



January 13, 2017

Attn: Ms. Beverly McKeone  
West Virginia DEP  
Division of Air Quality, Permitting Section  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

**Re: Permit to Construct, Class II Administrative Update, After-the-Fact  
Pilgrim's Pride Corporation Poultry Feed Mill and Hatchery  
Moorefield, Hardy County, West Virginia  
Permit No. R13-1506C**

Ms. McKeone:

On behalf of our client Pilgrim's Pride Corporation, transmitted herewith is one (1) hard copy, as well as two CD's with an electronic copy, of a completed air permit application (applicable NSR air permit forms, attachments and permitting fee) for the Pilgrim's Pride Corporation – Moorefield Feed Mill and Hatchery Complex located in Moorefield, West Virginia. The Complex consists of the Feed Mill and co-located Hatchery and Truck Shop. As part of this permitting action, applicable previously undocumented emission sources at the Hatchery and Truck Shop shall be incorporated into the existing Feed Mill Permit. We prefer a single air permit issued to the Complex, given the proximity of the Feed Mill, Hatchery and Truck Shop. These operations are located on a contiguous tract as shown in **Attachment E**.

This application is being made to construct/install a proposed 1,000 KW Emergency Generator at the Hatchery as well as to address items which were identified during an internal review of Facility operations. These items include:

- Information on the following Feed Mill undocumented source:
  - Main Ingredient Receiving Distribution System (2CS) and associated baghouse
- To show that there are multiple (two total) pneumatic receiving baghouses associated with the Pneumatic Receiving Systems (4S) with exterior emissions (current Permit only lists one baghouse);
- To address discrepancies in the permitted Feed Loadout (11S) rate (currently permitted at 60 tph), with the actual capacity loadout rate of approximately 150 tph;
- Information, applicable forms and emissions calculations are included for other existing emission sources in order for DEP to make a permit determination:
  - Hatchery 500 KW Emergency Generator;
  - Hatchery Water Heater (natural gas fired water heater for Hatchery use/sanitation) – believed to be an insignificant source that does not require permitting;
  - Hatchery Comfort Heating Units (natural gas fired heating units that provide space/comfort heating for the Hatchery) – believed to be insignificant sources that do not require permitting;

Ms. Beverly McKeone

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- Two (2) Truck Shop Used Oil Heaters (heaters that combust used oil generated from fleet vehicle maintenance activities to provide space heating of the Truck Shop during cold weather) – believed to be insignificant sources that do not require permitting.
- To show the Facility’s correct NAICS codes.

With the exception of the proposed 1,000 KW Hatchery Emergency Generator, emissions increases resulting from the changes described herein, meet the definition of “Class II administrative update” of 45CSR13.

Information, application forms and attachments focus only on changes with previously permitted information (i.e., not resubmitting forms/information for sources which have not changed since current Permit/previous applications).

We request that Current Permit Condition 4.4.5 be modified as follows: “For determining compliance with the PM emission limitations established under permit condition 4.1.4, the permittee shall maintain monthly records of ingredients received and finished feed shipped. These records shall be maintained on site for a period of no less than five (5) years, and made available to the Director of the Division of Air Quality or his/her duly authorized representative upon request.” The current wording of this Condition requires undue burden (i.e., keeping records of the date, time and location of deliveries). We believe that keeping monthly records of the total ingredients received and total finished feed shipped is sufficient to show compliance with Permit Condition 4.1.4.

Although not indicated in the current Air Permit, please note the Feed Mill is subject to the Feed Manufacturing NESHAP (40 CFR 63, Subpart 7D) as the Mill is an “existing source” as defined in the NESHAP. The regulatory applicability is shown in **Attachment D**.

Please contact myself at (770) 844-0037 (tsamples@wheeinc.com), or Mitch Burns at (304) 538-5315 (mitch.burns@pilgrims.com) if you should have any questions concerning the attached information.

Sincerely,

Woodruff & Howe Environmental Engineering, Inc.



Trent Samples, P.E.  
Senior Engineer

Attachments

Cc: Mitch Burns (Pilgrim’s – via email)

Pilgrim's Pride Corporation  
Moorefield Feedmill, Hatchery and Truck Shop  
Moorefield, West Virginia

**Permit Application Table of Contents**  
**January 5, 2017**

Permit Fee of \$1,000.00 made payable to "West Virginia Air Pollution Control Commission Fund"

**Application for NSR Permit**

**Attachments**

- Attachment 1 – Facility Emission Unit ID List and Emissions Information
- Attachment 2 – EPA Engine Certification Data
- Attachment A – Business Registration
- Attachment B – Area Map (USGS Map)
- Attachment C – Schedule of Installation, Change and Start-Up
- Attachment D – Applicable Regulations
- Attachment E – Plot Plan
- Attachment F – Process Flow Diagram
- Attachment G – Facility Process Descriptions
- Attachment H – Not Included - Applicable MSDS previously submitted
- Attachment I – Emission Units Table
- Attachment J – Emission Points Data Summary Sheet (Table 1 and Table 2)
- Attachment K – Not Included – Fugitive Emissions Data Sheet previously submitted and Current
- Attachment L – Emission Unit Data Sheets – General, Indirect Heat Exchanger, Generators
- Attachment M – Air Pollution Control Device Sheets
- Attachment N – Emission Inventory Calculations
- Attachment O – Monitoring, Recordkeeping, Reporting and Testing Plans
- Attachment P – Public Notice Class I Legal Advertisement
- Attachment S – Manufacturer Information



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**DIVISION OF AIR QUALITY**

601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
(304) 926-0475  
[www.dep.wv.gov/daq](http://www.dep.wv.gov/daq)

**APPLICATION FOR NSR PERMIT  
AND  
TITLE V PERMIT REVISION  
(OPTIONAL)**

PLEASE CHECK ALL THAT APPLY TO **NSR (45CSR13)** (IF KNOWN):

- CONSTRUCTION**     **MODIFICATION**     **RELOCATION**  
 **CLASS I ADMINISTRATIVE UPDATE**     **TEMPORARY**  
 **CLASS II ADMINISTRATIVE UPDATE**     **AFTER-THE-FACT**

PLEASE CHECK TYPE OF **45CSR30 (TITLE V)** REVISION (IF ANY):

- ADMINISTRATIVE AMENDMENT**     **MINOR MODIFICATION**  
 **SIGNIFICANT MODIFICATION**

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS **ATTACHMENT S** TO THIS APPLICATION

**FOR TITLE V FACILITIES ONLY:** Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

**Section I. General**

1. Name of applicant (as registered with the WV Secretary of State's Office): <b>Pilgrim's Pride Corporation</b>		2. Federal Employer ID No. (FEIN): 75-1285071	
3. Name of facility (if different from above): <b>Moorefield Feed Mill and Hatchery</b>		4. The applicant is the: <input type="checkbox"/> <b>OWNER</b> <input type="checkbox"/> <b>OPERATOR</b> <input checked="" type="checkbox"/> <b>BOTH</b>	
5A. Applicant's mailing address: <b>P.O. Box 539 Moorefield, WV 26836</b>		5B. Facility's present physical address: <b>Rt. 220 South, Industrial Park Road Moorefield, West Virginia 26836</b>	
6. <b>West Virginia Business Registration.</b> Is the applicant a resident of the State of West Virginia? <input checked="" type="checkbox"/> <b>YES</b> <input type="checkbox"/> <b>NO</b> – If <b>YES</b> , provide a copy of the <b>Certificate of Incorporation/Organization/Limited Partnership</b> (one page) including any name change amendments or other Business Registration Certificate as <b>Attachment A</b> . – If <b>NO</b> , provide a copy of the <b>Certificate of Authority/Authority of L.L.C./Registration</b> (one page) including any name change amendments or other Business Certificate as <b>Attachment A</b> .			
7. If applicant is a subsidiary corporation, please provide the name of parent corporation:			
8. Does the applicant own, lease, have an option to buy or otherwise have control of the <i>proposed site</i> ? <input checked="" type="checkbox"/> <b>YES</b> <input type="checkbox"/> <b>NO</b> – If <b>YES</b> , please explain: <b>Applicant owns the Site.</b> – If <b>NO</b> , you are not eligible for a permit for this source.			
9. Type of plant or facility (stationary source) to be <b>constructed, modified, relocated, administratively updated</b> or <b>temporarily permitted</b> (e.g., coal preparation plant, primary crusher, etc.): Poultry Feed Mill, Poultry Hatchery, Poultry Fleet Vehicle Maintenance Shop		10. North American Industry Classification System (NAICS) code for the facility: Feed Mill – 311119 Hatchery - 112340 Truck Shop - 484220	
11A. DAQ Plant ID No. (for existing facilities only): <b>031 – 00005</b>		11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): <b>R13-1506C</b>	

**All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.**

<p>12A.</p> <ul style="list-style-type: none"> <li>For <b>Modifications, Administrative Updates</b> or <b>Temporary permits</b> at an existing facility, please provide directions to the <i>present location</i> of the facility from the nearest state road;</li> <li>For <b>Construction</b> or <b>Relocation permits</b>, please provide directions to the <i>proposed new site location</i> from the nearest state road. Include a <b>MAP</b> as <b>Attachment B</b>.</li> </ul> <p><b>From downtown Moorefield, head south on West Virginia Route 220 for approximately 1.5 miles to Moorefield Industrial Park Road on the right.</b></p>		
12.B. New site address (if applicable):	12C. Nearest city or town: <b>Moorefield</b>	12D. County: <b>Hardy</b>
12.E. UTM Northing (KM): <b>4,323.615</b>	12F. UTM Easting (KM): <b>674.450</b>	12G. UTM Zone: <b>17</b>
<p>13. Briefly describe the proposed change(s) at the facility:  <b>Incorporate co-located emission sources at the Hatchery and Truck Shop into the existing Feed Mill Permit, as applicable. Hatchery proposes installation of new emergency generator. Minor update to currently permitted emission units 4S and 11S.</b></p>		
14A. Provide the date of anticipated installation or change: 02/01/2017 <ul style="list-style-type: none"> <li>If this is an <b>After-The-Fact</b> permit application, provide the date upon which the proposed change did happen:     /     /</li> </ul>	14B. Date of anticipated Start-Up if a permit is granted: 03/01/2017	
14C. Provide a <b>Schedule</b> of the planned <b>Installation of/Change</b> to and <b>Start-Up</b> of each of the units proposed in this permit application as <b>Attachment C</b> (if more than one unit is involved). <b>See Attachment C.</b>		
15. Provide maximum projected <b>Operating Schedule</b> of activity/activities outlined in this application: Hours Per Day 24      Days Per Week 7      Weeks Per Year 52		
16. Is demolition or physical renovation at an existing facility involved? <input type="checkbox"/> <b>YES</b> <input checked="" type="checkbox"/> <b>NO</b>		
17. <b>Risk Management Plans.</b> If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see <a href="http://www.epa.gov/ceppo">www.epa.gov/ceppo</a> ), submit your <b>Risk Management Plan (RMP)</b> to U. S. EPA Region III.		
18. <b>Regulatory Discussion.</b> List all Federal and State air pollution control regulations that you believe are applicable to the proposed process ( <i>if known</i> ). A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance ( <i>if known</i> ). Provide this information as <b>Attachment D. See Attachment D.</b>		
<b>Section II. Additional attachments and supporting documents.</b>		
19. Include a check payable to WVDEP – Division of Air Quality with the appropriate <b>application fee</b> (per 45CSR22 and 45CSR13).		
20. Include a <b>Table of Contents</b> as the first page of your application package.		
21. Provide a <b>Plot Plan</b> , e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as <b>Attachment E</b> (Refer to <b>Plot Plan Guidance</b> ) . <ul style="list-style-type: none"> <li>Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).</li> </ul>		
22. Provide a <b>Detailed Process Flow Diagram(s)</b> showing each proposed or modified emissions unit, emission point and control device as <b>Attachment F</b> .		
23. Provide a <b>Process Description</b> as <b>Attachment G</b> . <ul style="list-style-type: none"> <li>Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).</li> </ul>		
<b>All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.</b>		

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H**.  
 – For chemical processes, provide a MSDS for each compound emitted to the air. **Applicable MSDS previously submitted.**

25. Fill out the **Emission Units Table** and provide it as **Attachment I**.

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J**.

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K**. **Current info previously submitted.**

28. Check all applicable **Emissions Unit Data Sheets** listed below:

<input type="checkbox"/> Bulk Liquid Transfer Operations	<input type="checkbox"/> Haul Road Emissions	<input type="checkbox"/> Quarry
<input type="checkbox"/> Chemical Processes	<input type="checkbox"/> Hot Mix Asphalt Plant	<input type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities
<input type="checkbox"/> Concrete Batch Plant	<input type="checkbox"/> Incinerator	<input type="checkbox"/> Storage Tanks
<input type="checkbox"/> Grey Iron and Steel Foundry	<input checked="" type="checkbox"/> Indirect Heat Exchanger	

General Emission Unit, specify: Pneumatic Receiving Systems, Feed Shipping, Hatchery Emergency Generators, Hatchery Hot Water Boiler, Hatchery Comfort Heating Units, Truck Shop Waste Oil Heaters

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L**.

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

<input type="checkbox"/> Absorption Systems	<input checked="" type="checkbox"/> Baghouse	<input type="checkbox"/> Flare
<input type="checkbox"/> Adsorption Systems	<input type="checkbox"/> Condenser	<input type="checkbox"/> Mechanical Collector
<input type="checkbox"/> Afterburner	<input type="checkbox"/> Electrostatic Precipitator	<input type="checkbox"/> Wet Collecting System

Other Collectors, specify

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M**.

30. Provide all **Supporting Emissions Calculations** as **Attachment N**, or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O**.

➤ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and **Example Legal Advertisement** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33. **Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?

YES     NO

➤ If **YES**, identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's "**Precautionary Notice – Claims of Confidentiality**" guidance found in the **General Instructions** as **Attachment Q**.

