghouse	005	2.25E-02	1.25E-02	2.14E-03						
Hammer mill w/ Baghouse	006	128.31	128.31	64.16						
Ground Corn Silos (2)	007	0.00E+00	0.00E+00	0.00E+00						
Mash Rework Silo (1)	008	0.00E+00	0.00E+00	0.00E+00						
Major Dry Ingredient Scale (1)	009	0.00E+00	0.00E+00	0.00E+00						
Minor Dry Ingredient Scale (1)	010	0.00E+00	0.00E+00	0.00E+00						
Micro Bin System (16)	011	5.80E-02	3.23E-02	5.52E-03						2.48E-03
Micro Surge Bin (1)	012	0.00E+00	0.00E+00	0.00E+00						
Mixer (1)	013	0.00E+00	0.00E+00	0.00E+00						
Mixer Surge Bin (1)	014	0.00E+00	0.00E+00	0.00E+00						
Pellet Mash Bins (2)	015	0.00E+00	0.00E+00	0.00E+00						
Pellet Surge Bin (1)	016	0.00E+00	0.00E+00	0.00E+00						
Pellet Mill/Cooler (1) w/ Cyclone System	017	525.60	262.80	131.40			111.60			107.16
Pellet Bin Surge Hopper (1)	018	0.00E+00	0.00E+00	0.00E+00						
Finished Feed Silos (10)	019	0.00E+00	0.00E+00	0.00E+00						
Truck Loadout w/ Baghouse	020	0.58	0.14	0.07			4.58			0.03
Alimet Tank	021	NA	NA	NA						
Choline Chloride Tank	022	NA	NA	NA						
Fat Tank	023	NA	NA	NA						
Formaldehyde Solution Storage Tanks	025	NA	NA	NA			0.06			2.63E-02
Central Vac System	026	0.00E+00	0.00E+00	0.00E+00						
Natural Gas Emergency Generator	024	3.79E-03	3.79E-03	3.79E-03	2.35E-04	0.25	0.13	0.50	46.65	2.25E-02
250 HP Natural Gas Boiler	001	1.05	1.05	1.05	22.57	6.36	0.24	3.74	7,280.20	9.39E-02
Diesel Tank (1,000 gal)	IS						4.51E-04			
Heater	IS	1.33E-01	1.33E-01	1.33E-01	0.01	0.88	0.10	1.47	2,048.17	3.31E-02
TOTAL FACILITY-WIDE EMISSIONS:		**661.43**	**394.56**	**197.30**	**22.58**	**7.48**	**116.70**	**5.71**	**9,375**	**107.37**
Title V Threshold		100	100	100	100	100	100	100	N/A	25 / 10
Above Title V Threshold?		**Yes**	**Yes**	**Yes**	No	No	**Yes**	No	No	No

ALBANY, KY FEEDMILL

HAP CONTROLLED POTENTIAL EMISSIONS (TPY), Updated 5/31/23

Pollutant	CAS No.	HAP (Y or N)	Natural Gas Boiler	Natural Gas Emergency Generator	Natural Gas Heater	Micro Bin System (16)	Pellet Mill/Cooler (1) w/ Cyclone System 5, 6 ,8	Truck Loadout w/ Baghouse	Central Vac	Formaldehyde Solution Storage Tank
2-Methylnaphthalene	91-57-6	Y	1.07E-06	9.98E-05	4.20E-07					
3-Methylchloranthrene	56-49-5	Y	8.01E-08	0.00E+00	3.15E-08					
7,12-Dimethylbenz(a)anathracene	57-97-6	Y	7.12E-07	0.00E+00	2.80E-07					
Acenaphthene	83-32-9	Y	6.71E-06	4.99E-07	3.15E-08					
Acenaphtylene	203-96-8	Y	8.04E-08	0.00E+00	3.15E-08					
Anthracene	120-12-7	Y	3.88E-07	0.00E+00	4.20E-08					
Benz(a)anthracene	56-55-3	Y	1.27E-06	0.00E+00	3.15E-08					
Benzene	71-43-2	Y	9.34E-05	1.76E-04	3.68E-05					
Benzo(a)pyrene	50-32-8	Y	5.34E-08	0.00E+00	2.10E-08					
Benzo(b)fluoranthene	205-99-2	Y	8.01E-08	6.62E-08	3.15E-08					
Benzo(g,h,I)perylene	191-24-2	Y	7.18E-07	1.65E-07	2.10E-08					
Benzo(k)fluoranthene	205-82-3	Y	8.01E-08	0.00E+00	3.15E-08					
Benzo(b,k)fluoranthene	207-08-9	Y	4.70E-07	0.00E+00						
Chrysene	218-01-9	Y	7.56E-07	2.77E-07	3.15E-08					
Dibenz(a,h)anthracene	53-70-3	Y	5.31E-07	0.00E+00	2.10E-08					
p-dichlorobenzene	106-46-7	Y	5.34E-05	0.00E+00	2.10E-05					
Fluoranthene	206-44-0	Y	1.54E-06	4.43E-07	5.26E-08					
Fluorene	86-73-7	Y	1.42E-06	2.26E-06	4.91E-08					
Formaldehyde	50-00-0	Y	1.05E-02	2.11E-02	1.31E-03		13.02	9.53E-04	NA	0.01
Hexane	110-54-3	Y	8.01E-02	0.00E+00	3.15E-02					
Indeno(1,2,3-cd)pyrene	193-39-5	Y	6.80E-07	0.00E+00	3.15E-08					
Methanol	67-56-1	Y		9.98E-04	0.00E+00		94.02	0.03	NA	0.01
Naphthalene	91-20-3	Y	3.59E-04	2.97E-05	1.07E-05					
Phenanathrene	85-01-8	Y	3.34E-06	0.00E+00	2.98E-07					
Pyrene	129-00-0	Y	1.35E-06	5.43E-07	8.76E-08					
Toluene	108-88-3	Y	1.97E-03	1.63E-04	5.96E-05					
Arsenic	7440-38-2	Y	8.90E-06	0.00E+00	3.50E-06					
Beryllium	7440-41-7	Y	5.34E-07	0.00E+00	2.10E-07					
Cadmium	7440-43-9	Y	4.89E-05	0.00E+00	1.93E-05					
Chromium Compounds	7440-47-3	Y	6.23E-05	0.00E+00	2.45E-05					
Chromium VI	N/A - CRVI	Y		0.00E+00	2.45E-05					
Cobalt	7440-48-4	Y	3.74E-06	0.00E+00	1.47E-06					
Lead	7439-92-1	Y	4.80E-04	0.00E+00	8.76E-06					
Manganese	7439-96-5	Y	1.69E-05	0.00E+00	6.66E-06	2.48E-03	6.10E-03	1.34E-06	1.34E-06	
Mercury	7439-97-6	Y	1.16E-05	0.00E+00	4.56E-06					
Nickel	7440-02-0	Y	9.34E-05	0.00E+00	3.68E-05					
Selenium	7782-49-2	Y	1.07E-06	0.00E+00	4.20E-07					
Ethylbenzene	100-41-4	Y	2.02E-05							
o-Xylene	1330-20-7	Y	3.46E-05							
1,1,1-Trichloroethane (Methyl Chloroform)	71-55-6	Y	7.50E-05							
Total HAP			9.39E-02	2.25E-02	3.31E-02	2.48E-03	107.05	0.03	1.34E-06	2.63E-02