### **Section III. Certification of Information**

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

<input type="checkbox"/> Authority of Corporation or Other Business Entity	<input type="checkbox"/> Authority of Partnership
<input type="checkbox"/> Authority of Governmental Agency	<input type="checkbox"/> Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R**.

**All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.**

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

**Certification of Truth, Accuracy, and Completeness**

I, the undersigned  **Responsible Official** /  **Authorized Representative**, hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

**Compliance Certification**

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE  DATE: 1-6-17  
(Please use blue ink) (Please use blue ink)

35B. Printed name of signee: <b>Peyton Umstot</b>		35C. Title: <b>Complex Manager</b>
35D. E-mail: <b>Peyton.Umstot@pilgrims.com</b>	35E. Phone: <b>(304) 538-7811</b>	35F. FAX:
36A. Printed name of contact person (if different from above): <b>Mitch Burns</b>		36B. Title: <b>Complex Environmental Manager</b>
36C. E-mail: <b>Mitch.Burns@pilgrims.com</b>	36D. Phone: <b>(304) 538-5315</b>	36E. FAX:

**PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:**

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Attachment A: Business Certificate</li> <li><input checked="" type="checkbox"/> Attachment B: Map(s)</li> <li><input checked="" type="checkbox"/> Attachment C: Installation and Start Up Schedule</li> <li><input checked="" type="checkbox"/> Attachment D: Regulatory Discussion</li> <li><input checked="" type="checkbox"/> Attachment E: Plot Plan</li> <li><input checked="" type="checkbox"/> Attachment F: Detailed Process Flow Diagram(s)</li> <li><input checked="" type="checkbox"/> Attachment G: Process Description</li> <li><input type="checkbox"/> Attachment H: Material Safety Data Sheets (MSDS)</li> <li><input checked="" type="checkbox"/> Attachment I: Emission Units Table</li> <li><input checked="" type="checkbox"/> Attachment J: Emission Points Data Summary Sheet</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Attachment K: Fugitive Emissions Data Summary Sheet</li> <li><input checked="" type="checkbox"/> Attachment L: Emissions Unit Data Sheet(s)</li> <li><input checked="" type="checkbox"/> Attachment M: Air Pollution Control Device Sheet(s)</li> <li><input checked="" type="checkbox"/> Attachment N: Supporting Emissions Calculations</li> <li><input checked="" type="checkbox"/> Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans</li> <li><input checked="" type="checkbox"/> Attachment P: Public Notice</li> <li><input type="checkbox"/> Attachment Q: Business Confidential Claims</li> <li><input type="checkbox"/> Attachment R: Authority Forms</li> <li><input type="checkbox"/> Attachment S: Title V Permit Revision Information</li> <li><input checked="" type="checkbox"/> Application Fee</li> </ul> |
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*Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.*

**FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:**

- Forward 1 copy of the application to the Title V Permitting Group and:
- For Title V Administrative Amendments:
  - NSR permit writer should notify Title V permit writer of draft permit,
- For Title V Minor Modifications:
  - Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,
  - NSR permit writer should notify Title V permit writer of draft permit.
- For Title V Significant Modifications processed in parallel with NSR Permit revision:
  - NSR permit writer should notify a Title V permit writer of draft permit,
  - Public notice should reference both 45CSR13 and Title V permits,
  - EPA has 45 day review period of a draft permit.

*All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.*



**Attachment 1 - Facility Emission Unit ID List and Emissions Information**

Pilgrim's Pride Corporation - Feedmill, Hatchery and Truck Shop  
Moorefield, West Virginia

<b>Emission Unit</b>	<b>Emission Unit ID</b>	<b>Emission Point ID</b>	<b>Control Device ID</b>	<b>Emission Control</b>	<b>Description of Emissions Changes over Currently Permitted Rates (if applicable)</b>
<b>Feed Mill</b>					
Boiler 1	1S	1E	-	None	-
Grain Receiving (North Rail Station, South Rail Station and Truck Station)	2AS	2AE	-	Enclosure/ Fugitive Emissions	-
Headhouse and Grain Handling	2BS	2BE	-	Fugitive Emissions	-
Main Ingredient Receiving Distribution System	2CS	2CE	2C	Baghouse	Increase as a result of being a previously unpermitted source.
All Grain Storage (includes Silos 1-4, 6,7, New Silo)	3S	3E	-	None	-
Pneumatic Receiving Systems (Truck Unloading)	4S	4E1, 4E2	4C1, 4C2	(2) Baghouses	Slight increase in emissions (PM increase of < 0.5 tpy) due to slightly different emission calculation methodology over currently permitted rate.
Crusher (Hammermill)	5S	5E	5C	Baghouse	-
Crusher (Hammermill)	6S	6E	6C	Baghouse	-
Crusher (Hammermill)	10S	10E	10C	Baghouse	-
Pellet System	7S	7E	7C	Cyclones	-
Pellet System	9S	9E	9C	Cyclones	-
Boiler 2	8S	8E	-	None	-
Feed Shipping	11S	11E	-	Enclosure/ Fugitive Emissions	Slight increase in hourly emissions rate due to increase in feed loadout rate.
Vehicle Activity <sup>A</sup>	12S	12E	-	Fugitive Emissions	-
<b>Hatchery</b>					
Hatchery Emergency Backup Generator (500 KW)	1H	1HE	-	None	Increase as a result of being a previously unpermitted source.
Hatchery Emergency Backup Generator (1000 KW)	2H	2HE	-	None	New/Proposed Source
Hatchery Hot Water Boiler	3H	2HE	-	None	Increase as a result of being a previously unpermitted source.
Hatchery Comfort Heating Units (currently 31 heating units ranging from 0.10 - 0.54 mmBtu/hr)	4H	3HE	-	None	Increase as a result of being a previously unpermitted source.
<b>Truck Shop</b>					
Truck Shop Used Oil Heater Clean Burn CB-5000 (500,000 Btu/hr)	1TS	1TSE	-	None	Increase as a result of being a previously unpermitted source.
Truck Shop Used Oil Heater Clean Burn CB-2500 (250,000 Btu/hr)	2TS	2TSE	-	None	Increase as a result of being a previously unpermitted source.

Notes:

A = The vast majority of vehicle activity is associated with Feed Mill operations. However, this also includes vehicle activity associated with Hatchery and Truck Shop operations. Fugitive emissions information on file is adequate.



**Attachment 1 - Facility Emission Unit ID List and Emissions Information**

Pilgrim's Pride Corporation - Feedmill, Hatchery and Truck Shop  
Moorefield, West Virginia

Facility Wide Summary Table				
Pollutant	Currently Permitted Maximum Controlled Emissions		Proposed Maximum Controlled Emissions	
	Emission Rate (lbs/hr)	Emission Rate (Tons/yr)	Emission Rate (lbs/hr)	Emission Rate (Tons/yr)
PM	46.52	71.33	51.92	74.64
PM <sub>10</sub>	17.38	23.70	22.73	27.03
PM <sub>2.5</sub>	8.01	22.08	13.35	25.41
NO <sub>x</sub>	4.20	18.40	74.73	41.72
CO	3.52	15.46	19.52	24.00
SO <sub>2</sub>	0.02	0.12	4.71	1.88
VOC	0.24	1.02	5.96	2.77

**Notes:**

- 1) PM emissions shown above include fugitive emissions resulting from vehicle activity on unpaved and paved roadways.
- 2) Combustion emissions (NO<sub>x</sub>, CO, SO<sub>2</sub>, VOC) shown above are for burning natural gas. Currently permitted Boilers (1S, 8S) are also permitted to burn No. 2 Fuel Oil as backup fuel, and there are no changes proposed to the currently permitted fuel oil combustion quantities or emissions.

Attachment 2 - EPA Engine Certification Data  
 Pilgrim's Pride Corporation - Feed Mill, Hatchery and Truck Shop  
 Moorefield, West Virginia

ENGINE_FAMILY	MANUFACTURER	CERTIFICATE_NUMBER	ISSUE_DATE	COMMERCE_INTRODUCTION_DATE	CARRYOVER_ENGINE_FAMILY_NAME	POWER_CATEGORY
GCEXL030.AAD	CMI (CEX)	GCEXL030.AAD-006	31-JUL-2015	01-NOV-2015	CCEXL030.AAD	14 = 560<KW<=2237

APPLICABLE_REGULATION	APPLICABLE_TIER	APPLICABLE_COMPLIANCE_STANDARD	FUEL	FUEL_METER_SYSTEM	USEFUL_LIFE_OF_ENGINE_FAMILY	ENGINE_COMBUSTION_CYCLE
4 = Part 60 only certified to the requirements of part 89	2 = Tier 2	N = Not Applicable	L = 300-500 ppm Low Sulfur Diesel	D = Direct Diesel Injection	C = 10 years / 8,000 hrs	A = 4 Stroke Compression Ignition

Steady State NMHC	Steady State NOX	Steady State NMHC+NOX	Steady State CO	Steady State PM	Steady State CO2	NON_ATD_TYPE
0.24 g/kw-hr	5.67 g/kw-hr	5.9 g/kw-hr	0.7 g/kw-hr	0.13 g/kw-hr	648.4 g/kw-hr	Y = Electronic Control

ENGINE_MODEL	ENGINE_CODE	DISPLACEMENT	CERTIFICATION_FUEL	ENGINE_OPERATION	TEST_PROCEDURE	TEST_TYPE
QST30-G	2717:FR5269	30.48	L = 300-500 ppm Low Sulfur Diesel	C = Constant Speed	2 = Steady-State 5-Mode Cycle	RMT = Ramped-Modal Testing

Emission Factors

PM: 0.13 g/kw-hr      Converted to lb/mmBtu/hr as follows:  $0.13 \text{ g/kw-hr} * (1 \text{ lb}/453.6 \text{ grams}) * (1 \text{ kw}/3412 \text{ Btu/hr}) * 10^6 = 0.084 \text{ lb/mmBtu}$   
 NOx: 5.67 g/kw-hr      Converted to lb/mmBtu/hr as follows:  $5.67 \text{ g/kw-hr} * (1 \text{ lb}/453.6 \text{ grams}) * (1 \text{ kw}/3412 \text{ Btu/hr}) * 10^6 = 3.66 \text{ lb/mmBtu}$   
 CO: 0.7 g/kw-hr      Converted to lb/mmBtu/hr as follows:  $0.7 \text{ g/kw-hr} * (1 \text{ lb}/453.6 \text{ grams}) * (1 \text{ kw}/3412 \text{ Btu/hr}) * 10^6 = 0.45 \text{ lb/mmBtu}$

Source: Data from EPA Large Engines Certification Data for Model Year 2016. Engine information shown above is for proposed Hatchery Generator Engine.

**WEST VIRGINIA  
STATE TAX DEPARTMENT  
BUSINESS REGISTRATION  
CERTIFICATE**

ISSUED TO:  
**PILGRIM'S PRIDE CORPORATION  
1770 PROMONTORY CIR  
GREELEY, CO 80634-9039**

**BUSINESS REGISTRATION ACCOUNT NUMBER: 2306-9994**

This certificate is issued on: **02/10/2015**

*This certificate is issued by  
the West Virginia State Tax Commissioner  
in accordance with Chapter 11, Article 12, of the West Virginia Code*

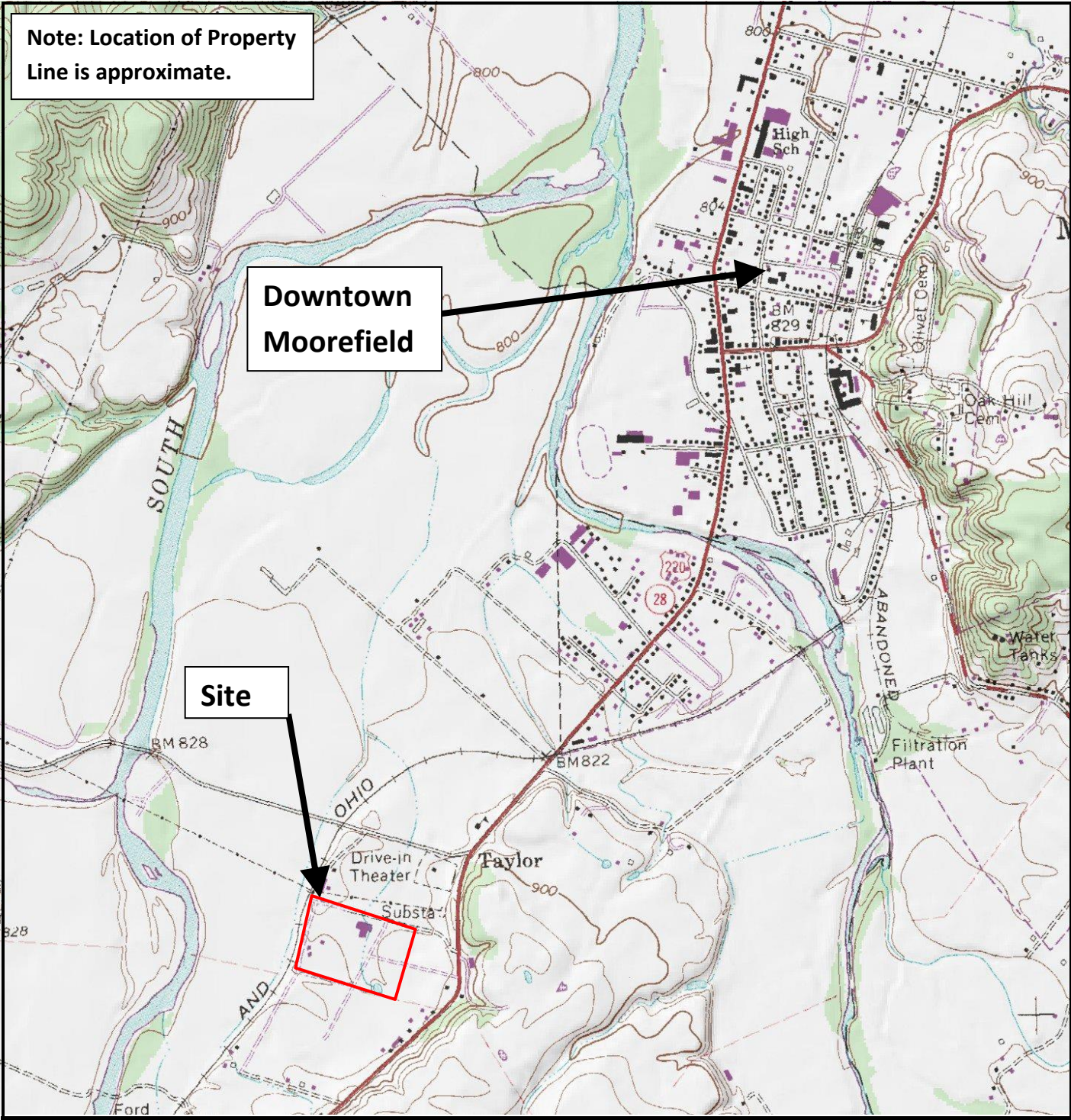
*The person or organization identified on this certificate is registered  
to conduct business in the State of West Virginia at the location above.*

**This certificate is not transferrable and must be displayed at the location for which issued**

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them.  
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of this certificate displayed at every job site within West Virginia.



Note: Location of Property Line is approximate.

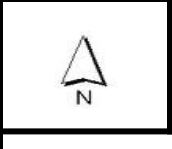
Downtown Moorefield

Site

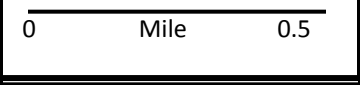
**WHEE**  
 WOODRUFF & HOWE  
 ENVIRONMENTAL ENGINEERING, INC.  
 4405 Canton Hwy, Suite 100  
 Cumming, GA 30040

**PILGRIM'S PRIDE CORPORATION**  
 Feed Mill and Hatchery  
**ATTACHMENT B— AREA MAP**

Rt. 220 South, Industrial Park Road  
 Moorefield, WV 26836  
 Hardy County



DATE  
 12/27/2016



Pilgrim's Pride Corporation  
Moorefield Feedmill, Hatchery and Truck Shop  
Moorefield, West Virginia

Attachment C  
Schedule of Installation, Change and Start-Up

With the exception of the Hatchery Emergency Generator – 1,000 KW (2H), Pilgrim's is not constructing or installing new emission sources. The new Hatchery Emergency Generator– 1,000 KW (2H) can be fully operational within a few weeks of delivery onsite. Anticipated startup is winter 2017.



Pilgrim's Pride Corporation  
Moorefield Feedmill, Hatchery and Truck Shop  
Moorefield, West Virginia

Attachment D  
Applicable Regulations

State Regulations

45CSR2 – “To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers.”

45CSR4 – “To Prevent and Control the Discharge of Air Pollutants into the Open Air Which Causes or Contributes to an Objectionable Odor or Odors”

45CSR6 – “To Prevent and Control Air Pollution from Combustion of Refuse”

45CSR7 – “To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations”

45CSR10 – “To Prevent and Control Air Pollution from the Emission of Sulfur Oxides”

45CSR13 – “Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation”

45CSR16 – “Standards of Performance for New Stationary Sources”

45CSR34 – “Emission Standards for Hazardous Air Pollutants”

Federal Regulations

40 CFR 60, Subpart Dc – “Standards Of Performance For Small Industrial-Commercial-Institutional Steam Generating Units”

Currently permitted Boilers (1S, 8S) are subject to this regulation.

40 CFR 63, Subpart DDDDDDD – “National Emission Standards For Hazardous Air Pollutants For Area Sources: Prepared Feeds Manufacturing”

Impacts various sources at the Mill and requires various housekeeping actions at the Mill in areas where manganese is stored, used and handled. Specifically impacts sources 7S, 9S and 11S.

40 CFR 60, Subpart IIII – “Standards of Performance for Stationary Compression Ignition Internal Combustion Engines”

Proposed Generator 2H is subject to this regulation due to engine manufacture date.

40 CFR 63, Subpart ZZZZ – “National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines”

Existing Generator 1H is subject to this regulation due to engine manufacture date.

40 CFR 63, Subpart JJJJJ – “National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources”

Boilers 1S and 8S are defined as “gas-fired boilers” and are therefore not subject to this regulation.

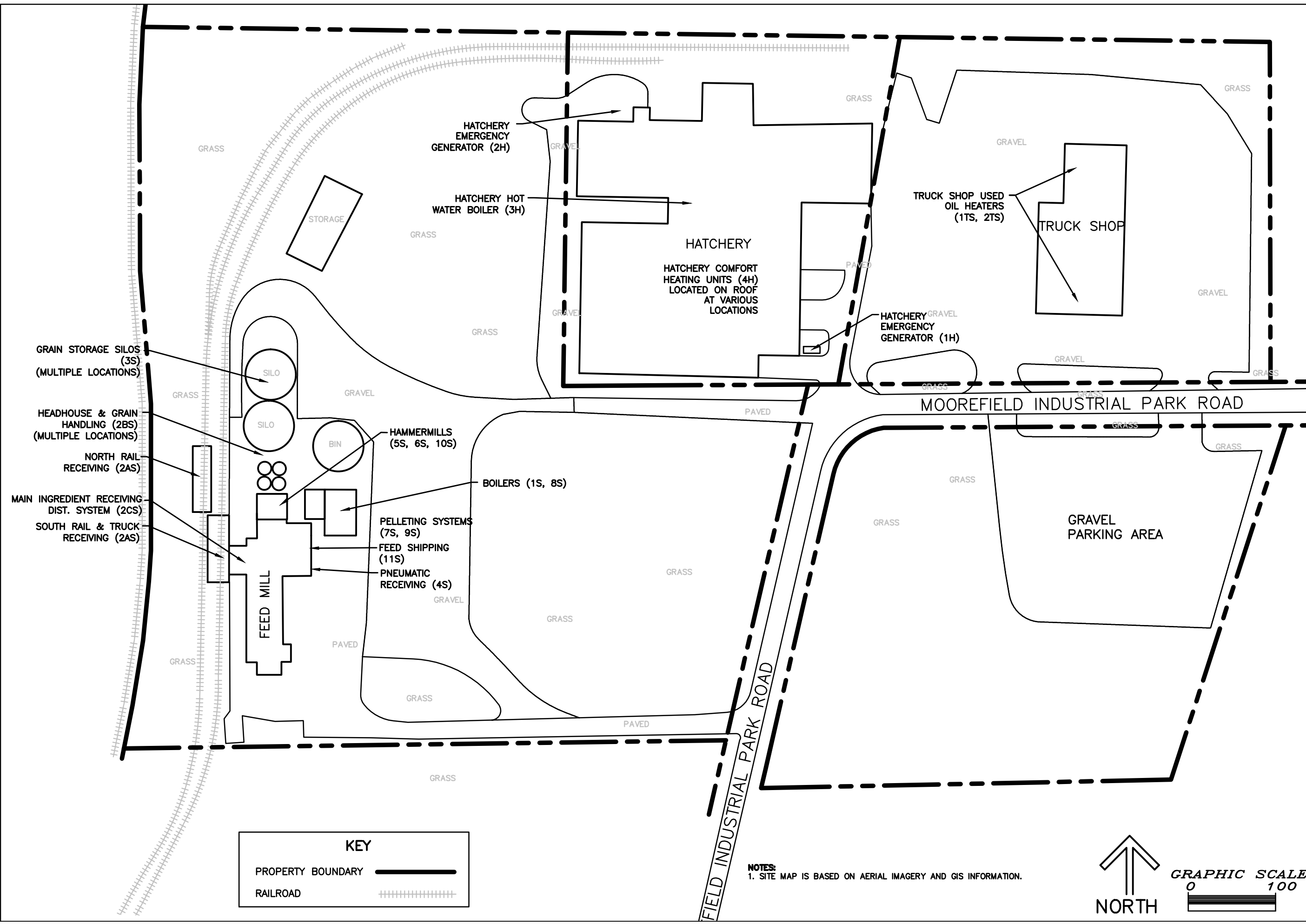
**ATTACHMENT E**  
**PLOT PLAN**

PILGRIM'S PRIDE CORPORATION  
 MOOREFIELD FEED MILL, HATCHERY &  
 TRUCK SHOP  
 RT. 220 SOUTH, INDUSTRIAL PARK ROAD  
 MOOREFIELD, WEST VIRGINIA  
 HARDY COUNTY



JOB NO.  
 16-114

DRAWN BY. TTS	CHECKED BY. SRW
SCALE 1"=100'	SHEET ATTACH E
DATE 1/5/17	REV



GRAIN STORAGE SILOS (3S)  
 (MULTIPLE LOCATIONS)

HEADHOUSE & GRAIN HANDLING (2BS)  
 (MULTIPLE LOCATIONS)

NORTH RAIL RECEIVING (2AS)

MAIN INGREDIENT RECEIVING DIST. SYSTEM (2CS)

SOUTH RAIL & TRUCK RECEIVING (2AS)

**KEY**

PROPERTY BOUNDARY ————

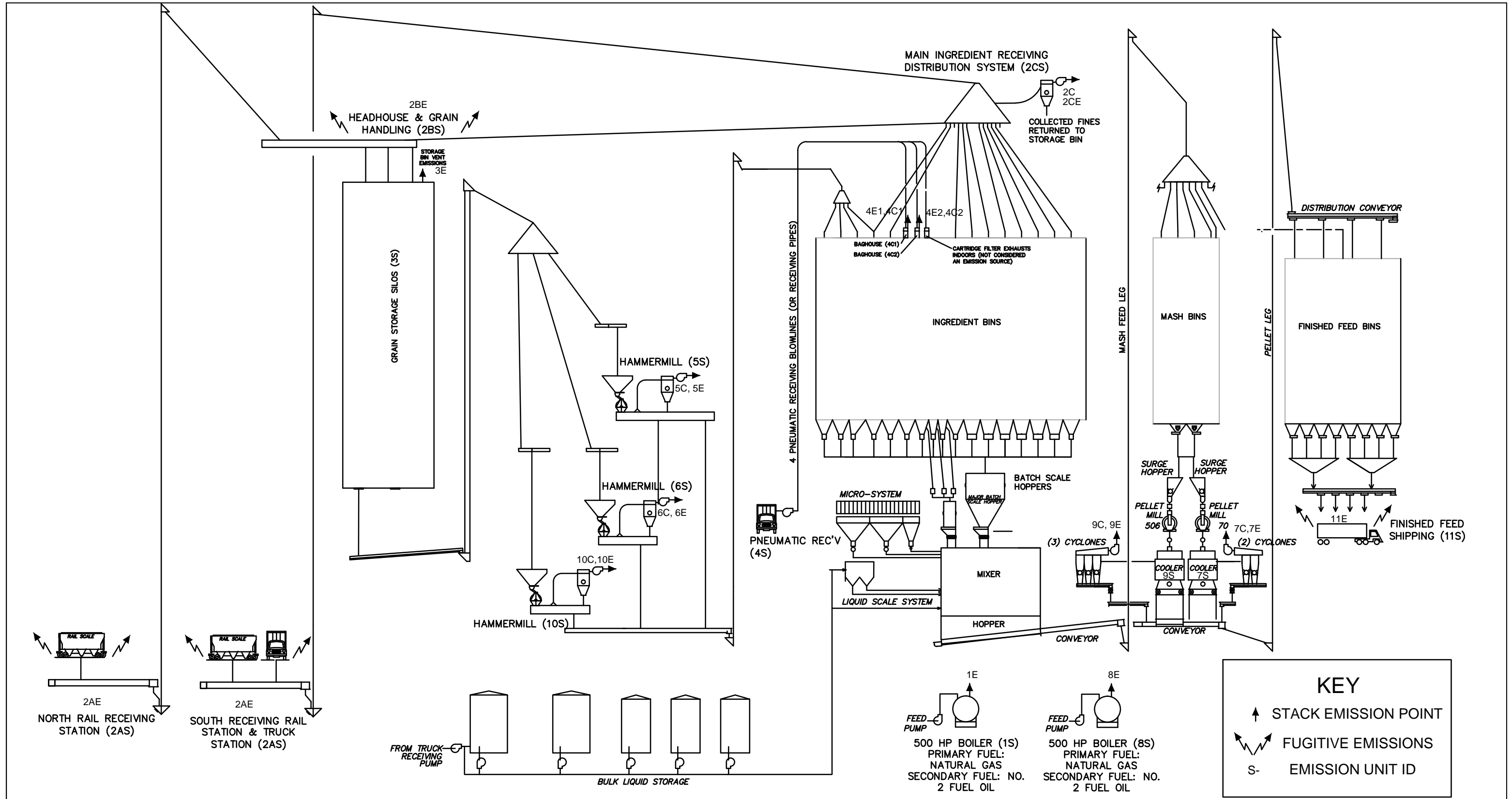
RAILROAD ++++++


**NOTES**  
 1. SITE MAP IS BASED ON AERIAL IMAGERY AND GIS INFORMATION.

**GRAPHIC SCALE**  
 0 100


**NORTH**






  
 PILGRIM'S PRIDE CORPORATION  
 MOOREFIELD FEED MILL, HATCHERY &  
 TRUCK SHOP  
 RT. 220 SOUTH, INDUSTRIAL PARK ROAD  
 MOOREFIELD, WEST VIRGINIA  
 HARDY COUNTY

## ATTACHMENT F PROCESS FLOW DIAGRAM

AIR PERMITTING ENGINEER  
  
 WOODRUFF & HOWE  
 ENVIRONMENTAL ENGINEERING, INC.  
 4405 CANTON HWY, SUITE 100  
 CUMMING, GEORGIA 30040  
 TEL: 770-844-0037

PAGE	REV
1 OF 2	0
DATE	JOB NO.
1/5/17	16-114

**NOTES:**

- PROCESS FLOW FOR AIR PERMITTING ONLY.
- HATCHERY EMISSION SOURCES AND TRUCK SHOP EMISSION SOURCES NOT SHOWN DUE TO SIMPLISTIC NATURE OF THESE SOURCES (COMBUSTION RELATED EMISSIONS ONLY).
- FUGITIVE EMISSIONS FROM SITE HAUL ROADS NOT SHOWN.