ALBANY, KY FEEDMILL

HAP UNCONTROLLED POTENTIAL EMISSIONS (TPY), Reviewed 5/31/23

Pollutant	CAS No.	HAP (Y or N)	Natural Gas Boiler	Natural Gas Emergency Generator	Natural Gas Heater	Micro Bin System (16)	Pellet Mill/Cooler (1) w/ Cyclone System 5, 6 ,8	Truck Loadout w/ Baghouse	Central Vac	Formaldehyde Solution Storage Tank
2-Methylnaphthalene	91-57-6	Y	1.07E-06	9.98E-05	4.20E-07					
3-Methylchloranthrene	56-49-5	Y	8.01E-08	0.00E+00	3.15E-08					
7,12-Dimethylbenz(a)anathracene	57-97-6	Y	7.12E-07	0.00E+00	2.80E-07					
Acenaphthene	83-32-9	Y	6.71E-06	4.99E-07	3.15E-08					
Acenaphtylene	203-96-8	Y	8.04E-08	0.00E+00	3.15E-08					
Anthracene	120-12-7	Y	3.88E-07	0.00E+00	4.20E-08					
Benz(a)anthracene	56-55-3	Y	1.27E-06	0.00E+00	3.15E-08					
Benzene	71-43-2	Y	9.34E-05	1.76E-04	3.68E-05					
Benzo(a)pyrene	50-32-8	Y	5.34E-08	0.00E+00	2.10E-08					
Benzo(b)fluoranthene	205-99-2	Y	8.01E-08	6.62E-08	3.15E-08					
Benzo(g,h,I)perylene	191-24-2	Y	7.18E-07	1.65E-07	2.10E-08					
Benzo(k)fluoranthene	205-82-3	Y	8.01E-08	0.00E+00	3.15E-08					
Benzo(b,k)fluoranthene	207-08-9	Y	4.70E-07	0.00E+00						
Chrysene	218-01-9	Y	7.56E-07	2.77E-07	3.15E-08					
Dibenz(a,h)anthracene	53-70-3	Y	5.31E-07	0.00E+00	2.10E-08					
p-dichlorobenzene	106-46-7	Y	5.34E-05	0.00E+00	2.10E-05					
Fluoranthene	206-44-0	Y	1.54E-06	4.43E-07	5.26E-08					
Fluorene	86-73-7	Y	1.42E-06	2.26E-06	4.91E-08					
Formaldehyde	50-00-0	Y	1.05E-02	2.11E-02	1.31E-03		13.02	9.53E-04		0.01
Hexane	110-54-3	Y	8.01E-02	0.00E+00	3.15E-02					
Indeno(1,2,3-cd)pyrene	193-39-5	Y	6.80E-07	0.00E+00	3.15E-08					
Methanol	67-56-1	Y		9.98E-04	0.00E+00		94.02	0.03		0.01
Naphthalene	91-20-3	Y	3.59E-04	2.97E-05	1.07E-05					
Phenanathrene	85-01-8	Y	3.34E-06	0.00E+00	2.98E-07					
Pyrene	129-00-0	Y	1.35E-06	5.43E-07	8.76E-08					
Toluene	108-88-3	Y	1.97E-03	1.63E-04	5.96E-05					
Arsenic	7440-38-2	Y	8.90E-06	0.00E+00	3.50E-06					
Beryllium	7440-41-7	Y	5.34E-07	0.00E+00	2.10E-07					
Cadmium	7440-43-9	Y	4.89E-05	0.00E+00	1.93E-05					
Chromium Compounds	7440-47-3	Y	6.23E-05	0.00E+00	2.45E-05					
Chromium VI	N/A - CRVI	Y		0.00E+00	2.45E-05					
Cobalt	7440-48-4	Y	3.74E-06	0.00E+00	1.47E-06					
Lead	7439-92-1	Y	4.80E-04	0.00E+00	8.76E-06					
Manganese	7439-96-5	Y	1.69E-05	0.00E+00	6.66E-06	2.48E-03	1.22E-01	1.34E-04	1.34E-06	
Mercury	7439-97-6	Y	1.16E-05	0.00E+00	4.56E-06					
Nickel	7440-02-0	Y	9.34E-05	0.00E+00	3.68E-05					
Selenium	7782-49-2	Y	1.07E-06	0.00E+00	4.20E-07					
Ethylbenzene	100-41-4	Y	2.02E-05							
o-Xylene	1330-20-7	Y	3.46E-05							
1,1,1-Trichloroethane (Methyl Chloroform)	71-55-6	Y	7.50E-05							
Total HAP			9.39E-02	2.25E-02	3.31E-02	2.48E-03	107.16	0.03	1.34E-06	2.63E-02

ALBANY, KY FEEDMILL

PRODUCTION POTENTIAL PM AND MANGANESE EMISSIONS

Reviewed 11/16/22

Source	SN #	Control Device	Control Device ID	Potential Capacity tn/hr	hr/yr	tn/yr	Air Flow Rate cfm	Emission Factor lb/ton [2] PM	PM10	PM2.5	Control Efficiency	PM lb/hr	PM tn/yr
Truck/Rail Receiving (1) w/ Baghouse [1,7]	002	Baghouse	002C	100	8760	312,724		0.017	0.0025	0.00125	99%	0.02	0.03
Grain Silos (4)	003	N/A	N/A	100	8760	213,858		NA	NA		NA		
Dry Ingredient Transfer to Silos w/ Baghouse	004	Baghouse	004C	100	8760	98,866		0.061	0.034	0.0058	99%	0.06	0.03
Salt Receiving w/ Baghouse	005	Baghouse	005C	25	8760	738		0.061	0.034	0.0058	99%	0.02	2.25E-04
Hammer mill w/ Baghouse [3]	006	Baghouse	006C	30	8760	213,858		0.012	0.012	0.006	99%	0.36	1.28
Ground Corn Silos (2)	007	N/A	N/A	30	8760	213,858		NA	NA		NA		
Mash Rework Silo (1)	008	N/A	N/A	50	8760	7,623		NA	NA		NA		
Major Dry Ingredient Scale (1)	009	N/A	N/A	35.82	8760	313,790		NA	NA		NA		
Minor Dry Ingredient Scale (1)	010	N/A	N/A	2.5	8760	21,936		NA	NA		NA		
Micro Bin System (16)	011	NA	NA	0.22	8760	1,902		0.061	0.034	0.0058	0%	1.34E-02	5.80E-02
Micro Surge Bin (1)	012	N/A	N/A	0.22	8760	1,902		NA	NA		NA		
Mixer (1)	013	N/A	N/A	40	8760	350,400		NA	NA		NA		
Mixer Surge Bin (1)	014	N/A	N/A	40	8760	350,400		NA	NA		NA		
Pellet Mash Bins (2)	015	N/A	N/A	40	8760	350,400		NA	NA		NA		
Pellet Surge Bin (1)	016	N/A	N/A	40	8760	350,400		NA	NA		NA		
Pellet Mill/Cooler (1) w/ Cyclone System [4,5,7,8]	017	Cyclone	017C	40	8760	350,400		0.15	0.075	0.0375	95%	6.00	26.28
Pellet Bin Surge Hopper (1)	018	N/A	N/A	40	8760	350,400		NA	NA		NA		
Finished Feed Silos (10)	019	N/A	N/A	40	8760	350,400		NA	NA		NA		
Truck Loadout w/ Baghouse	020	Baghouse	020C	200	8,760	350,400		0.0033	0.0008	0.0004	99%	0.01	5.78E-03
Central Vac System[8,9]	026	Baghouse	025C	NA	8,760	NA	320	0.01	0.01	0.005	99%	2.74E-02	1.20E-01
Alimet Tank [6]	021	N/A	N/A	PD	8760	PD		NA	NA		NA	NA	NA
Choline Chloride Tank [6]	022	N/A	N/A	PD	8760	PD		NA	NA		NA	NA	NA
Fat Tank [6]	023	N/A	N/A	PD	8760	PD		NA	NA		NA	NA	NA
											Total Production Emissions	**6.473**	**27.684**

1. Rail and truck receiving areas employ baghouse with 99.9% particulate removal efficiency guaranteed by manufacturer.
2. All emissions factors used in determining amounts were obtained from AP-42 Section 9.9.1, Grain Elevators & Processes, Tables 9.9.1-1 and 9.9.1-2, dated May 2003.
3. Hammermill Baghouse 99% particulate removal efficiency guarnateed by manufacturer. Efficiency control is included in the AP-42 emission factor.
4. Cyclone System 95% particulate removal efficiency guaranateed by manufacturer, efficiency control is included in the AP-42 emission factor.
5. 350,400 tn/yr is based off a 40 tn/hr pelleting system.
6. PD Proprietary Data
7. No emission factor is given for $PM_{2.5}$. Therefore, it is assumed to be half of the PM_{10} as a conservative estimate.
8. No emission factor is given for PM_{10}. Therefore, it is assumed to be half of the PM as a conservative estimate.
9. Due to the limited data on the central vac system, 0.01 gr/ cf after control is assumed for worst case conservative emission estimate. HEPA filter is part of the central vac system therefore the system will not operate w