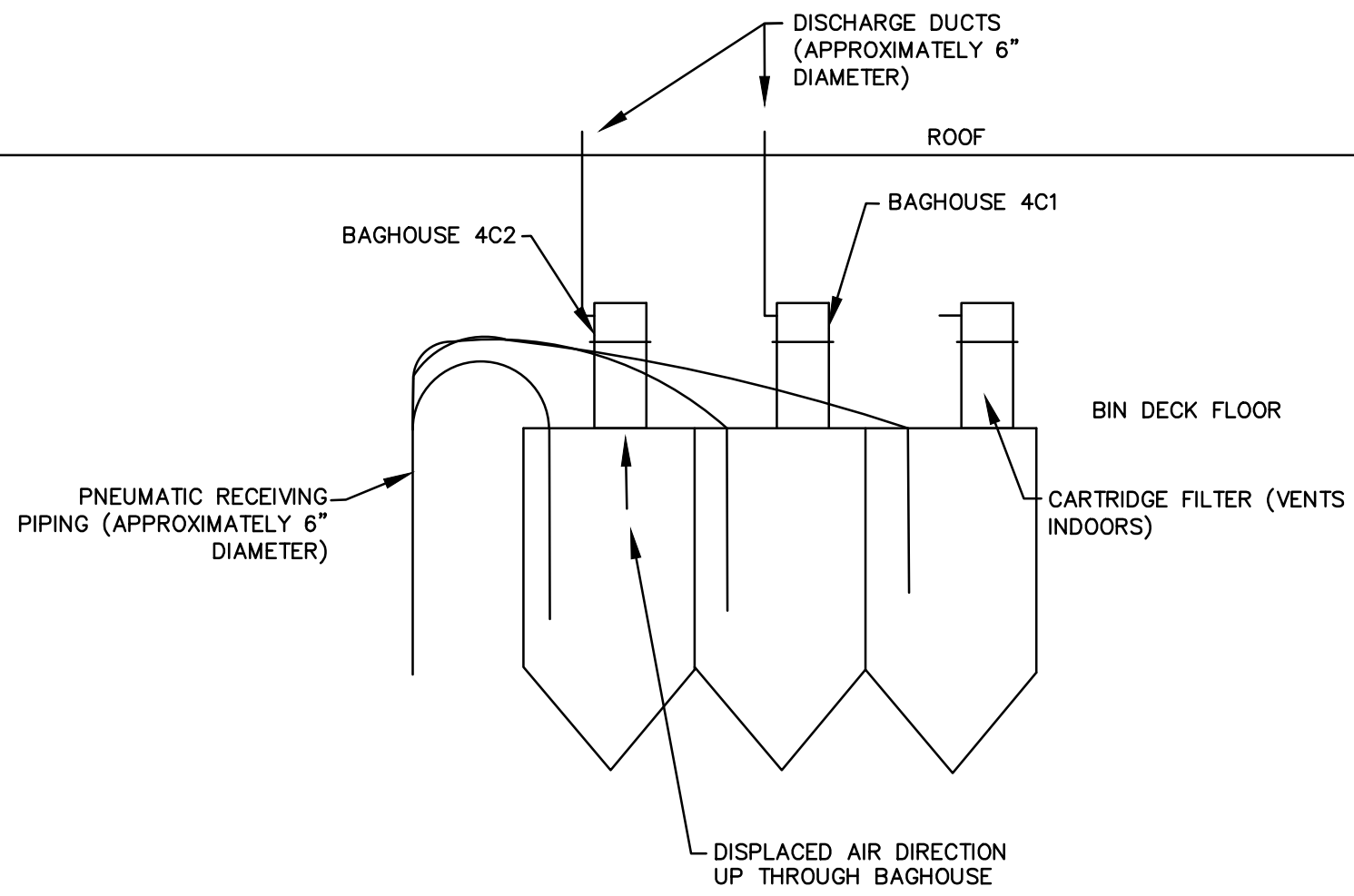
**WHEE**  
**WOODRUFF & HOWE**  
 ENVIRONMENTAL ENGINEERING, INC.  
 4405 CANTON HWY, SUITE 100  
 CUMMING, GEORGIA 30040  
 TEL: 770-844-0037

**ATTACHMENT F**  
**PROCESS**  
**FLOW**  
**DIAGRAM**

PILGRIM'S PRIDE  
 CORPORATION  
 MOOREFIELD FEED MILL,  
 HATCHERY & TRUCK SHOP  
 RT. 220 SOUTH, INDUSTRIAL  
 PARK ROAD  
 MOOREFIELD, WEST VIRGINIA  
 HARDY COUNTY



JOB NO. <b>16-114</b>	
DRAWN BY: <b>TTS</b>	CHECKED BY: <b>SRW</b>
SCALE <b>N.T.S.</b>	SHEET <b>2 OF 2</b>
DATE <b>1/5/17</b>	REV



**NOTES:**  
 1. PROCESS FLOW FOR AIR PERMITTING ONLY.

## **Attachment G – Facility Process Descriptions**

Pilgrim's Pride Corporation Moorefield Feed Mill, Hatchery and Truck Shop  
Moorefield, West Virginia

### **General Facility Description**

The Pilgrim's Pride Corporation Moorefield Poultry Feed Mill (Mill), Hatchery and Truck Shop are located in Moorefield, West Virginia. The Mill receives grain, soybean meal and other ingredients via truck and rail for the purpose of making poultry feed. Ingredients are ground, mixed, batched and pelleted into finished poultry feed. Finished poultry feed is loaded onto trucks to transport offsite to contract poultry growers. Operations at the Mill fall under NAICS 311119 – chicken feeds, prepared, manufacturing. The Hatchery receives eggs from contract growers, incubates and hatches the eggs and ships the hatched chicks to contract chicken growers. Hatchery operations are under NAICS 112340 – poultry hatcheries. The Truck Shop maintains fleet vehicles used in the transportation of poultry feeds and other poultry products. Activities include major/minor vehicle repairs, lubrication, maintenance and tire replacement. Truck Shop operations are under NAICS 484220 - specialized freight trucking, local.

### **Description of Facility Processes (Emission Unit ID No.)**

#### **Feed Mill**

##### **Receiving Operations (2AS, 4S)**

Grains (corn, soybean meal, dried distillers grains, etc.), softstock ingredients (meat & bone meal, etc.) and other dry ingredients are received via truck and railcar at the North Rail Station (2AS) and South Rail and Truck Station (2AS). Emissions from truck and rail receiving consist of fugitive emissions caused by the emptying of ingredients from a truck or railcar. Fugitive emissions are minimized from the Truck and Railcar Receiving Pits by using choke feeding as applicable. Truck receiving operations occur in a metal-sided building that is enclosed except for the entrance/exit to the receiving pit, which also minimizes fugitive emissions. Ingredients are conveyed from the pits through a series of screw conveyors, elevators, etc.

Various ingredients, such as salt, phosphate and limestone, are received pneumatically (4S). A delivery truck will connect to the receiving pipe, and ingredients are blown (using a truck mounted blower) through the piping into the top of storage bins located atop the Mill. Displaced air that results from filling the bins is aspirated through one of three baghouses that sit atop the pneumatically received storage bins. There are two baghouses (4C1, 4C2) that are vented and exhaust outdoors. There is a third baghouse (technically a cartridge filter which is similar to a baghouse) that exhausts indoors and is not considered an emission source.

##### **Materials Handling and Storage (2BS, 2CS, 3S)**

Grain, ingredients and other products are conveyed via conveyors, elevators, etc. to storage bins/silos or for processing inside the Mill. Conveyors, elevators, etc. are generally enclosed or are located indoors. However, fugitive emissions may result from headhouse and grain handling activities (2BS). Primary grain storage includes concrete silos and steel bins. These silos and bins have multiple small vents (3S) to allow displaced air to exit while the silos/bins are being filled with grain.

Many ingredients received are conveyed using the Main Ingredient Receiving Distribution System (2CS) which includes a turn-head that distributes ingredients to additional conveying systems or storage bins. This System is aspirated by a Baghouse (2C) which aids in air movement and associated material transfer and allows air generated from product movement to be filtered before exhausting to the atmosphere. Collected materials in the baghouses are returned to the respective conveying system. Ingredients are transferred to storage bins inside the Mill.

## **Attachment G – Facility Process Descriptions**

Pilgrim's Pride Corporation Moorefield Feed Mill, Hatchery and Truck Shop  
Moorefield, West Virginia

### **Grain Grinding (5S, 6S, 10S)**

Grain (corn) is conveyed from the storage silos/bins to one of three Hammermills (5S, 6S, 10S) for grinding. The Hammermills grind the corn for use in the finished feed. Each Hammermill is aspirated by a baghouse (5C, 6C, 10C) to increase product throughput through the Hammermill and to recover ground grain. Each baghouse serves a primary product processing function and a secondary air pollution control function. Ground grain is conveyed to storage bins to await batching and mixing.

### **Batching and Mixing**

Ground grain is combined with softstock ingredients, minerals and other micro ingredients in the mixer(s) to produce mixed feed prior to pelleting. This process occurs completely inside the Mill with no direct atmospheric emissions.

### **Pelleting (7S, 9S)**

Mixed feed (also referred to as mash feed) is conveyed to one of two pelleting systems. Each pelleting system consists of a pellet mill, which pelletizes the feed, and a pellet cooler(s) which cools the feed pellets. The Pellet Coolers are each aspirated by a set of cyclones operating in parallel (7C, 9C), and each cyclone system is a negative air system controlled by a fan which discharges to the atmosphere. The cyclones operate primarily as a product collector and serve a secondary air pollution control function. Steam from the Boilers are used in the pelleting process.

### **Boilers (1S, 8S)**

The Boilers (1S, 8S) are each 500 HP Boilers which fire natural gas. Each boiler has the ability to fire No. 2 fuel oil on a limited basis during natural gas curtailments and for maintenance/testing. The Boilers provide steam for milling operations.

### **Finished Feed Truck Loadout (11S)**

Finished feed is loaded out onto trucks for delivery to contract growers. Finished feed loadout occurs in a loadout bay (11S) in a two-sided building that is only open at the truck entrance/exit, which provides additional emissions control (emissions control provided by the two-sided structure). Fugitive particulate emissions occur during the truck loading process. Loading spouts are installed on the feed loadout assembly to minimize fugitive emissions from this operation by reducing the distance between the loadout spouts and trucks being loaded with poultry feeds.

### **Hatchery**

A pro-longed power outage would be devastating to poultry operations. The Hatchery is planning to install a new 1,000 KW diesel-fired generator (2H), along with an existing 500 KW diesel-fired generator (1H), to provide power to critical Hatchery operations in the event of a power outage or other emergency. The generator engines will fire No. 2 fuel oil.

In addition to the generators, there are also other smaller combustion emission sources at the Hatchery. A natural gas-fired Hot Water Boiler (3H) is used to provide hot water for Hatchery operations and sanitation. There are also numerous small natural gas-fired heating units (4H), located on the roof, used for comfort and space heating of the Hatchery building. There are currently 31 units, ranging in size from 0.10 mmBtu/hr – 0.54 mmBtu/hr.

## **Attachment G – Facility Process Descriptions**

Pilgrim's Pride Corporation Moorefield Feed Mill, Hatchery and Truck Shop  
Moorefield, West Virginia

### **Truck Shop**

The Truck Shop generates used motor oil and other oil fluids from vehicle maintenance activities that occur onsite. The used oil is collected and stored in small above ground storage tanks. During cold weather periods, the used oil is combusted in one of two Used Oil Heaters (1TS, 2TS) to provide space/comfort heating of the Truck Shop building.

**Attachment I**  
**Emission Units Table**  
(includes all emission units and air pollution control devices  
that will be part of this permit application review, regardless of permitting status)

Emission Unit ID <sup>1</sup>	Emission Point ID <sup>2</sup>	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type <sup>3</sup> and Date of Change	Control Device <sup>4</sup>
<b>Feed Mill</b>						
4S	4E1, 4E2	Pneumatic Receiving Systems (Truck Unloading)	1992	25 tph	Minor Modification to include 2nd baghouse	4C1, 4C2
2CS	2CE	Main Ingredient Receiving Distribution System	1992	200 tph/ 450,000 tpy	Previously unpermitted	2C
11S	11E	Feed Shipping	1992	150 tph/ 478,000 tpy	Slight increase in feed loadout rate	Fugitive Emissions
<b>Hatchery</b>						
1H	1HE	Hatchery Emergency Backup Generator	1992	500 KW	N/A	None
2H	2HE	Hatchery Emergency Backup Generator	2017	1,000 KW	N/A	None
3H	3HE	Hatchery Hot Water Boiler	2004	1.68 mmBtu/hr	Previously unpermitted	None
4H	4HE	Hatchery Comfort Heating Units (currently 31 heating units ranging from 0.10 - 0.54 mmBtu/hr)	1991	0.10 - 0.54 mmBtu/hr	Previously unpermitted	None
<b>Truck Shop</b>						
1TS	1TSE	Truck Shop Used Oil Heater Clean Burn CB-5000		500,000 Btu/hr	Previously unpermitted	None
2TS	2TSE	Truck Shop Used Oil Heater Clean Burn CB-2500		250,000 Btu/hr	Previously unpermitted	None
This Attachment only includes sources that are impacted by this application. Refer to Attachment 1- Facility Emission Unit ID List and Emissions Information for complete Facility-wide emission unit list.						

<sup>1</sup> For Emission Units (or Sources) use the following numbering system: 1S, 2S, 3S,... or other appropriate designation.

<sup>2</sup> For Emission Points use the following numbering system: 1E, 2E, 3E, ... or other appropriate designation.

<sup>3</sup> New, modification, removal

<sup>4</sup> For Control Devices use the following numbering system: 1C, 2C, 3C,... or other appropriate designation.

**Attachment J  
EMISSION POINTS DATA SUMMARY SHEET**

Table 1: Emissions Data															
Emission Point ID No. <i>(Must match Emission Units Table &amp; Plot Plan)</i>	Emission Point Type <sup>1</sup>	Emission Unit Vented Through This Point <i>(Must match Emission Units Table &amp; Plot Plan)</i>		Air Pollution Control Device <i>(Must match Emission Units Table &amp; Plot Plan)</i>		Vent Time for Emission Unit <i>(chemical processes only)</i>		All Regulated Pollutants - Chemical Name/CAS <sup>3</sup>  <i>(Speciate VOCs &amp; HAPS)</i>	Maximum Potential Uncontrolled Emissions <sup>4</sup>		Maximum Potential Controlled Emissions <sup>5</sup>		Emission Form or Phase  <i>(At exit conditions, Solid, Liquid or Gas/Vapor)</i>	Est. Method Used <sup>6</sup>	Emission Concentration <sup>7</sup> <i>(ppmv or mg/m<sup>3</sup>)</i>
		ID No.	Source	ID No.	Device Type	Short Term <sup>2</sup>	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
4E1	Vertical Stack	4S	Pneumatic Receiving Systems	4C1	Bag-house	N/A	N/A	PM PM <sub>10</sub> PM <sub>2.5</sub>	38.60	169.07	0.13	0.56	Solid	Outlet Grain Loading	.01 gr/dscf
4E2	Vertical Stack	4S	Pneumatic Receiving Systems	4C2	Bag-house				5.02	21.98	0.13	0.56			
2CE	Vertical Stack	2CS	Main Ing. Rec'v Dist. System	2C	Bag-house	N/A	N/A	PM PM <sub>10</sub> PM <sub>2.5</sub>	12.20 6.80 1.16	13.73 7.65 1.31	0.13 0.13 0.13	0.56 0.56 0.56	Solid	Outlet Grain Loading	.01 gr/dscf
11E	Fugitive	11S	Feed Shipping		En-closure	N/A	N/A	PM PM <sub>10</sub> PM <sub>2.5</sub>	0.50 0.12 0.02	0.79 0.19 0.03	0.10 0.02 0.004	0.16 0.04 0.01	Solid	AP-42	

This Attachment only includes sources that are impacted by this application. Refer to **Attachment N - Emission Inventory Calculations** and **Attachment 1- Facility Emission Unit ID List and Emissions Information** for more detailed information.

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

<sup>1</sup> Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

<sup>2</sup> Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (ie., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).

<sup>3</sup> List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. **LIST** Acids, CO, CS<sub>2</sub>, VOCs, H<sub>2</sub>S, Inorganics, Lead, Organics, O<sub>3</sub>, NO, NO<sub>2</sub>, SO<sub>2</sub>, SO<sub>3</sub>, all applicable Greenhouse Gases (including CO<sub>2</sub> and methane), etc. **DO NOT LIST** H<sub>2</sub>, H<sub>2</sub>O, N<sub>2</sub>, O<sub>2</sub>, and Noble Gases.

<sup>4</sup> Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

<sup>5</sup> Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

<sup>6</sup> Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

<sup>7</sup> Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m<sup>3</sup>) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO<sub>2</sub>, use units of ppmv (See 45CSR10).



Table 1: Emissions Data

Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type <sup>1</sup>	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS <sup>3</sup>  (Speciate VOCs & HAPS)	Maximum Potential Uncontrolled Emissions <sup>4</sup>		Maximum Potential Controlled Emissions <sup>5</sup>		Emission Form or Phase  (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used <sup>6</sup>	Emission Concentration <sup>7</sup> (ppmv or mg/m <sup>4</sup> )
		ID No.	Source	ID No.	Device Type	Short Term <sup>2</sup>	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
1HE	Vertical Stack	1H	Hatchery Emergency Backup Generator		None	N/A	N/A	PM PM <sub>10</sub> PM <sub>2.5</sub> NO <sub>x</sub> CO SO <sub>2</sub> VOC Total HAPs	1.63 1.63 1.63 23.15 4.99 1.52 1.89 0.02	0.41 0.41 0.41 5.79 1.25 0.38 0.47 0.01	1.63 1.63 1.63 23.15 4.99 1.52 1.89 0.02	0.41 0.41 0.41 5.79 1.25 0.38 0.47 0.01	Solid Solid Solid Gas Gas Gas Gas Gas	AP-42	
2HE	Vertical Stack	2H	Hatchery Emergency Backup Generator		None	N/A	N/A	PM PM <sub>10</sub> PM <sub>2.5</sub> NO <sub>x</sub> CO SO <sub>2</sub> VOC Total HAPs	3.23 3.23 3.23 46.00 9.91 3.03 3.76 0.04	0.81 0.81 0.81 11.50 2.48 0.76 0.94 0.01	3.23 3.23 3.23 46.00 9.91 3.03 3.76 0.04	0.81 0.81 0.81 11.50 2.48 0.76 0.94 0.01	Solid Solid Solid Gas Gas Gas Gas Gas	AP-42	
3HE	Vertical Stack	3H	Hatchery Hot Water Boiler		None	N/A	N/A	PM PM <sub>10</sub> PM <sub>2.5</sub> NO <sub>x</sub> CO SO <sub>2</sub> VOC	0.01 0.01 0.01 0.17 0.14 0.01 0.01	0.06 0.06 0.06 0.74 0.62 0.01 0.04	0.01 0.01 0.01 0.17 0.14 0.01 0.01	0.06 0.06 0.06 0.74 0.62 0.01 0.04	Solid Solid Solid Gas Gas Gas Gas	AP-42	

This Attachment only includes sources that are impacted by this application. Refer to **Attachment N - Emission Inventory Calculations** and **Attachment 1- Facility Emission Unit ID List and Emissions** Information for more detailed information.

Table 1: Emissions Data

Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type <sup>1</sup>	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS <sup>3</sup>  (Speciate VOCs & HAPS)	Maximum Potential Uncontrolled Emissions <sup>4</sup>		Maximum Potential Controlled Emissions <sup>5</sup>		Emission Form or Phase  (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used <sup>6</sup>	Emission Concentration <sup>7</sup> (ppmv or mg/m <sup>4</sup> )
		ID No.	Source	ID No.	Device Type	Short Term <sup>2</sup>	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
4HE	Vertical Stacks	4H	Hatchery Comfort Heating Units (currently 31 heating units)		None	N/A	N/A	PM PM <sub>10</sub> PM <sub>2.5</sub> NO <sub>x</sub> CO SO <sub>2</sub> VOC	0.09 0.09 0.09 1.13 0.95 0.01 0.06	0.38 0.38 0.38 4.95 4.16 0.03 0.27	0.09 0.09 0.09 1.13 0.95 0.01 0.06	0.38 0.38 0.38 4.95 4.16 0.03 0.27	Solid Solid Solid Gas Gas Gas Gas	AP-42	
1TSE	Vertical Stack	1TS	Truck Shop Used Oil Heater Clean Burn CB-5000		None	N/A	N/A	PM PM <sub>10</sub> PM <sub>2.5</sub> NO <sub>x</sub> CO SO <sub>2</sub> VOC Total HAPs	0.10 0.09 0.09 0.05 0.01 0.09 0.01 0.002	0.44 0.38 0.38 0.23 0.03 0.39 0.01 0.009	0.10 0.09 0.09 0.05 0.01 0.09 0.01 0.002	0.44 0.38 0.38 0.23 0.03 0.39 0.01 0.009	Solid Solid Solid Gas Gas Gas Gas Gas	AP-42	
2TSE	Vertical Stack	2TS	Truck Shop Used Oil Heater Clean Burn CB-2500		None	N/A	N/A	PM PM <sub>10</sub> PM <sub>2.5</sub> NO <sub>x</sub> CO SO <sub>2</sub> VOC Total HAPs	0.05 0.05 0.05 0.03 0.01 0.05 0.01 0.001	0.23 0.20 0.20 0.12 0.02 0.20 0.01 0.004	0.05 0.05 0.05 0.03 0.01 0.05 0.01 0.001	0.23 0.20 0.20 0.12 0.02 0.20 0.01 0.004	Solid Solid Solid Gas Gas Gas Gas Gas	AP-42	

This Attachment only includes sources that are impacted by this application. Refer to **Attachment N - Emission Inventory Calculations** and **Attachment 1- Facility Emission Unit ID List and Emissions** Information for more detailed information.

**Attachment J  
EMISSION POINTS DATA SUMMARY SHEET**

Table 2: Release Parameter Data								
Emission Point ID No. <i>(Must match Emission Units Table)</i>	Inner Diameter (ft.)	Exit Gas			Emission Point Elevation (ft)		UTM Coordinates (km)	
		Temp. (°F)	Volumetric Flow <sup>1</sup> (acfm) <i>at operating conditions</i>	Velocity (fps)	Ground Level <i>(Height above mean sea level)</i>	Stack Height <sup>2</sup> <i>(Release height of emissions above ground level)</i>	Northing	Easting
4E1	≈10"	Ambient	≈1,500	≈45	835	110	4,323.602	674.264
4E2	≈10"	Ambient	≈1,500	≈45	835	110	4,323.602	674.264
2CE	≈10"	Ambient	≈1,500	≈45	835	120	4,323.607	674.282
11CE	N/A	Ambient	Fugitive Emissions	N/A	835	10	4,323.595	674.278
1HE	0.40	≈ 700	≈ 3,000	≈ 400	835	15	4,323.627	674.465
2HE	0.50	≈ 890	≈ 7,540	≈ 600	835	15	4,323.720	674.415
3HE	0.40	≈ 300	≈ 700	≈ 90	835	25	4,323.683	674.438
4HE	Varies	Varies	Varies (Typically < 100)	Varies	835	25	Varies	Varies
1TSE	0.83	≈ 400	< 1,000	≈ 50	835	20	4,323.624	674.563
2TSE	0.67	≈ 400	< 1,000	≈ 50	835	20	4,323.666	674.575

This Attachment only includes sources that are impacted by this application. Refer to **Attachment N - Emission Inventory Calculations** and **Attachment 1-Facility Emission Unit ID List and Emissions** Information for more detailed information.

<sup>1</sup> Give at operating conditions. Include inerts.

<sup>2</sup> Release height of emissions above ground level.

**Attachment L**  
**EMISSIONS UNIT DATA SHEET**  
**GENERAL**

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): **2CS**

<p>1. Name or type and model of proposed affected source:</p> <p><b>Main Ingredient Receiving Distribution System</b></p>
<p>2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p> <p><b>200 tons/hour</b></p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p> <p><b>N/A</b></p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:</p> <p><b>N/A</b></p>

\* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):			
(a) Type and amount in appropriate units of fuel(s) to be burned:			
N/A			
(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:			
N/A			
(c) Theoretical combustion air requirement (ACF/unit of fuel):			
N/A	@	°F and	psia.
(d) Percent excess air: N/A			
(e) Type and BTU/hr of burners and all other firing equipment planned to be used:			
N/A			
(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:			
N/A			
(g) Proposed maximum design heat input:			
		N/A	× 10 <sup>6</sup> BTU/hr.
7. Projected operating schedule:			
Hours/Day	4	Days/Week	6
		Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@	°F and	psia
a. NO <sub>x</sub>	lb/hr	grains/ACF
b. SO <sub>2</sub>	lb/hr	grains/ACF
c. CO	lb/hr	grains/ACF
d. PM <sub>10</sub>	<b>6.80</b> lb/hr	- grains/ACF
e. Hydrocarbons	lb/hr	grains/ACF
f. VOCs	lb/hr	grains/ACF
g. Pb	lb/hr	grains/ACF
h. Specify other(s)	lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing  
 Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

<p><b>MONITORING</b></p> <p>None</p>	<p><b>RECORDKEEPING</b></p> <p>Current records kept for current Permit Condition 4.4.5 are adequate for this source.</p>
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<p><b>REPORTING</b></p> <p>None</p>	<p><b>TESTING</b></p> <p>None</p>
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**MONITORING.** PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

**RECORDKEEPING.** PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

**REPORTING.** PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

**TESTING.** PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

None



**Attachment L  
EMISSIONS UNIT DATA SHEET  
GENERAL**

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): **4S**

<p>1. Name or type and model of proposed affected source:</p> <p><b>Pneumatic Receiving Systems (Truck Unloading)</b></p>
<p>2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p> <p><b>Max rate of 25 tons/hour.</b></p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p> <p><b>N/A</b></p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:</p> <p><b>N/A</b></p>

\* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):			
(a) Type and amount in appropriate units of fuel(s) to be burned:			
N/A			
(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:			
N/A			
(c) Theoretical combustion air requirement (ACF/unit of fuel):			
N/A	@	°F and	psia.
(d) Percent excess air: N/A			
(e) Type and BTU/hr of burners and all other firing equipment planned to be used:			
N/A			
(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:			
N/A			
(g) Proposed maximum design heat input: N/A × 10 <sup>6</sup> BTU/hr.			
7. Projected operating schedule:			
Hours/Day	4	Days/Week	6
		Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@	°F and	psia
a. NO <sub>x</sub>	lb/hr	grains/ACF
b. SO <sub>2</sub>	lb/hr	grains/ACF
c. CO	lb/hr	grains/ACF
d. PM <sub>10</sub>	<b>5.02</b> lb/hr	- grains/ACF
e. Hydrocarbons	lb/hr	grains/ACF
f. VOCs	lb/hr	grains/ACF
g. Pb	lb/hr	grains/ACF
h. Specify other(s)	lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing  
 Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

<p><b>MONITORING</b></p> <p>None</p>	<p><b>RECORDKEEPING</b></p> <p>Total quantities of materials received.</p>
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<p><b>REPORTING</b></p> <p>None</p>	<p><b>TESTING</b></p> <p>None</p>
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**MONITORING.** PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

**RECORDKEEPING.** PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

**REPORTING.** PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

**TESTING.** PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

None

**Attachment L  
EMISSIONS UNIT DATA SHEET  
GENERAL**

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): **11S**

<p>1. Name or type and model of proposed affected source:</p> <p><b>Feed Shipping</b></p>
<p>2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p> <p><b>Max feed loadout rate of 150 tons/hour.</b></p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p> <p><b>N/A</b></p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:</p> <p><b>N/A</b></p>

\* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):			
(a) Type and amount in appropriate units of fuel(s) to be burned:			
N/A			
(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:			
N/A			
(c) Theoretical combustion air requirement (ACF/unit of fuel):			
N/A	@	°F and	psia.
(d) Percent excess air: N/A			
(e) Type and BTU/hr of burners and all other firing equipment planned to be used:			
N/A			
(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:			
N/A			
(g) Proposed maximum design heat input: N/A × 10 <sup>6</sup> BTU/hr.			
7. Projected operating schedule:			
Hours/Day	4	Days/Week	6
		Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@	°F and	psia
a. NO <sub>x</sub>	lb/hr	grains/ACF
b. SO <sub>2</sub>	lb/hr	grains/ACF
c. CO	lb/hr	grains/ACF
d. PM <sub>10</sub>	<b>0.12</b> lb/hr	- grains/ACF
e. Hydrocarbons	lb/hr	grains/ACF
f. VOCs	lb/hr	grains/ACF
g. Pb	lb/hr	grains/ACF
h. Specify other(s)	lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.