Controlled Potential Emissions						Uncontrolled Potential Emissions							
PM_{10} lb/hr	PM_{10} tn/yr	$PM_{2.5}$ lb/hr	$PM_{2.5}$ tn/yr	HAP (Mn) lb/hr	HAP (Mn) tpy	PM lb/hr	PM tn/yr	PM_{10} lb/hr	PM_{10} tn/yr	$PM_{2.5}$ lb/hr	$PM_{2.5}$ tn/yr	HAP (Mn) lb/hr	HAP (Mn) tpy
0.003	0.004	0.001	0.002	NA	NA	1.70	2.66	0.250	0.391	0.125	0.195	NA	NA
Units are completely enclosed, no emissions						Units are completely enclosed, no emissions							
0.034	0.02	0.006	0.003	NA	NA	6.10	3.02	3.40	1.68	0.58	0.29	NA	NA
0.009	1.25E-04	0.001	2.14E-05	NA	NA	1.53	0.02	0.85	0.01	0.15	0.002	NA	NA
0.360	1.28	0.180	0.642	NA	NA	36.00	128.31	36.00	128.31	18.00	64.16	NA	NA
Units are completely enclosed, no emissions						Units are completely enclosed, no emissions							
Units are completely enclosed, no emissions						Units are completely enclosed, no emissions							
Units are completely enclosed, no emissions						Units are completely enclosed, no emissions							
Units are completely enclosed, no emissions						Units are completely enclosed, no emissions							
7.48E-03	3.23E-02	1.28E-03	5.52E-03	5.67E-04	2.48E-03	0.01	0.06	0.007	0.032	0.001	0.006	5.67E-04	2.48E-03
Units are completely enclosed, no emissions						Units are completely enclosed, no emissions							
Units are completely enclosed, no emissions						Units are completely enclosed, no emissions							
Units are completely enclosed, no emissions						Units are completely enclosed, no emissions							
Units are completely enclosed, no emissions						Units are completely enclosed, no emissions							
Units are completely enclosed, no emissions						Units are completely enclosed, no emissions							
3.000	13.14	1.500	6.57	1.39E-03	6.10E-03	120.00	525.60	60.00	262.80	30.00	131.40	0.028	0.122
Units are completely enclosed, no emissions						Units are completely enclosed, no emissions							
Units are completely enclosed, no emissions						Units are completely enclosed, no emissions							
1.60E-03	1.40E-03	8.00E-04	7.01E-04	3.07E-07	1.34E-06	0.66	0.58	0.16	0.14	0.08	7.01E-02	3.07E-05	1.34E-04
2.74E-02	1.20E-01	1.37E-02	6.01E-02	3.07E-07	1.34E-06	0.03	0.12	0.03	0.12	0.01	0.06	3.07E-07	1.34E-06
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3.414	**14.478**	**1.691**	**7.223**	**0.002**	**0.009**	**165.998**	**660.247**	**100.667**	**393.371**	**48.931**	**196.117**	**0.028**	**0.125**

vithout the filter.

ALBANY, KY FEEDMILL

POTENTIAL FORMALDEHYDE, METHANOL, & VOC EMISSIONS

Updated 5 31 23

Production and Formaldehyde Solution Information:

Value	Units	Description	Basis
350,400	tons/yr	Annual Feed Production Rate	Based on Maximum Production rate of Feedmill at 8760 hrs/yr
40.00	tons/hr	Hourly Production Rate	Based on Feed Mill Design Rate tons/hr produced
200.00	tons/hr	Hourly Loadout Rate	Based on Feed Mill Design Rate tons/hr loadout
6	lb/ton	Termin-8 added per ton of feed	Provided by Albany
6.5	lbs/ton	Sal CURB	Provided by Albany
240.00	lb/hr	Termin 8 added to feed	Mass Balance (6 lb/ton * 40 tons/hr)
2,102,400	lb/yr	Termin 8 added to feed	Mass Balance (6 lb/ton * 350,400 tons/yr)
260.00	lb/hr	Sal CURB added to feed	Mass Balance (6.5 lb/ton * 40 tons/hr)
2,277,600	lb/yr	Sal CURB added to feed	Mass Balance (6.5 lb/ton * 350,400 tons/yr)

Process Emissions from Pellet Mill/Cooler (017)

		Formaldehyde		
5.37E-02	lbs/ton of feed	Formaldehyde Emission Factor	Stack Testing at Albany Cobb April 23 @ 4.3 lbs of SalCurb/ton of feed	
7.43E-02	lbs/lbs of feed	Formaldehyde Emission Factor	Stack Testing at Albany Cobb April 23 @ 6.5 lbs of SalCurb/ton of feed	Since testing was done on Salcurb and it has the maximum concentration of formaldehyde between SalCurb and Termin-8 no estimates were need to develop worst case emissions.
1.25E-02	lbs/lb of solution	Formaldehyde Emission Factor	Stack Testing at Albany Cobb April 23 @ 4.3 lbs of SalCurb/ton of feed	
1.14E-02	lbs/lb of solution	Formaldehyde Emission Factor	Stack Testing at Albany Cobb April 23 @ 6.5 lbs of SalCurb/ton of feed	
35%	%	Percent Formaldehyde in Termin-8	Provided by Termin-8 supplier Anitox	
37%	%	Percent Formaldehyde in Sal CURB	Provided by Kemin supplier of Sal Curb	
2.97	lb/hr	Worst Case Hourly Formaldehyde emissions	Production (tons/hr) x Worst Case Emission Factor 37% formaldehyde (lbs/ton of feed)	
71.33	lbs/day	Worst Case Daily Formaldehyde emissions	Hourly Formaldehyde emissions x 24 hrs/day	
26,035	lb/yr	Worest Case Annual Formaldehyde emissions	Production (tons/yr) x Worst Case Emission Factor 37% formaldehyde (lbs/ton of feed)	
13.02	tons/yr	Worst Case Annual Formaldehyde emissions	Annual emissions (lb/yr) / (2000 lb/ton)	
		Methanol		
0.38	lbs/ton of feed	Methanol Emission Factor	Stack Testing at Albany Cobb April 23 @ 4.3 lbs of SalCurb/ton of feed @ 12% methanol	
0.46	lbs/ton of feed	Methanol Emission Factor	Stack Testing at Albany Cobb April 23 @ 6.5 lbs of SalCurb/ton of feed @12% methanol	
0.09	lbs/lb of solution	Methanol Emission Factor	Stack Testing at Albany Cobb April 23 @ 4.3 lbs of SalCurb/ton of feed @12% methanol	
0.07	lbs/lb of solution	Methanol Emission Factor	Stack Testing at Albany Cobb April 23 @ 6.5 lbs of SalCurb/ton of feed @12% methanol	Since emission factors were developed using SalCurb is 12% methanol; the emission factors were scaled to estimate the methanol emissions when using Termin-8 @ 14% methanol assuming a linear relationship.
0.44	lbs/ton of feed	Estimated Methanol Emission Factor	Stack Testing at Albany Cobb April 23 @ 4.3 lbs of SalCurb/ton of feed estimated to 14% methanol	
0.54	lbs/lbs of feed	Estimated Methanol Emission Factor	Stack Testing at Albany Cobb April 23 @ 6.5 lbs of SalCurb/ton of feed estimated to 14% methanol	
0.10	lbs/lb of solution	Estimated Methanol Emission Factor	Stack Testing at Albany Cobb April 23 @ 4.3 lbs of SalCurb/ton of feed estimated to 14% methanol	
0.08	lbs/lb of solution	Estimated Methanol Emission Factor	Stack Testing at Albany Cobb April 23 @ 6.5 lbs of SalCurb/ton of feed estimated to 14% methanol	
14%	%	Percent Methanol in Termin-8	Provided by Termin-8 supplier Anitox	
12%	%	Percent Methanol in Sal CURB	Provided by Kemin supplier of Sal Curb	
21.47	lb/hr	Worst Case hourly Methanol emissions	Production (tons/hr) x Worst Case Emission Factor for 14% methanol (lbs/ton of feed)	
515.20	lbs/day	Worst Case daily Methanol emissions	Worst Case Hourly Methanal emissions x 24 hrs/day	
188,048	lb/yr	Worst Case annual Methanol emissions	Production (tons/yr) x Worst Case Emission Factor for 14% methanol (lbs/ton of feed)	
94.02	tons/yr	Worst Case Methanol emissions	Worst Case Annual emissions (lb/yr) / (2000 lb/ton)	
		Propionic Acid		
14%		Percent Propionic acid in Termin-8	Provided by Termin-8 supplier Anitox	
20%		Percent Propionic acid in Sal CURB	Provided by Kemin supplier of Sal Curb	
2.0%		Percent Released	Assumption from Kemin and Anitox	

1.04	lbs/hr	Worst Case Propionic acid emissions	Max of 2 solutions: Hourly Feed Production Rate (tons/hr) * lb/ton of formaldehyde solution *% Prop Acid * % Prop Acid Released
9,110	lb/yr	Worst Case Propionic acid emissions	Max of 2 solutions: Annual Feed Production Rate (tons/yr) * lb/ton formaldehyde solution * % Prop Acid * % Prop Acid Released
4.56	tons/yr	Worst Case Propionic acid emissions	Worst Case Annual emissions (lb/yr) / (2000 lb/ton)
25.48	lbs/hr	VOC emissions	Formaldehyde + Methanol + Propionic acid emissions
223,193	lb/yr	VOC emissions	Formaldehyde + Methanol + Propionic acid emissions
111.60	tons/yr	VOC emissions	Annual PTE VOC emissions (lb/yr) / (2000 lb/ton)

Process Emissions from Truck Loadout (020)

Formaldehyde				
5.44E-06	lbs/ton of feed loaded out	Formaldehyde Emission Factor	Stack Testing at Albany Cobb April 23 @ 6.5 lbs of SalCurb/ton loaded out)	Testing was performed on feed with an applied rate of 6.5 lbs of salcurb/ton of feed
35%	%	Percent Formaldehyde in Termin-8	Provided by Termin-8 supplier Anitox	
37%	%	Percent Formaldehyde in Sal CURB	Provided by Kemin supplier of Sal Curb	
1.09E-03	lb/hr	Worst Case Hourly Formaldehyde emissions	Production (tons/hr) x Worst Case Emission Factor 37% formaldehyde (lbs/ton of feed) @ 6.5 lbs application rate	
0.03	lbs/day	Worst Case Daily Formaldehyde emissions	Hourly Formaldehyde emissions x 24 hrs/day	
1.91	lb/yr	Worest Case Annual Formaldehyde emissions	Production (tons/yr) x Worst Case Emission Factor 37% formaldehyde (lbs/ton of feed) @ 6.5 lbs application rate	
9.53E-04	tons/yr	Worst Case Annual Formaldehyde emissions	Annual emissions (lb/yr) / (2000 lb/ton)	
Methanol				
1.27E-04	lbs/ton of feed loaded out	Methanol Emission Factor	Stack Testing at Albany Cobb April 23 @ 6.5 lbs of SalCurb/ton loaded out) @ 12% methanol	Since emission factors were developed using SalCurb is 12% methanol; the emission factors were scaled to estimate the methanol emissions when using Termin-8 @ 14% methanol assuming
1.48E-04	lbs/ton of feed loaded out	Estimated Methanol Emission Factor	Stack Testing at Albany Cobb April 23 @ 6.5 lbs of SalCurb/ton of feed estimated to 14% methanol	
14%	%	Percent Methanol in Termin-8	Provided by Termin-8 supplier Anitox	
12%	%	Percent Methanol in Sal CURB	Provided by Kemin supplier of Sal Curb	
0.03	lb/hr	Worst Case hourly Methanol emissions	Loadout Rate (tons/hr) x Worst Case Emission Factor for 14% methanol (lbs/ton of feed)	
0.71	lbs/day	Worst Case daily Methanol emissions	Worst Case Hourly Methanal emissions x 24 hrs/day	
52	lb/yr	Worst Case annual Methanol emissions	Loadout Rate (tons/yr) x Worst Case Emission Factor for 14% methanol (lbs/ton of feed)	
0.03	tons/yr	Worst Case Methanol emissions	Worst Case Annual emissions (lb/yr) / (2000 lb/ton)	
Propionic Acid				
14%		Percent Propionic acid in Termin-8	Provided by Termin-8 supplier Anitox	
20%		Percent Propionic acid in Sal CURB	Provided by Kemin supplier of Sal Curb	
2.0%		Percent Released	Assumption from Kemin and Anitox	
1.04	lbs/hr	Worst Case Propionic acid emissions	Max of 2 solutions: Hourly Feed Production Rate (tons/hr) * lb/ton of formaldehyde solution *% Prop Acid * % Prop Acid Released	
9,110	lb/yr	Worst Case Propionic acid emissions	Max of 2 solutions: Annual Feed Production Rate (tons/yr) * lb/ton formaldehyde solution * % Prop Acid * % Prop Acid Released	
4.56	tons/yr	Worst Case Propionic acid emissions	Worst Case Annual emissions (lb/yr) / (2000 lb/ton)	
1.07	lbs/hr	VOC emissions	Formaldehyde + Methanol + Propionic acid emissions	
9,164	lb/yr	VOC emissions	Formaldehyde + Methanol + Propionic acid emissions	
4.58	tons/yr	VOC emissions	Annual PTE VOC emissions (lb/yr) / (2000 lb/ton)	

Termin-8 Storage Tank (Insignificant) Throughput Calculation and Emissions:

Value	Units	Description	Basis
350,400	tons/yr	Annual Feed Production Rate	Provided by Albany
6	lb/ton	Termin-8 added per ton of feed	Provided by Albany
252,000	gal/yr	Annual Termin-8 Usage	Set at 252,000 conservatively.
9.174	lb/gal	Density	Based on Anitox Termin-8 SDS info

2,311,848	lb/yr	Annual Termin-8 Usage	Annual Termin-8 Usage gal/yr * Density
21,000	gal/month	Monthly Termin-8 Usage as input to TANKS ESP spreadsheet	Annual Termin-8 Usage (gal) / 12
0.003	lb/hr	Hourly Formaldehyde Emissions	Annual Emissions / (8,760 hrs/yr)
23.91	lb/yr	Annual Formaldehyde Emissions	Based on TANKS ESP Spreadsheet (see Tanks ESP calcs)
0.01	tons/yr	Annual Formaldehyde Emissions	Annual emissions (lb/yr) / (2000 lb/ton)
0.003	lb/hr	Methanol Emissions	Annual Emissions / (8,760 hrs/yr)
27.36	lb/yr	Methanol Emissions	Based on TANKS ESP Spreadsheet (see Tanks ESP calcs)
0.014	tons/yr	Methanol Emissions	Annual emissions (lb/yr) / (2000 lb/ton)
0.69	lb/yr	Propionic acid emissions	Based on TANKS ESP Spreadsheet (see Tanks ESP calcs)
0.0003	tons/yr	Propionic acid emissions	Annual emissions (lb/yr) / (2000 lb/ton)
117	lb/yr	Annual VOC Emissions	Formaldehyde + Methanol + Propionic acid emissions
0.06	tons/yr	Annual VOC Emissions	Annual VOC emissions (lb/yr) / (2000 lb/ton)

Notes:
Uncontrolled emissions = Controlled emissions
Emissions calculated using Tanks ESP software (see Tanks ESP calcs).

Sal Curb Storage Tank (Insignificant) Throughput Calculation and Emissions:

Value	Units	Description	Basis
350,400	tons/yr	Annual Feed Production Rate	Provided by Albany
6.5	lb/ton	Sal Curb added per ton of feed	Provided by Albany
252,000	gal/yr	Annual Sal Curb Usage	Set at 252,000 gal/yr conservatively
9.174	lb/gal	Density	Based on Kemin Sal CURB SDS info
2,311,848	lb/yr	Annual Sal Curb Usage	Annual Sal Curb Usage gal/yr * Density
21,000	gal/month	Monthly Sal Curb Usage as input to TANKS ESP spreadsheet	Annual Sal Curb usage (gal) / 12
0.003	lb/hr	Hourly Formaldehyde Emissions	Annual Emissions / (8,760 hrs/yr)
25.25	lb/yr	Annual Formaldehyde Emissions	Based on TANKS ESP Spreadsheet (see Tanks ESP calcs)
0.01	tons/yr	Annual Formaldehyde Emissions	Annual emissions (lb/yr) / (2000 lb/ton)
0.003	lb/hr	Methanol Emissions	Annual Emissions / (8,760 hrs/yr)
24.76	lb/yr	Methanol Emissions	Based on TANKS ESP Spreadsheet (see Tanks ESP calcs)
0.012	tons/yr	Methanol Emissions	Annual emissions (lb/yr) / (2000 lb/ton)
1.04	lb/yr	Propionic acid emissions	Based on TANKS ESP Spreadsheet (see Tanks ESP calcs)
0.0005	tons/yr	Propionic acid emissions	Annual emissions (lb/yr) / (2000 lb/ton)
51	lb/yr	Annual VOC Emissions	Formaldehyde + Methanol + Propionic acid emissions
0.03	tons/yr	Annual VOC Emissions	Annual VOC emissions (lb/yr) / (2000 lb/ton)

Notes:
Uncontrolled emissions = Controlled emissions
Emissions calculated using Tanks ESP software (see Tanks ESP calcs).