9. Proposed Monitoring, Recordkeeping, Reporting, and Testing  
 Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

<p><b>MONITORING</b></p> <p><b>Total quantities of feed shipped.</b></p>	<p><b>RECORDKEEPING</b></p> <p><b>Total quantities of feed shipped.</b></p>
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<p><b>REPORTING</b></p> <p><b>None</b></p>	<p><b>TESTING</b></p> <p><b>None</b></p>
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**MONITORING.** PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

**RECORDKEEPING.** PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

**REPORTING.** PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

**TESTING.** PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

**None**

**Attachment L**  
**Emission Unit Data Sheet**  
(INDIRECT HEAT EXCHANGER)

Control Device ID No. (must match List Form): **3H**

**Equipment Information**

1. Manufacturer: <b>Raypac, Inc.</b>	2. Model No. Serial No.
3. Number of units: <b>1</b>	4. Use <b>Hot Water Heater</b>
5. Rated Boiler Horsepower: <b>N/A</b> hp	6. Boiler Serial No.:
7. Date constructed: <b>2004</b>	8. Date of last modification and explain: <b>N/A</b>
9. Maximum design heat input per unit: <b>1.68</b> ×10 <sup>6</sup> BTU/hr	10. Peak heat input per unit: <b>1.68</b> ×10 <sup>6</sup> BTU/hr
11. Steam produced at maximum design output: LB/hr psig	12. Projected Operating Schedule: Hours/Day <b>24</b> Days/Week <b>7</b> Weeks/Year <b>52</b>
13. Type of firing equipment to be used: <input type="checkbox"/> Pulverized coal <input type="checkbox"/> Spreader stoker <input type="checkbox"/> Oil burners <input checked="" type="checkbox"/> Natural Gas Burner <input type="checkbox"/> Others, specify	14. Proposed type of burners and orientation: <input type="checkbox"/> Vertical <input type="checkbox"/> Front Wall <input type="checkbox"/> Opposed <input type="checkbox"/> Tangential <input type="checkbox"/> Others, specify
15. Type of draft: <input checked="" type="checkbox"/> Forced <input type="checkbox"/> Induced	16. Percent of ash retained in furnace: <b>N/A</b> %
17. Will flyash be reinjected? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	18. Percent of carbon in flyash: <b>N/A</b> %

**Stack or Vent Data**

19. Inside diameter or dimensions: <b>≈ 0.4</b> ft.	20. Gas exit temperature: <b>≈ 300°F</b>
21. Height: <b>25</b> ft.	22. Stack serves: <input checked="" type="checkbox"/> This equipment only <input type="checkbox"/> Other equipment also (submit type and rating of all other equipment exhausted through this stack or vent)
23. Gas flow rate: <b>≈700</b> ft <sup>3</sup> /min	
24. Estimated percent of moisture: <b>N/A</b> %	

### Fuel Requirements

<b>25.</b>	<b>Type</b>	Fuel Oil No.	Natural Gas	Gas (other, specify)	Coal, Type:	Other:
	<b>Quantity</b> (at Design Output)	gph@60°F	<b>1,680</b> ft <sup>3</sup> /hr	ft <sup>3</sup> /hr	TPH	
	<b>Annually</b>	×10 <sup>3</sup> gal	<b>14.72</b> ×10 <sup>6</sup> ft <sup>3</sup> /hr	×10 <sup>6</sup> ft <sup>3</sup> /hr	tons	
	<b>Sulfur</b>	Maximum: wt. % Average: wt. %	<b>N/A</b> gr/100 ft <sup>3</sup>	gr/100 ft <sup>3</sup>	Maximum: wt. %	
	<b>Ash (%)</b>		<b>N/A</b>		Maximum	
	<b>BTU Content</b>	BTU/Gal.  Lbs/Gal. @60°F	<b>1,000</b> BTU/ft <sup>3</sup>	BTU/ft <sup>3</sup>	BTU/lb	
	<b>Source</b>		<b>Pipeline</b>			
	<b>Supplier</b>		<b>Local Utility</b>			
	<b>Halogens</b> (Yes/No)		<b>No</b>			
	<b>List and Identify Metals</b>		<b>N/A</b>			
26. Gas burner mode of control: <input type="checkbox"/> Manual <input type="checkbox"/> Automatic hi-low <input type="checkbox"/> Automatic full modulation <input type="checkbox"/> Automatic on-off				27. Gas burner manufacture: <hr/> 28. Oil burner manufacture:		
29. If fuel oil is used, how is it atomized? <input type="checkbox"/> Oil Pressure <input type="checkbox"/> Steam Pressure <input type="checkbox"/> Compressed Air <input type="checkbox"/> Rotary Cup <input type="checkbox"/> Other, specify						
30. Fuel oil preheated: <input type="checkbox"/> Yes <input type="checkbox"/> No				31. If yes, indicate temperature:                      °F		
32. Specify the calculated theoretical air requirements for combustion of the fuel or mixture of fuels described above actual cubic feet (ACF) per unit of fuel: @                      °F,                      PSIA,                      % moisture						
33. Emission rate at rated capacity:                      lb/hr						
34. Percent excess air actually required for combustion of the fuel described:                      %						
<b>Coal Characteristics</b>						
35. Seams:						
36. Proximate analysis (dry basis):    % of Fixed Carbon:                      % of Sulfur: % of Moisture:                      % of Volatile Matter: % of Ash:						

**Emissions Stream**

37. What quantities of pollutants will be emitted from the boiler before controls?

Pollutant	Pounds per Hour lb/hr	grain/ACF	@ °F	PSIA
CO	<b>See Attachment N – Emission Inventory Calculations and Attachment J.</b>			
Hydrocarbons				
NO <sub>x</sub>				
Pb				
PM <sub>10</sub>				
SO <sub>2</sub>				
VOCs				
Other (specify)				

38. What quantities of pollutants will be emitted from the boiler after controls?

Pollutant	Pounds per Hour lb/hr	grain/ACF	@ °F	PSIA
CO	<b>See Attachment N – Emission Inventory Calculations and Attachment J.</b>			
Hydrocarbons				
NO <sub>x</sub>				
Pb				
PM <sub>10</sub>				
SO <sub>2</sub>				
VOCs				
Other (specify)				

39. How will waste material from the process and control equipment be disposed of? **N/A**

40. Have you completed an *Air Pollution Control Device Sheet(s)* for the control(s) used on this Emission Unit.

41. Have you included the **air pollution rates** on the Emissions Points Data Summary Sheet?

**42. Proposed Monitoring, Recordkeeping, Reporting, and Testing**

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

**MONITORING PLAN:** Please list (1) describe the process parameters and how they were chosen (2) the ranges and how they were established for monitoring to demonstrate compliance with the operation of this process equipment operation or air pollution control device.

**None**

**TESTING PLAN:** Please describe any proposed emissions testing for this process equipment or air pollution control device.

**None**

**RECORDKEEPING:** Please describe the proposed recordkeeping that will accompany the monitoring.

**Hatchery Natural Gas Use kept through Utility billing records**

**REPORTING:** Please describe the proposed frequency of reporting of the recordkeeping.

**None**

43. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.

**Attachment L  
EMISSIONS UNIT DATA SHEET  
GENERAL**

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): **4H**

1. Name or type and model of proposed affected source:

**Hatchery Comfort Heating Units (currently 31 heating units ranging from 0.10 - 0.54 mmBtu/hr)**

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

**Heating units total heat input of 11.29 mmBtu/hr.**

4. Name(s) and maximum amount of proposed material(s) produced per hour:

**N/A**

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

**Natural Gas combustion related reactions.**

\* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):			
(a) Type and amount in appropriate units of fuel(s) to be burned:			
<b>Max of 98.9 x 10<sup>6</sup> scf/year of natural gas</b>			
(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:			
N/A			
(c) Theoretical combustion air requirement (ACF/unit of fuel):			
@	°F and	psia.	
(d) Percent excess air:			
(e) Type and BTU/hr of burners and all other firing equipment planned to be used:			
<b>Currently 31 units total ranging from 0.10 mmBtu/hr to 0.54 mmBtu/hr.</b>			
(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:			
N/A			
(g) Proposed maximum design heat input:		<b>Varies</b>	× 10 <sup>6</sup> BTU/hr.
7. Projected operating schedule:			
Hours/Day	<b>24</b>	Days/Week	<b>7</b>
		Weeks/Year	<b>52</b>

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@	°F and	psia	
a. NO <sub>x</sub>	<b>1.13</b>	lb/hr	grains/ACF
b. SO <sub>2</sub>	<b>0.01</b>	lb/hr	grains/ACF
c. CO	<b>0.95</b>	lb/hr	grains/ACF
d. PM <sub>10</sub>	<b>0.90</b>	lb/hr	- grains/ACF
e. Hydrocarbons		lb/hr	grains/ACF
f. VOCs	<b>0.06</b>	lb/hr	grains/ACF
g. Pb		lb/hr	grains/ACF
h. Specify other(s)		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.



9. Proposed Monitoring, Recordkeeping, Reporting, and Testing  
 Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

**MONITORING**

**None**

**RECORDKEEPING**

**None. Total Hatchery natural gas usage information available from monthly utility bill.**

**REPORTING**

**None**

**TESTING**

**None**

**MONITORING.** PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

**RECORDKEEPING.** PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

**REPORTING.** PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

**TESTING.** PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

**None**

**Attachment L**  
**Emission Unit Data Sheet**  
 (INDIRECT HEAT EXCHANGER)

Control Device ID No. (must match List Form): **1TS**

**Equipment Information**

1. Manufacturer: <b>Clean Burn</b>	2. Model No. <b>CB-5000</b> Serial No.
3. Number of units: <b>1</b>	4. Use <b>Space Heating during cold periods</b>
5. Rated Boiler Horsepower: <b>N/A</b> hp	6. Boiler Serial No.:
7. Date constructed:	8. Date of last modification and explain: <b>N/A</b>
9. Maximum design heat input per unit: <b>0.50</b> ×10 <sup>6</sup> BTU/hr	10. Peak heat input per unit: <b>0.50</b> ×10 <sup>6</sup> BTU/hr
11. Steam produced at maximum design output:  LB/hr  psig	12. Projected Operating Schedule: Hours/Day <b>8-12</b> Days/Week <b>5</b> Weeks/Year <b>25</b>
13. Type of firing equipment to be used: <input type="checkbox"/> Pulverized coal <input type="checkbox"/> Spreader stoker <input checked="" type="checkbox"/> Oil burners <input type="checkbox"/> Natural Gas Burner <input type="checkbox"/> Others, specify	14. Proposed type of burners and orientation: <input type="checkbox"/> Vertical <input type="checkbox"/> Front Wall <input type="checkbox"/> Opposed <input type="checkbox"/> Tangential <input type="checkbox"/> Others, specify
15. Type of draft: <input checked="" type="checkbox"/> Forced <input type="checkbox"/> Induced	16. Percent of ash retained in furnace: <b>N/A</b> %
17. Will flyash be reinjected? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	18. Percent of carbon in flyash: <b>N/A</b> %

**Stack or Vent Data**

19. Inside diameter or dimensions: <b>≈ 0.83</b> ft.	20. Gas exit temperature: <b>≈ 400°F</b>
21. Height: <b>20</b> ft.	22. Stack serves: <input checked="" type="checkbox"/> This equipment only <input type="checkbox"/> Other equipment also (submit type and rating of all other equipment exhausted through this stack or vent)
23. Gas flow rate: <b>&lt; 1,000</b> ft <sup>3</sup> /min	
24. Estimated percent of moisture: <b>N/A</b> %	