Emissions Summary:

Pollutant	Pellet Mill/Cooler (lb/hr)	Pellet Mill/Cooler (tpy)	Product Loadout (lb/hr)	Product Loadout (tpy)	Storage Tanks (lbs/hr)	Storage Tanks (tpy)	Total (tpy)
Formaldehyde	2.97	13.02	1.09E-03	9.53E-04	2.88E-03	1.26E-02	13.03
Methanol	21.47	94.02	0.03	0.03	3.12E-03	1.37E-02	94.06
VOC	25.48	111.60	1.07	4.58	1.33E-02	5.84E-02	116.24

Notes:
Uncontrolled emissions = Controlled emissions
Emissions calculated derived emission factors from April 2023 testing
Formaldehyde and Methanol Emissions are assumed to be depleted from the pellet system and loadout and therefore would not be present in the Central Vac System (09)

TankSummaries for PTE

Site: Albany, KY, Feed Mill

Equations for this site: After 2019 AP-42 revisions H/D ratio: Default 0.5

					Total loss components in the "My HAPs/VOC" set (lbs)				
					Formaldehyde	Methanol {methyl alcohol}	Propionic Acid		
Tank ID	Tank Diameter (ft)	Product	Throughput (gal)	Total estimated emissions (lbs)	50000	67561	79094		
Tank Sal Curb	9	Sal CURB	252000	51.048502	25.24621831	24.76383504	1.038448206		
Tank Termin-8	9	Termin-8	252000	51.962457	23.91092551	27.36306518	0.688466691		

ALBANY, KY FEEDMILL

PRODUCTION POTENTIAL MANGANESE EMISSIONS

Reviewed 11/16/22

Annual Production (tpy)	350,400
Percentage Pelletized (%)	100%
Trace Mineral Used (lb/yr)	519,993.6
Percentage of Manganese from Trace Mineral (%)	31.30%
Total Manganese Processed (lb/yr)	162,758

Table B-4. Potential Manganese Emissions from Process Sources

Emission Source	Manganese Used tpy	Ratio of Mangaese lbs mn/lbs of finished	Control Efficiency %	PM Emission Factor[1] (lb/ton)	PM Emissions lbs/hr	Potential Controlled Manganese Emissions (lb/yr)[3]	(lb/hr)	(tpy)	Potential Uncontrolled Manganese Emissions (lb/yr)[3]	(lb/hr)	(tpy)
Micro Bin System	81.38			0.061		4.96E+00	5.67E-04	2.48E-03	4.96	5.67E-04	2.48E-03
Pellet Cooler Systems	81.38		95%	0.15		1.22E+01	1.39E-03	6.10E-03	244.14	0.03	1.22E-01
Truck Loadout	81.38		99%	0.0033		2.69E-03	3.07E-07	1.34E-06	0.27	3.07E-05	1.34E-04
Central Vac		0.00023			11.56	2.69E-03	3.07E-07	1.34E-06	2.69E-03	3.07E-07	1.34E-06
Total						17.18	1.96E-03	8.59E-03	249.37	0.03	0.12

1. AP-42 Section 9.9.1, *Grain Elevators & Processes,* Tables 9.9.1-1 and 9.9.1-2, dated May 2003. The Pellet Cooler is a controlled factor. The other two are uncontrolled

2. Controlled Emissions (lb/yr) = Emission Factor (lb/ton) * Manganese in Feed (tons/year) *(1-% Control if not included in AP-42 factor)

3. HEPA filter is part of the central vac system and will not operate without the filter

Boilers Information Reviewed 11 16/22

Source	Emission Source ID	Low NO_X Burner?	Heat Input Capacity (MMBtu/hr)	Natural Gas Heating Value (Btu/scf)	Hourly Natural Gas Consumption (MMscf/hr)	Diesel Heating Value (MMBtu/Mgal)	Hourly Diesel Combustion (Mgal/hr)	Annual Hours of Operation (hr/yr)	Maximum Fuel Oil gal/yr	Maximum Annual Natural Gas cf/yr
250 hp Boiler	7	Yes	10.16	1,000	1.02E-02	140	7.26E-02	8,760	635,663	88,992,840
		Maximum MMBtu/yr	88992.84							
		MMBtu/yr used from Diesel	88992.84						635.6631429	88.99284
		MMBtu/hr for natural gas	0							

Criteria Pollutant Potential Emissions from the Boilers

Pollutant	Emission Factors: Natural Gas[1] (lb/MMscf)	Emission Factors: Diesel[2] (lb/Mgal)	250 hp Boiler Potential Emissions: Natural Gas[3] (lb/hr)	250 hp Boiler Potential Emissions: Diesel (lb/hr)	250 hp Boiler Potential Emissions: Natural Gas[4] tpy	250 hp Boiler Potential Emissions: Fuel Oil[4] (tpy)	Total Potential Emissions: Max (lb/hr)[5]	Total Potential Emissions: Worst Case Emissions between Diesel and Natural gas (tpy)
NO_X Low NOx	50	20	0.51	1.45	2.22	6.36	1.45	6.36
CO	84	5	0.85	0.36	3.74	1.59	0.85	3.74
PM	7.6	3.3	0.08	0.24	0.34	1.05	0.24	1.05
SO_2	0.6	71	0.01	5.15	0.03	22.57	5.15	22.57
VOC	5.5	0.2	0.06	0.01	0.24	0.064	0.06	0.24
Lead	5.00E-04	1.51E-03	5.08E-06	1.10E-04	2.22E-05	4.80E-04	1.10E-04	4.80E-04
CO_2e[6]	117,098	22,906	1,190	1,662	5,210.44	7280.20	1662.15	7280.20

1. AP-42 Section 1.4, *Natural Gas Combustion,* Tables 1.4-1 and 1.4-2, dated July 1998.

2. AP-42 Section 1.3, *Fuel Oil Combustion,* Tables 1.3-1, 1.3-2, and 1.3-3, dated May 2010. Emission factors utilized are for distillate oil combustion. The SO_2 emission factor is based on a maximum diesel sulfur content of 0.5% by weight. PM is the sum of filterable PM and condensable PM emissions. The VOC emission factor is the emission factor for non-methane total organic compounds for industrial boilers.

3. Natural gas NO_X emissions for boiler are based on the emission factor for a low NO_X burner.

4. Potential annual emissions for the boiler is based on the hourly potential emissions from natural gas combustion multiplied by 8,760 hours of operation per year.

5. Total potential hourly emissions for boiler is based on the worst-case hourly emissions for each pollutant between natural gas and diesel combustion

6. CO_2e factor calculated based on the emission factors for CO_2, CH_4, and N_2O from 40 CFR 98, Subpart C, Tables C-1 and C-2, and the global warming potential (GWP) for each pollutant per 40 CFR 98, Subpart A, Table A-1.

HAP Potential Emissions from the Boilers Reviewed 11/16/22

Pollutant	Emission Factors		250 hp Boiler Potential Emissions				
	Natural Gas[1] (lb/MMscf)	Diesel[2] (lb/Mgal)	Natural Gas (lb/hr)	Diesel (lb/hr)	Natual Gas tpy	Diesel tpy	Annual[3] (tpy)
2-Methylnaphthalene*	2.40E-05	-	2.44E-07	-	1.07E-06		1.07E-06
3-Methylchloranthrene*	1.80E-06	-	1.83E-08	-	8.01E-08		8.01E-08
7,12-Dimethylbenz(a) anthracene*	1.60E-05	-	1.63E-07	-	7.12E-07		7.12E-07
Acenaphthene*	1.80E-06	2.11E-05	1.83E-08	1.53E-06	8.01E-08	6.71E-06	6.71E-06
Acenaphthylene*	1.80E-06	2.53E-07	1.83E-08	1.84E-08	8.01E-08	8.04E-08	8.04E-08
Anthracene*	2.40E-06	1.22E-06	2.44E-08	8.85E-08	1.07E-07	3.88E-07	3.88E-07
Benz(a)anthracene*	1.80E-06	4.01E-06	1.83E-08	2.91E-07	8.01E-08	1.27E-06	1.27E-06
Benzene	2.10E-03	2.14E-04	2.13E-05	1.55E-05	9.34E-05	6.8E-05	9.34E-05
Benzo(a)pyrene*	1.20E-06	-	1.22E-08	-	5.34E-08		5.34E-08
Benzo(b)fluoranthene*	1.80E-06	-	1.83E-08	-	8.01E-08		8.01E-08
Benzo(g,h,I)perylene*	1.20E-06	2.26E-06	1.22E-08	1.64E-07	5.34E-08	7.18E-07	7.18E-07
Benzo(k)fluoranthene*	1.80E-06	-	1.83E-08	-	8.01E-08		8.01E-08
Benzo(b,k)fluoranthene*	-	1.48E-06	-	1.07E-07		4.7E-07	4.70E-07
Chrysene*	1.80E-06	2.38E-06	1.83E-08	1.73E-07	8.01E-08	7.56E-07	7.56E-07
Dibenzo(a,h)anthracene*	1.20E-06	1.67E-06	1.22E-08	1.21E-07	5.34E-08	5.31E-07	5.31E-07
Dichlorobenzene	1.20E-03	-	1.22E-05	-	5.34E-05		5.34E-05
Fluoranthene*	3.00E-06	4.84E-06	3.05E-08	3.51E-07	1.33E-07	1.54E-06	1.54E-06
Fluorene*	2.80E-06	4.47E-06	2.84E-08	3.24E-07	1.25E-07	1.42E-06	1.42E-06
Formaldehyde	7.50E-02	3.30E-02	7.62E-04	2.39E-03	3.34E-03	0.010488	1.05E-02
Hexane	1.80E+00	-	1.83E-02	-	8.01E-02		8.01E-02
Indeno(1,2,3-cd)pyrene*	1.80E-06	2.14E-06	1.83E-08	1.55E-07	8.01E-08	6.8E-07	6.80E-07
Naphthalene	6.10E-04	1.13E-03	6.20E-06	8.20E-05	2.71E-05	0.000359	3.59E-04
Phenanathrene*	1.70E-05	1.05E-05	1.73E-07	7.62E-07	7.56E-07	3.34E-06	3.34E-06
Pyrene*	5.00E-06	4.25E-06	5.08E-08	3.08E-07	2.22E-07	1.35E-06	1.35E-06
Toluene	3.40E-03	6.20E-03	3.45E-05	4.50E-04	1.51E-04	0.001971	1.97E-03
Arsenic	2.00E-04	-	2.03E-06	-	8.90E-06		8.90E-06
Beryllium	1.20E-05	-	1.22E-07	-	5.34E-07		5.34E-07
Cadmium	1.10E-03	-	1.12E-05	-	4.89E-05		4.89E-05
Chromium	1.40E-03	-	1.42E-05	-	6.23E-05		6.23E-05
Cobalt	8.40E-05	-	8.53E-07	-	3.74E-06		3.74E-06
Manganese	3.80E-04	-	3.86E-06	-	1.69E-05		1.69E-05
Mercury	2.60E-04	-	2.64E-06	-	1.16E-05		1.16E-05
Nickel	2.10E-03	-	2.13E-05	-	9.34E-05		9.34E-05
Selenium	2.40E-05	-	2.44E-07	-	1.07E-06		1.07E-06
Ethylbenzene	-	6.36E-05	-	4.62E-06		2.02E-05	2.02E-05
o-Xylene	-	1.09E-04	-	7.91E-06		3.46E-05	3.46E-05
1,1,1-Trichloroethane (Methyl Chloroform)	-	2.36E-04	-	1.71E-05		7.5E-05	7.50E-05
Polycyclic Organic Matter (POM)[6]	-	3.30E-03		2.39E-04		0.001049	1.05E-03
Total Boiler HAP			**0.02**	**0.003**	**0.08**	**0.01**	**0.09**

1. Emission factors for natural gas combustion per AP-42 Section 1.4, Tables 1.4-3 and 1.4-4, dated July 1998.

2. Emission factors for diesel combustion per AP-42, Section 1.3, Tables 1.3-8 through 1.3-10, dated May 2010.

3. Potential annual emissions for the 400 hp boiler are based on the worst-case hourly emissions for each pollutant between natural gas and diesel combustion, multiplied by 8,760 hours of operation per year.

4. Potential annual emissions for the 300 hp boiler are based on the hourly potential emissions from natural gas combustion multiplied by 8,760 hours of operation per year.

5. Total potential hourly emissions for both boilers are based on the worst-case hourly emissions for each pollutant between natural gas and diesel combustion for the 400 hp boiler and on the hourly emissions from natural gas combustion for the 300 hp boiler.

6. The starred compounds are POM. For natural gas, only individual POM compounds are listed. For fuel oil, there is a factor for total POM as well as for individual POM HAPs. These were conservatively summed (all included in the HAP total).

ALBANY, KY NATURAL GAS FIRED EMERGENCY GENERATOR (024)

Reviewed 11/16/22

Generator Emissions - Natural Gas

Annual Hours of Operation:	500	hr/yr
Generator Capacity (Output):	150	kW
	228	hp
Heating Value for Natural Gas=	1000	Btu/ft3

Pollutant	Natural Gas-fired Generators			Potential Emissions			
	(lb/MMBtu) [1]	(lb/hp-hr) [2, 3]	grams/bhp-hr [4]	(lb/hr)	(lb/yr)	(tpy)	Emission Factor Source
NOx			2.00E+00	1.00	502.20	0.251	Manufacturer's Data
CO			4.00E+00	2.01	1004.41	0.502	Manufacturer's Data
PM_{10}	9.50E-03	6.65E-05		1.52E-02	7.58	3.79E-03	AP-42, Table 3.2-2 (08/00)
$PM_{2.5}$	9.50E-03	6.65E-05		1.52E-02	7.58	3.79E-03	AP-42, Table 3.2-2 (08/00)
SO_2	5.88E-04	4.12E-06		9.38E-04	0.47	2.35E-04	AP-42, Table 3.2-2 (08/00)
VOC			1.00E+00	0.50	251.10	0.126	Manufacturer's Data
1,1,2,2-Tetrachloroethane	4.00E-05	2.80E-07		6.38E-05	3.19E-02	1.60E-05	AP-42, Table 3.2-2 (08/00)
1,1,2-Trichloroethane	3.18E-04	2.23E-06		5.08E-04	2.54E-01	1.27E-04	AP-42, Table 3.2-2 (08/00)
1,1-Dichloroethane	2.36E-05	1.65E-07		3.77E-05	1.88E-02	9.42E-06	AP-42, Table 3.2-2 (08/00)
1,2,3-Trimethylbenzene	2.30E-05	1.61E-07		3.67E-05	1.84E-02	9.18E-06	AP-42, Table 3.2-2 (08/00)
1,2,4-Trimethylbenzene	1.43E-05	1.00E-07		2.28E-05	1.14E-02	5.71E-06	AP-42, Table 3.2-2 (08/00)
1,2-Dichloroethane	2.36E-05	1.65E-07		3.77E-05	1.88E-02	9.42E-06	AP-42, Table 3.2-2 (08/00)
1,2-Dichloropropane	2.69E-05	1.88E-07		4.29E-05	2.15E-02	1.07E-05	AP-42, Table 3.2-2 (08/00)
1,3,5-Trimethylbenzene	3.38E-05	2.37E-07		5.39E-05	2.70E-02	1.35E-05	AP-42, Table 3.2-2 (08/00)
1,3-Butadiene	2.67E-04	1.87E-06		4.26E-04	2.13E-01	1.07E-04	AP-42, Table 3.2-2 (08/00)
1,3-Dichloropropene	2.64E-05	1.85E-07		4.21E-05	2.11E-02	1.05E-05	AP-42, Table 3.2-2 (08/00)
2,2,4-Trimethylpentane	3.32E-05	2.32E-07		5.30E-05	2.65E-02	1.32E-05	AP-42, Table 3.2-2 (08/00)
2-Methylnaphthalene	2.50E-04	1.75E-06		3.99E-04	2.00E-01	9.98E-05	AP-42, Table 3.2-2 (08/00)
Acenaphthene	1.25E-06	8.75E-09		2.00E-06	9.98E-04	4.99E-07	AP-42, Table 3.2-2 (08/00)
Acenaphthylene	5.53E-06	3.87E-08		8.83E-06	4.41E-03	2.21E-06	AP-42, Table 3.2-2 (08/00)
Acetaldehyde	8.36E-03	5.85E-05		1.33E-02	6.67E+00	3.34E-03	AP-42, Table 3.2-2 (08/00)
Acrolein	5.14E-03	3.60E-05		8.20E-03	4.10E+00	2.05E-03	AP-42, Table 3.2-2 (08/00)
Benzene	4.40E-04	3.08E-06		7.02E-04	3.51E-01	1.76E-04	AP-42, Table 3.2-2 (08/00)
Benzo(b)fluoranthene	1.66E-07	1.16E-09		2.65E-07	1.32E-04	6.62E-08	AP-42, Table 3.2-2 (08/00)
Benzo(e)pyrene	4.15E-07	2.91E-09		6.62E-07	3.31E-04	1.66E-07	AP-42, Table 3.2-2 (08/00)
Benzo(g,h,i)perylene	4.14E-07	2.90E-09		6.61E-07	3.30E-04	1.65E-07	AP-42, Table 3.2-2 (08/00)
Biphenyl	2.12E-04	1.48E-06		3.38E-04	1.69E-01	8.46E-05	AP-42, Table 3.2-2 (08/00)
Butane	5.41E-04	3.79E-06		8.63E-04	4.32E-01	2.16E-04	AP-42, Table 3.2-2 (08/00)
Butyr/Isobutyraldehyde	1.01E-04	7.07E-07		1.61E-04	8.06E-02	4.03E-05	AP-42, Table 3.2-2 (08/00)
Carbon Tetrachloride	3.67E-05	2.57E-07		5.86E-05	2.93E-02	1.46E-05	AP-42, Table 3.2-2 (08/00)
Chlorobenzene	3.04E-05	2.13E-07		4.85E-05	2.43E-02	1.21E-05	AP-42, Table 3.2-2 (08/00)
Chloroform	2.85E-05	2.00E-07		4.55E-05	2.27E-02	1.14E-05	AP-42, Table 3.2-2 (08/00)
Chrysene	6.93E-07	4.85E-09		1.11E-06	5.53E-04	2.77E-07	AP-42, Table 3.2-2 (08/00)
Cyclopentane	2.27E-04	1.59E-06		3.62E-04	1.81E-01	9.06E-05	AP-42, Table 3.2-2 (08/00)
Ethane	1.05E-01	7.35E-04		1.68E-01	8.38E+01	4.19E-02	AP-42, Table 3.2-2 (08/00)
Ethylbenzene	3.97E-05	2.78E-07		6.34E-05	3.17E-02	1.58E-05	AP-42, Table 3.2-2 (08/00)
Ethylene Dibromide	4.43E-05	3.10E-07		7.07E-05	3.54E-02	1.77E-05	AP-42, Table 3.2-2 (08/00)
Fluoranthene	1.11E-06	7.77E-09		1.77E-06	8.86E-04	4.43E-07	AP-42, Table 3.2-2 (08/00)
Fluorene	5.67E-06	3.97E-08		9.05E-06	4.52E-03	2.26E-06	AP-42, Table 3.2-2 (08/00)
Formaldehyde	5.28E-02	3.70E-04		8.43E-02	4.21E+01	2.11E-02	AP-42, Table 3.2-2 (08/00)
Methanol	2.50E-03	1.75E-05		3.99E-03	2.00E+00	9.98E-04	AP-42, Table 3.2-2 (08/00)
Methylcyclohexane	1.23E-03	8.61E-06		1.96E-03	9.82E-01	4.91E-04	AP-42, Table 3.2-2 (08/00)
Methylene Chloride	2.00E-05	1.40E-07		3.19E-05	1.60E-02	7.98E-06	AP-42, Table 3.2-2 (08/00)
n-Hexane	1.11E-03	7.77E-06		1.77E-03	8.86E-01	4.43E-04	AP-42, Table 3.2-2 (08/00)
n-Nonane	1.10E-04	7.70E-07		1.76E-04	8.78E-02	4.39E-05	AP-42, Table 3.2-2 (08/00)
n-Octane	3.51E-04	2.46E-06		5.60E-04	2.80E-01	1.40E-04	AP-42, Table 3.2-2 (08/00)
n-Pentane	2.60E-03	1.82E-05		4.15E-03	2.07E+00	1.04E-03	AP-42, Table 3.2-2 (08/00)
Naphthalene	7.44E-05	5.21E-07		1.19E-04	5.94E-02	2.97E-05	AP-42, Table 3.2-2 (08/00)
PAH	2.69E-05	1.88E-07		4.29E-05	2.15E-02	1.07E-05	AP-42, Table 3.2-2 (08/00)
Phenanthrene	1.04E-05	7.28E-08		1.66E-05	8.30E-03	4.15E-06	AP-42, Table 3.2-2 (08/00)
Phenol	2.40E-05	1.68E-07		3.83E-05	1.92E-02	9.58E-06	AP-42, Table 3.2-2 (08/00)
Propane	4.19E-02	2.93E-04		6.69E-02	3.34E+01	1.67E-02	AP-42, Table 3.2-2 (08/00)
Pyrene	1.36E-06	9.52E-09		2.17E-06	1.09E-03	5.43E-07	AP-42, Table 3.2-2 (08/00)
Styrene	2.36E-05	1.65E-07		3.77E-05	1.88E-02	9.42E-06	AP-42, Table 3.2-2 (08/00)
Tetrachloroethane	2.48E-06	1.74E-08		3.96E-06	1.98E-03	9.90E-07	AP-42, Table 3.2-2 (08/00)
Toluene	4.08E-04	2.86E-06		6.51E-04	3.26E-01	1.63E-04	AP-42, Table 3.2-2 (08/00)
Vinyl Chloride	1.49E-05	1.04E-07		2.38E-05	1.19E-02	5.95E-06	AP-42, Table 3.2-2 (08/00)
Xylene	1.84E-04	1.29E-06		2.94E-04	1.47E-01	7.34E-05	AP-42, Table 3.2-2 (08/00)