## Fuel Requirements

25.	<b>Type</b>	Fuel Oil No.	Natural Gas	Gas (other, specify)	Coal, Type:	<b>Other: Used Motor/ Hydraulic Oil</b>
	<b>Quantity</b> (at Design Output)	gph@60°F	ft³/hr	ft³/hr	TPH	<b>3.3 gals/hour</b>
	<b>Annually</b>	x10³ gal	x10 <sup>6</sup> ft³/hr	x10 <sup>6</sup> ft³/hr	tons	<b>&lt; 5,000 gals</b>
	<b>Sulfur</b>	Maximum: wt. % Average: wt. %	gr/100 ft³	gr/100 ft³	Maximum: wt. %	<b>0.25%</b>
	<b>Ash (%)</b>				Maximum	<b>0.46%</b>
	<b>BTU Content</b>	BTU/Gal.	BTU/ft³	BTU/ft³	BTU/lb	<b>≈140,000 Btu/Gal (Est.)</b>
	<b>Source</b>					<b>Onsite Fleet Vehicle Maintenance activities</b>
	<b>Supplier</b>					
	<b>Halogens</b> (Yes/No)					No
	<b>List and Identify Metals</b>					.0057% Lead
26. Gas burner mode of control: <input type="checkbox"/> Manual <input type="checkbox"/> Automatic hi-low <input type="checkbox"/> Automatic full modulation <input type="checkbox"/> Automatic on-off			27. Gas burner manufacture:			
			28. Oil burner manufacture: <b>Clean Burn</b>			
29. If fuel oil is used, how is it atomized? <input type="checkbox"/> Oil Pressure <input type="checkbox"/> Steam Pressure <input type="checkbox"/> Compressed Air <input type="checkbox"/> Rotary Cup <input type="checkbox"/> Other, specify						
30. Fuel oil preheated: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			31. If yes, indicate temperature:                  °F			
32. Specify the calculated theoretical air requirements for combustion of the fuel or mixture of fuels described above actual cubic feet (ACF) per unit of fuel: <div style="text-align: center;">@                  °F,                  PSIA,                  % moisture</div>						
33. Emission rate at rated capacity:			lb/hr			
34. Percent excess air actually required for combustion of the fuel described:					%	
<b>Coal Characteristics</b>						
35. Seams:						
36. Proximate analysis (dry basis):      % of Fixed Carbon:                          % of Sulfur: % of Moisture:                                          % of Volatile Matter: % of Ash:						

**Emissions Stream**

37. What quantities of pollutants will be emitted from the boiler before controls?

Pollutant	Pounds per Hour lb/hr	grain/ACF	@ °F	PSIA
CO	<b>See Attachment N – Emission Inventory Calculations and Attachment J.</b>			
Hydrocarbons				
NO <sub>x</sub>				
Pb				
PM <sub>10</sub>				
SO <sub>2</sub>				
VOCs				
Other (specify)				

38. What quantities of pollutants will be emitted from the boiler after controls?

Pollutant	Pounds per Hour lb/hr	grain/ACF	@ °F	PSIA
CO	<b>See Attachment N – Emission Inventory Calculations and Attachment J.</b>			
Hydrocarbons				
NO <sub>x</sub>				
Pb				
PM <sub>10</sub>				
SO <sub>2</sub>				
VOCs				
Other (specify)				

39. How will waste material from the process and control equipment be disposed of? **N/A**

40. Have you completed an *Air Pollution Control Device Sheet(s)* for the control(s) used on this Emission Unit.

41. Have you included the **air pollution rates** on the Emissions Points Data Summary Sheet?

**42. Proposed Monitoring, Recordkeeping, Reporting, and Testing**

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

**MONITORING PLAN:** Please list (1) describe the process parameters and how they were chosen (2) the ranges and how they were established for monitoring to demonstrate compliance with the operation of this process equipment operation or air pollution control device.

**None**

**TESTING PLAN:** Please describe any proposed emissions testing for this process equipment or air pollution control device.

**None**

**RECORDKEEPING:** Please describe the proposed recordkeeping that will accompany the monitoring.

**None**

**REPORTING:** Please describe the proposed frequency of reporting of the recordkeeping.

**None**

43. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.

**Attachment L**  
**Emission Unit Data Sheet**  
(INDIRECT HEAT EXCHANGER)

Control Device ID No. (must match List Form): **2TS**

**Equipment Information**

1. Manufacturer: <b>Clean Burn</b>	2. Model No. <b>CB-2500</b> Serial No.
3. Number of units: <b>1</b>	4. Use <b>Space Heating during cold periods</b>
5. Rated Boiler Horsepower: <b>N/A</b> hp	6. Boiler Serial No.:
7. Date constructed:	8. Date of last modification and explain: <b>N/A</b>
9. Maximum design heat input per unit: <b>0.25</b> x10 <sup>6</sup> BTU/hr	10. Peak heat input per unit: <b>0.25</b> x10 <sup>6</sup> BTU/hr
11. Steam produced at maximum design output:  LB/hr  psig	12. Projected Operating Schedule: Hours/Day <b>8-12</b> Days/Week <b>5</b> Weeks/Year <b>25</b>
13. Type of firing equipment to be used: <input type="checkbox"/> Pulverized coal <input type="checkbox"/> Spreader stoker <input checked="" type="checkbox"/> Oil burners <input type="checkbox"/> Natural Gas Burner <input type="checkbox"/> Others, specify	14. Proposed type of burners and orientation: <input type="checkbox"/> Vertical <input type="checkbox"/> Front Wall <input type="checkbox"/> Opposed <input type="checkbox"/> Tangential <input type="checkbox"/> Others, specify
15. Type of draft: <input checked="" type="checkbox"/> Forced <input type="checkbox"/> Induced	16. Percent of ash retained in furnace: <b>N/A</b> %
17. Will flyash be reinjected? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	18. Percent of carbon in flyash: <b>N/A</b> %

**Stack or Vent Data**

19. Inside diameter or dimensions: <b>≈ 0.67</b> ft.	20. Gas exit temperature: <b>≈ 400°F</b>
21. Height: <b>20</b> ft.	22. Stack serves: <input checked="" type="checkbox"/> This equipment only <input type="checkbox"/> Other equipment also (submit type and rating of all other equipment exhausted through this stack or vent)
23. Gas flow rate: <b>&lt; 1,000</b> ft <sup>3</sup> /min	
24. Estimated percent of moisture: <b>N/A</b> %	

### Fuel Requirements

<b>25.</b>	<b>Type</b>	Fuel Oil No.	Natural Gas	Gas (other, specify)	Coal, Type:	Other: <b>Used Motor/ Hydraulic Oil</b>
	<b>Quantity</b> (at Design Output)	gph@60°F	ft <sup>3</sup> /hr	ft <sup>3</sup> /hr	TPH	<b>1.7 gals/hour</b>
	<b>Annually</b>	x10 <sup>3</sup> gal	x10 <sup>6</sup> ft <sup>3</sup> /hr	x10 <sup>6</sup> ft <sup>3</sup> /hr	tons	<b>&lt; 3,000 gals</b>
	<b>Sulfur</b>	Maximum: wt. % Average: wt. %	gr/100 ft <sup>3</sup>	gr/100 ft <sup>3</sup>	Maximum: wt. %	<b>0.25%</b>
	<b>Ash (%)</b>				Maximum	<b>0.46%</b>
	<b>BTU Content</b>	BTU/Gal.	BTU/ft <sup>3</sup>	BTU/ft <sup>3</sup>	BTU/lb	<b>≈140,000 Btu/Gal (Est.)</b>
	<b>Source</b>					<b>Onsite Fleet Vehicle Maintenance activities</b>
	<b>Supplier</b>					
	<b>Halogens (Yes/No)</b>					<b>No</b>
	<b>List and Identify Metals</b>					<b>.0057% Lead</b>
26. Gas burner mode of control: <input type="checkbox"/> Manual <input type="checkbox"/> Automatic hi-low <input type="checkbox"/> Automatic full modulation <input type="checkbox"/> Automatic on-off			27. Gas burner manufacture:			
			28. Oil burner manufacture: <b>Clean Burn</b>			
29. If fuel oil is used, how is it atomized? <input type="checkbox"/> Oil Pressure <input type="checkbox"/> Steam Pressure <input type="checkbox"/> Compressed Air <input type="checkbox"/> Rotary Cup <input type="checkbox"/> Other, specify						
30. Fuel oil preheated: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			31. If yes, indicate temperature:          °F			
32. Specify the calculated theoretical air requirements for combustion of the fuel or mixture of fuels described above actual cubic feet (ACF) per unit of fuel: @                  °F,                  PSIA,                  % moisture						
33. Emission rate at rated capacity:			lb/hr			
34. Percent excess air actually required for combustion of the fuel described:					%	
<b>Coal Characteristics</b>						
35. Seams:						
36. Proximate analysis (dry basis):    % of Fixed Carbon:                  % of Sulfur: % of Moisture:                          % of Volatile Matter: % of Ash:						

**Emissions Stream**

37. What quantities of pollutants will be emitted from the boiler before controls?

Pollutant	Pounds per Hour lb/hr	grain/ACF	@ °F	PSIA
CO	<b>See Attachment N – Emission Inventory Calculations and Attachment J.</b>			
Hydrocarbons				
NO <sub>x</sub>				
Pb				
PM <sub>10</sub>				
SO <sub>2</sub>				
VOCs				
Other (specify)				

38. What quantities of pollutants will be emitted from the boiler after controls?

Pollutant	Pounds per Hour lb/hr	grain/ACF	@ °F	PSIA
CO	<b>See Attachment N – Emission Inventory Calculations and Attachment J.</b>			
Hydrocarbons				
NO <sub>x</sub>				
Pb				
PM <sub>10</sub>				
SO <sub>2</sub>				
VOCs				
Other (specify)				

39. How will waste material from the process and control equipment be disposed of? **N/A**

40. Have you completed an *Air Pollution Control Device Sheet(s)* for the control(s) used on this Emission Unit.

41. Have you included the **air pollution rates** on the Emissions Points Data Summary Sheet?



**42. Proposed Monitoring, Recordkeeping, Reporting, and Testing**

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

**MONITORING PLAN:** Please list (1) describe the process parameters and how they were chosen (2) the ranges and how they were established for monitoring to demonstrate compliance with the operation of this process equipment operation or air pollution control device.

**None**

**TESTING PLAN:** Please describe any proposed emissions testing for this process equipment or air pollution control device.

**None**

**RECORDKEEPING:** Please describe the proposed recordkeeping that will accompany the monitoring.

**None**

**REPORTING:** Please describe the proposed frequency of reporting of the recordkeeping.

**None**

43. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.

**Attachment L  
Emission Unit Data Sheet**

**EMERGENCY GENERATOR ENGINE DATA SHEET**

Source Identification Number <sup>1</sup>		1H		2H			
Engine Manufacturer and Model		Cummins KTTA19G2		Cummins QST30-G5			
Manufacturer's Rated bhp/rpm		750/1800		1490/1800			
Source Status <sup>2</sup>		ES		NS			
Date Installed/Modified/Removed <sup>3</sup>		1992		2017			
Engine Manufactured/Reconstruction Date <sup>4</sup>		1992		2016/2017			
Is this a Certified Stationary Compression Ignition Engine according to 40CFR60 Subpart III? (Yes or No) <sup>5</sup>		No		Yes			
Is this a Certified Stationary Spark Ignition Engine according to 40CFR60 Subpart JJJ? (Yes or No) <sup>6</sup>		No		No			
Engine, Fuel and Combustion Data	Engine Type <sup>7</sup>	Compression Ignition		Compression Ignition			
	APCD Type <sup>8</sup>						
	Fuel Type <sup>9</sup>	2FO		2FO			
	H <sub>2</sub> S (gr/100 scf)	N/A		N/A			
	Operating bhp/rpm	750/1800		1350/1800			
	BSFC (Btu/bhp-hr)	N/A		N/A			
	Fuel throughput (ft <sup>3</sup> /hr)	35 gal/hr		72.2 gal/hr			
	Fuel throughput (MMft <sup>3</sup> /yr)	N/A		N/A			
	Operation (hrs/yr)	500		500			
Reference <sup>10</sup>	Potential Emissions <sup>11</sup>	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
AP	NO <sub>x</sub>	23.15	5.79	46.0	11.50		
	CO	4.99	1.25	9.91	2.48		
	VOC	1.89	0.47	3.76	0.94		
	SO <sub>2</sub>	1.52	0.38	3.03	0.76		
	PM <sub>10</sub>	1.63	0.41	3.23	0.81		
	Formaldehyde	0.006	0.002	0.012	0.003		

1. Enter the appropriate Source Identification Number for each emergency generator. Generator engines should be designated EG-1, EG-2, EG-3 etc. If more than three (3) engines exist, please use additional sheets.
2. Enter the Source Status using the following codes:  

NS	Construction of New Source (installation)	ES	Existing Source
MS	Modification of Existing Source	RS	Removal of Source
3. Enter the date (or anticipated date) of the engine's installation (construction of source), modification or removal.
4. Enter the date that the engine was manufactured, modified or reconstructed.
5. Is the engine a certified stationary spark ignition internal combustion engine according to 40CFR60 Subpart III. If so, the engine and control device must be operated and maintained in accordance with the manufacturer's emission-related written instructions. You must keep records of conducted maintenance to demonstrate compliance, but no performance testing is

required. If the certified engine is not operated and maintained in accordance with the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine and you must demonstrate compliance according to 40CFR§60.4210 as appropriate.

6. Is the engine a certified stationary spark ignition internal combustion engine according to 40CFR60 Subpart JJJJ. If so, the engine and control device must be operated and maintained in accordance with the manufacturer's emission-related written instructions. You must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required. If the certified engine is not operated and maintained in accordance with the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine and you must demonstrate compliance according to 40CFR§60.4243a(2)(i) through (iii), as appropriate.