Notes:

[1] AP-42 Section 3.2 (08/2000), Table 3.2-2, Emission Factors for Uncontrolled Natural Gas Engines (4-Stroke Lean Burn Engine).

[2] Assume a brake specific fuel consumption of 7,000 Btu/hp-hr per AP-42 Section 3.3 (10/1996), Table 3.3-1, Footnote a.

[3] Per EPA Certificate of Conformity for NSPS JJJJ Emergency SI Engine > 130 hp

[4] Manufacturer's Information for Model 150

GHG Pollutant	Uncontrolled Emission Factor for Natural Gas (lb/MMBtu)	Uncontrolled Emission Factor for Natural Gas (lb/hp-hr)		Total Emissions (lb/hr)	Total Emissions (lb/yr)	Total Emissions (TPY)
CO_2	1.17E+02	8.17E-01		186.4	93193.7	46.6
Methane	2.20E-03	1.54E-05		3.52E-03	1.76E+00	8.79E-04
N_2O	2.20E-04	1.54E-06		3.52E-04	1.76E-01	8.79E-05
CO_2e				186.6	93290.1	46.6

1. GHG factors from Tables C-1 through C-2 of EPA's GHG Reporting Rule.

2. CO_2e = CO_2 Emissions + CH_4 Emissions * GWP of CH_4 + N_2O Emissions * GWP of N_2O

GWP for CH_4	25	(Table A-1 of 40 CFR Part 98)
GWP for N_2O	298	(Table A-1 of 40 CFR Part 98)

ALBANY, KY FEEDMILL

INSIGNIFICANT NATURAL GAS FIRED HEATERS POTENTIAL EMISSIONS

Reviewed 11/16/22

Potential Ratings:

Total Heater Rating =	4	MMBtu/hr
Maximum Natural Gas Usage =	35.04	$mmft^3/yr$
Potential Hours of Operation =	8760	hrs/year

Conversions:

Heating Value for Natural Gas=	1000	Btu/ft3
Dekatherm =	999,761	Btu

					Potential Emissions (Uncontrolled=Controlled)		
Pollutant	**CAS No.**	**Uncontrolled Emission Factor for Natural Gas ($lb/mmft^3$)**	**Ref**	**HAP (Y or N)**	**Total Emissions (lb/hr)**	**Total Emissions (lb/yr)**	**Total Emissions (TPY)**
PM	N/A - PM	7.6	1		0.03	266.30	0.13
PM-10	N/A - PM-10	7.6	1		0.03	266.30	0.13
PM-2.5	N/A - PM-2.5	7.6	1		0.03	266.30	0.13
SO_2	N/A - SO2	0.6000	1		0.00	21.02	0.01
NOx	N/A - NOx	50	1		0.20	1,752.00	0.88
VOCs	N/A - VOC	5.500	1		0.02	192.72	0.10
CO	N/A - CO	84	1		0.34	2,943.36	1.47
2-Methylnaphthalene	91-57-6	2.40E-05	1	Y	9.60E-08	8.41E-04	4.20E-07
3-Methylchloranthrene	56-49-5	1.80E-06	1	Y	7.20E-09	6.31E-05	3.15E-08
7,12-Dimethylbenz(a)anathracene	57-97-6	1.60E-05	1	Y	6.40E-08	5.61E-04	2.80E-07
Acenaphthene	83-32-9	1.80E-06	1	Y	7.20E-09	6.31E-05	3.15E-08
Acenaphtylene	203-96-8	1.80E-06	1	Y	7.20E-09	6.31E-05	3.15E-08
Anthracene	120-12-7	2.40E-06	1	Y	9.60E-09	8.41E-05	4.20E-08
Benz(a)anthracene	56-55-3	1.80E-06	1	Y	7.20E-09	6.31E-05	3.15E-08
Benzene	71-43-2	2.10E-03	1	Y	8.40E-06	7.36E-02	3.68E-05
Benzo(a)pyrene	50-32-8	1.20E-06	1	Y	4.80E-09	4.20E-05	2.10E-08
Benzo(b)fluoranthene	205-99-2	1.80E-06	1	Y	7.20E-09	6.31E-05	3.15E-08
Benzo(g,h,I)perylene	191-24-2	1.20E-06	1	Y	4.80E-09	4.20E-05	2.10E-08
Benzo(k)fluoranthene	205-82-3	1.80E-06	1	Y	7.20E-09	6.31E-05	3.15E-08
Butane	106-97-8	2.1	1		8.40E-03	7.36E+01	3.68E-02
Chrysene	218-01-9	1.80E-06	1	Y	7.20E-09	6.31E-05	3.15E-08
Dibenz(a,h)anthracene	53-70-3	1.20E-06	1	Y	4.80E-09	4.20E-05	2.10E-08
p-dichlorobenzene	106-46-7	1.20E-03	1	Y	4.80E-06	4.20E-02	2.10E-05
Ethane	74-84-0	3.1	1		1.24E-02	1.09E+02	5.43E-02
Fluoranthene	206-44-0	3.00E-06	1	Y	1.20E-08	1.05E-04	5.26E-08
Fluorene	86-73-7	2.80E-06	1	Y	1.12E-08	9.81E-05	4.91E-08
Formaldehyde	50-00-0	7.50E-02	1	Y	3.00E-04	2.63E+00	1.31E-03
Hexane	110-54-3	1.8	1	Y	7.20E-03	6.31E+01	3.15E-02
Indeno(1,2,3-cd)pyrene	193-39-5	1.80E-06	1	Y	7.20E-09	6.31E-05	3.15E-08
Naphthalene	91-20-3	6.10E-04	1	Y	2.44E-06	2.14E-02	1.07E-05
Pentane	109-66-0	2.6	1		1.04E-02	9.11E+01	4.56E-02
Phenanathrene	85-01-8	1.70E-05	1	Y	6.80E-08	5.96E-04	2.98E-07
Propane	74-98-6	1.6	1		6.40E-03	5.61E+01	2.80E-02
Pyrene	129-00-0	5.00E-06	1	Y	2.00E-08	1.75E-04	8.76E-08
Toluene	108-88-3	3.40E-03	1	Y	1.36E-05	1.19E-01	5.96E-05
Arsenic	7440-38-2	2.00E-04	1	Y	8.00E-07	7.01E-03	3.50E-06
Barium	7440-39-3	4.40E-03	1		1.76E-05	1.54E-01	7.71E-05
Beryllium	7440-41-7	1.20E-05	1	Y	4.80E-08	4.20E-04	2.10E-07
Cadmium	7440-43-9	1.10E-03	1	Y	4.40E-06	3.85E-02	1.93E-05
Chromium Compounds	7440-47-3	1.40E-03	1	Y	5.60E-06	4.91E-02	2.45E-05
Chromium VI	N/A - CRVI	1.40E-03	1	Y	5.60E-06	4.91E-02	2.45E-05
Cobalt	7440-48-4	8.40E-05	1	Y	3.36E-07	2.94E-03	1.47E-06
Copper	7440-50-8	8.50E-04	1		3.40E-06	2.98E-02	1.49E-05
Lead	7439-92-1	5.00E-04	1	Y	2.00E-06	1.75E-02	8.76E-06
Manganese	7439-96-5	3.80E-04	1	Y	1.52E-06	1.33E-02	6.66E-06
Mercury	7439-97-6	2.60E-04	1	Y	1.04E-06	9.11E-03	4.56E-06
Molybdenum	7439-98-7	1.10E-03	1		4.40E-06	3.85E-02	1.93E-05
Nickel	7440-02-0	2.10E-03	1	Y	8.40E-06	7.36E-02	3.68E-05
Selenium	7782-49-2	2.40E-05	1	Y	9.60E-08	8.41E-04	4.20E-07
Vanadium	7440-62-2	2.30E-03	1		9.20E-06	8.06E-02	4.03E-05
Zinc	7440-66-6	2.90E-02	1		1.16E-04	1.02E+00	5.08E-04
Total HAP					7.56E-03	6.62E+01	3.31E-02

GHG Pollutant	**Uncontrolled Emission Factor for Natural Gas (kg/MMBtu)**	**Ref**	**Total Emissions (lb/hr)**	**Total Emissions (lb/yr)**	**Total Emissions (TPY)**
CO_2	5.30E+01	2	467.14	4,092,116.30	2,046.06
Methane	1.00E-03	2	0.01	77.18	0.04
N_2O	1.00E-04	2	0.00	7.72	0.00
CO_2e		3	467.62	4,096,345.80	2,048.17

1. AP -42; Compilation of Air Pollutant Emission Factors Vol. 1 - Stationary Sources USEPA, 5th ed. Section 1.4, 7/98 - Small Boiler with Low NOx/ Flue Gas Recirculation (assuming CRVI = CRIII)
2. GHG factors from Tables C-1 through C-2 of EPA's GHG Reporting Rule.
3. CO_2e = CO_2 Emissions + CH_4 Emissions * GWP of CH_4 + N_2O Emissions * GWP of N_2O

GWP for CH_4	25	(Table A-1 of 40 CFR Part 98)
GWP for N_2O	298	(Table A-1 of 40 CFR Part 98)

Diesel Tank D-1 Reviewed 11/16/22

Volume of tank; 1,000 gallons

- Horizontal or Vertical tank; Horizontal
- Dimensions of tank; 46” dia. X 142” length

Maximum Throughput Per Year: 32,000 gal

Potential Emissions:

lbs/yr	0.90
tpy	4.51E-04

Emissions Determined from Tanks Calcs

Tank Summary for PTE

Site: Cobb Albany, Cobb Feed Mill

Equations for this site: After 2019 AP-42 revisions H/D ratio: Default 0.5

Tank ID	Product	Throughput (gal)	Estimated standing losses (lbs)	Estimated working losses (lbs)	Total estimated emissions (lbs)
Diesel Tank	Diesel	31999.99992	0.20826163	0.69352517	0.9017868

Division for Air Quality
300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007DD

Insignificant Activities

___ Section DD.1: Table of Insignificant Activities
___ Section DD.2: Signature Block
___ Section DD.3: Notes, Comments, and Explanations

Source Name: Cobb-Vantress Feed Mill

KY EIS (AFS) #: 21- 053-00007

Permit #: S-13-100-R3

Agency Interest (AI) ID: 119204

Date: 3/20/2024

Section DD.1: Table of Insignificant Activities

*Identify each activity with a unique Insignificant Activity number (IA #); for example: 1, 2, 3… etc.

Insignificant Activity #	Description of Activity including Rated Capacity	Serial Number or Other Unique Identifier	Applicable Regulation(s)	Calculated Emissions
IA #1 (EU 021)	Alimet Tank	EU-021	NA	NA
IA #2 (EU-022)	Choline Chloride Tank	EU-022	NA	NA
IA #3 (EU-023)	Fat Tank	EU-023	NA	NA
IA #4	Natural Gas Direct Fired Heaters Constructed: 2018 (truck wash bay; 4 mmbtu/hr	-	401 KAR 59:010	Emissions considered negligible
IA #5	Diesel Tank (1000 gal) Constructed: 2018	-	401 KAR 59:010	Emissions considered negligible

Insignificant Activity #	Description of Activity including Rated Capacity	Serial Number or Other Unique Identifier	Applicable Regulation(s)	Calculated Emissions
IA #6 (EU-003)	Grain Silos (Enclosed)	EU-003	401 KAR 59:010, 52:030(6)	Emissions considered negligible
IA #7 (EU-007)	Ground Corn silos (Enclosed System)	EU-007	401 KAR 59:010, 52:030(6)	Emissions considered negligible
IA #8 (EU-009)	Major Scale (Enclosed System)	EU-009	401 KAR 59:010, 52:030(6)	Emissions considered negligible
IA #9 (EU-010)	Minor Scale (Enclosed System)	EU-010	401 KAR 59:010, 52:030(6)	Emissions considered negligible
IA #10 (EU-025)	Liquid Storage Tank	EU-025	401 KAR 59:010, 52:030(6), 401 KAR 63:020	Emissions considered negligible

Section DD.2: Signature Block

I, THE UNDERSIGNED, HEREBY CERTIFY UNDER PENALTY OF LAW, THAT I AM A RESPONSIBLE OFFICIAL, AND THAT I HAVE PERSONALLY EXAMINED, AND AM FAMILIAR WITH, THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ITS ATTACHMENTS. BASED ON MY INQUIRY OF THOSE INDIVIDUALS WITH PRIMARY RESPONSIBILITY FOR OBTAINING THE INFORMATION, I CERTIFY THAT THE INFORMATION IS ON KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE OR INCOMPLETE INFORMATION, INCLUDING THE POSSIBILITY OF FINE OR IMPRISONMENT.

By:

Randy Harrington

Authorized Signature

4/1/2024

Date

Randy Harrington

Type/Print Name of Siguatory

Sr. Feed Mill Manager

Title of Siguatory