7. Enter the Engine Type designation(s) using the following codes:

LB2S	Lean Burn Two Stroke	RB4S	Rich Burn Four Stroke
LB4S	Lean Burn Four Stroke		

8. Enter the Air Pollution Control Device (APCD) type designation(s) using the following codes:

A/F	Air/Fuel Ratio	IR	Ignition Retard
HEIS	High Energy Ignition System	SIPC	Screw-in Precombustion Chambers
PSC	Prestratified Charge	LEC	Low Emission Combustion
NSCR	Rich Burn & Non-Selective Catalytic Reduction	SCR	Lean Burn & Selective Catalytic Reduction

9. Enter the Fuel Type using the following codes:

PQ	Pipeline Quality Natural Gas	RG	Raw Natural Gas
2FO	#2 Fuel Oil	LPG	Liquid Propane Gas

10. Enter the Potential Emissions Data Reference designation using the following codes. Attach all referenced data to this *Compressor/Generator Data Sheet(s)*.

MD	Manufacturer's Data	AP	AP-42	
GR	GRI-HAPCalc™	OT	Other _____	(please list)

11. Enter each engine's Potential to Emit (PTE) for the listed regulated pollutants in pounds per hour and tons per year. PTE shall be calculated at manufacturer's rated brake horsepower and may reflect reduction efficiencies of listed Air Pollution Control Devices. Emergency generator engines may use 500 hours of operation when calculating PTE. PTE data from this data sheet shall be incorporated in the *Emissions Summary Sheet*.

**Attachment M**  
**Air Pollution Control Device Sheet**  
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table): **2C (Main Ingredient Receiving Dist. System - 2CS)**

**Equipment Information and Filter Characteristics**

1. Manufacturer: <b>MAC Equipment</b> Model No. <b>54AVS16</b>		2. Total number of compartments: <b>1</b>	
		3. Number of compartment online for normal operation: <b>1</b>	
4. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.			
5. Baghouse Configuration: <input type="checkbox"/> Open Pressure <input type="checkbox"/> Closed Pressure <input checked="" type="checkbox"/> Closed Suction (check one) <input type="checkbox"/> Electrostatically Enhanced Fabric <input type="checkbox"/> Other, Specify			
6. Filter Fabric Bag Material: <input type="checkbox"/> Nomex nylon <input type="checkbox"/> Wool <input checked="" type="checkbox"/> Polyester <input type="checkbox"/> Polypropylene <input type="checkbox"/> Acrylics <input type="checkbox"/> Ceramics <input type="checkbox"/> Fiber Glass <input type="checkbox"/> Cotton Weight      oz./sq.yd <input type="checkbox"/> Teflon Thickness      in <input type="checkbox"/> Others, specify		7. Bag Dimension: Diameter <b>6</b> in. Length <b>4.5</b> ft.	
		8. Total cloth area: <b>107</b> ft <sup>2</sup>	
		9. Number of bags: <b>16</b>	
		10. Operating air to cloth ratio: <b>14:1</b> ft/min	
11. Baghouse Operation: <input type="checkbox"/> Continuous <input type="checkbox"/> Automatic <input checked="" type="checkbox"/> Intermittent			
12. Method used to clean bags: <input type="checkbox"/> Mechanical Shaker <input type="checkbox"/> Sonic Cleaning <input checked="" type="checkbox"/> Reverse Air Jet <input type="checkbox"/> Pneumatic Shaker <input type="checkbox"/> Reverse Air Flow <input type="checkbox"/> Other: <input type="checkbox"/> Bag Collapse <input type="checkbox"/> Pulse Jet <input type="checkbox"/> Manual Cleaning <input type="checkbox"/> Reverse Jet			
13. Cleaning initiated by: <input checked="" type="checkbox"/> Timer <input type="checkbox"/> Frequency if timer actuated <input type="checkbox"/> Expected pressure drop range      in. of water <input type="checkbox"/> Other			
14. Operation Hours:    Max. per day: <b>24</b> Max. per yr: <b>7,500</b>		15. Collection efficiency:    Rating:      % Guaranteed minimum: <b>.01 gr/dscf</b> %	

**Gas Stream Characteristics**

16. Gas flow rate into the collector: <b>1,500</b> ACFM at <b>Ambient</b> °F and      PSIA ACFM: Design:      PSIA      Maximum:      PSIA      Average Expected:      PSIA	
17. Water Vapor Content of Effluent Stream:      lb. Water/lb. Dry Air	
18. Gas Stream Temperature: <b>Ambient</b> °F	19. Fan Requirements:      hp OR <b>1,500</b> ft <sup>3</sup> /min
20. Stabilized static pressure loss across baghouse. Pressure Drop:    High <b>7.0</b> in. H <sub>2</sub> O Low <b>0.5</b> in. H <sub>2</sub> O	
21. Particulate Loading:    Inlet:      grain/scf      Outlet: <b>0.01</b> grain/scf	

22. Type of Pollutant(s) to be collected (if particulate give specific type): **Dusts associated with grains and other poultry feed ingredients.**

23. Is there any SO<sub>3</sub> in the emission stream?  No  Yes SO<sub>3</sub> content: \_\_\_\_\_ ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

Pollutant	IN		OUT	
	lb/hr	grains/acf	lb/hr	grains/acf
PM			<b>0.129</b>	<b>0.01</b>
PM <sub>10</sub>			<b>0.129</b>	<b>0.01</b>

25. Complete the table:

Particulate Size Range (microns)	Particle Size Distribution at Inlet to Collector	Fraction Efficiency of Collector
	Weight % for Size Range	Weight % for Size Range
0 – 2	Unknown	
2 – 4		
4 – 6		
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

26. How is filter monitored for indications of deterioration (e.g., broken bags)?

Continuous Opacity

Pressure Drop

Alarms-Audible to Process Operator

Visual opacity readings, Frequency:

Other, specify: **Monthly VE Check per current Permit Condition 4.2.1 and 4.4.4**

27. Describe any recording device and frequency of log entries:

28. Describe any filter seeding being performed:

N/A

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):

N/A

30. Describe the collection material disposal system:

**Collected material drops into conveying system located directly underneath baghouse and returned to process.**

31. Have you included **Baghouse Control Device** in the Emissions Points Data Summary Sheet? **Yes**

**32. Proposed Monitoring, Recordkeeping, Reporting, and Testing**

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:  
**None**

RECORDKEEPING:  
**Monthly VE Check. Records of Equipment preventative maintenance procedures.**

REPORTING:  
**None**

TESTING:  
**None**

MONITORING: Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.  
RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.  
REPORTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.  
TESTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.

**Attachment M**  
**Air Pollution Control Device Sheet**  
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table): **4C1 (Pneumatic Receiving System – 4S)**

**Equipment Information and Filter Characteristics**

1. Manufacturer: <b>MAC Equipment</b> Model No. <b>96AVS16</b>		2. Total number of compartments: <b>1</b>	
		3. Number of compartment online for normal operation: <b>1</b>	
4. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.			
5. Baghouse Configuration: <input type="checkbox"/> Open Pressure <input type="checkbox"/> Closed Pressure <input checked="" type="checkbox"/> Closed Suction (check one) <input type="checkbox"/> Electrostatically Enhanced Fabric <input type="checkbox"/> Other, Specify			
6. Filter Fabric Bag Material: <input type="checkbox"/> Nomex nylon <input type="checkbox"/> Wool <input checked="" type="checkbox"/> Polyester <input type="checkbox"/> Polypropylene <input type="checkbox"/> Acrylics <input type="checkbox"/> Ceramics <input type="checkbox"/> Fiber Glass <input type="checkbox"/> Cotton Weight      oz./sq.yd <input type="checkbox"/> Teflon Thickness      in <input type="checkbox"/> Others, specify		7. Bag Dimension: Diameter <b>6</b> in. Length <b>8</b> ft.	
		8. Total cloth area: <b>196</b> ft <sup>2</sup>	
		9. Number of bags: <b>16</b>	
		10. Operating air to cloth ratio: <b>7.6:1</b> ft/min	
11. Baghouse Operation: <input type="checkbox"/> Continuous <input type="checkbox"/> Automatic <input checked="" type="checkbox"/> Intermittent			
12. Method used to clean bags: <input type="checkbox"/> Mechanical Shaker <input type="checkbox"/> Sonic Cleaning <input checked="" type="checkbox"/> Reverse Air Jet <input type="checkbox"/> Pneumatic Shaker <input type="checkbox"/> Reverse Air Flow <input type="checkbox"/> Other: <input type="checkbox"/> Bag Collapse <input type="checkbox"/> Pulse Jet <input type="checkbox"/> Manual Cleaning <input type="checkbox"/> Reverse Jet			
13. Cleaning initiated by: <input checked="" type="checkbox"/> Timer <input type="checkbox"/> Frequency if timer actuated <input type="checkbox"/> Expected pressure drop range      in. of water <input type="checkbox"/> Other			
14. Operation Hours:    Max. per day: <b>8</b> Max. per yr: <b>3,000</b>		15. Collection efficiency:    Rating:      % Guaranteed minimum: <b>.01 gr/dscf</b> %	

**Gas Stream Characteristics**

16. Gas flow rate into the collector: <b>1,500</b> ACFM at <b>Ambient</b> °F and      PSIA ACFM: Design:      PSIA      Maximum:      PSIA      Average Expected:      PSIA			
17. Water Vapor Content of Effluent Stream:      lb. Water/lb. Dry Air			
18. Gas Stream Temperature: <b>Ambient</b> °F		19. Fan Requirements:      hp OR <b>1,500</b> ft <sup>3</sup> /min	
20. Stabilized static pressure loss across baghouse. Pressure Drop:    High <b>7.0</b> in. H <sub>2</sub> O Low <b>0.5</b> in. H <sub>2</sub> O			
21. Particulate Loading:    Inlet:      grain/scf      Outlet: <b>0.01</b> grain/scf			



22. Type of Pollutant(s) to be collected (if particulate give specific type): **Dusts associated with ingredients received pneumatically; currently salt, limestone and phosphate.**

23. Is there any SO<sub>3</sub> in the emission stream?  No  Yes SO<sub>3</sub> content: \_\_\_\_\_ ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

Pollutant	IN		OUT	
	lb/hr	grains/acf	lb/hr	grains/acf
PM			<b>0.129</b>	<b>0.01</b>
PM <sub>10</sub>			<b>0.129</b>	<b>0.01</b>

25. Complete the table:

Particulate Size Range (microns)	Particle Size Distribution at Inlet to Collector	Fraction Efficiency of Collector
	Weight % for Size Range	Weight % for Size Range
0 – 2	Unknown	
2 – 4		
4 – 6		
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

26. How is filter monitored for indications of deterioration (e.g., broken bags)?

Continuous Opacity

Pressure Drop

Alarms-Audible to Process Operator

Visual opacity readings, Frequency:

Other, specify: **Monthly VE Check per current Permit Condition 4.2.1 and 4.4.4**

27. Describe any recording device and frequency of log entries:

28. Describe any filter seeding being performed:

N/A

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):

N/A

30. Describe the collection material disposal system:

**Collected material drops into storage bin underneath baghouse.**

31. Have you included **Baghouse Control Device** in the Emissions Points Data Summary Sheet? **Yes**

**32. Proposed Monitoring, Recordkeeping, Reporting, and Testing**

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:  
**None**

RECORDKEEPING:  
**Monthly VE Check. Records of Equipment preventative maintenance procedures.**

REPORTING:  
**None**

TESTING:  
**None**

MONITORING: Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.  
RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.  
REPORTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.  
TESTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.

**Attachment M**  
**Air Pollution Control Device Sheet**  
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table): **4C2 (Pneumatic Receiving System – 4S)**

**Equipment Information and Filter Characteristics**

1. Manufacturer: <b>MAC Equipment</b> Model No. <b>96AVS16</b>	2. Total number of compartments: <b>1</b> 3. Number of compartment online for normal operation: <b>1</b>
4. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.	
5. Baghouse Configuration: <input type="checkbox"/> Open Pressure <input type="checkbox"/> Closed Pressure <input checked="" type="checkbox"/> Closed Suction (check one) <input type="checkbox"/> Electrostatically Enhanced Fabric <input type="checkbox"/> Other, Specify	
6. Filter Fabric Bag Material: <input type="checkbox"/> Nomex nylon <input type="checkbox"/> Wool <input checked="" type="checkbox"/> Polyester <input type="checkbox"/> Polypropylene <input type="checkbox"/> Acrylics <input type="checkbox"/> Ceramics <input type="checkbox"/> Fiber Glass <input type="checkbox"/> Cotton Weight                      oz./sq.yd <input type="checkbox"/> Teflon Thickness                  in <input type="checkbox"/> Others, specify	7. Bag Dimension: Diameter <b>6</b> in. Length <b>8</b> ft.
	8. Total cloth area: <b>196</b> ft <sup>2</sup>
	9. Number of bags: <b>16</b>
	10. Operating air to cloth ratio: <b>7.6:1</b> ft/min
11. Baghouse Operation: <input type="checkbox"/> Continuous <input type="checkbox"/> Automatic <input checked="" type="checkbox"/> Intermittent	
12. Method used to clean bags: <input type="checkbox"/> Mechanical Shaker <input type="checkbox"/> Sonic Cleaning <input checked="" type="checkbox"/> Reverse Air Jet <input type="checkbox"/> Pneumatic Shaker <input type="checkbox"/> Reverse Air Flow <input type="checkbox"/> Other: <input type="checkbox"/> Bag Collapse <input type="checkbox"/> Pulse Jet <input type="checkbox"/> Manual Cleaning <input type="checkbox"/> Reverse Jet	
13. Cleaning initiated by: <input checked="" type="checkbox"/> Timer <input type="checkbox"/> Frequency if timer actuated <input type="checkbox"/> Expected pressure drop range      in. of water <input type="checkbox"/> Other	
14. Operation Hours:    Max. per day: <b>8</b> Max. per yr: <b>3,000</b>	15. Collection efficiency:    Rating:                  % Guaranteed minimum: <b>.01 gr/dscf</b> %

**Gas Stream Characteristics**

16. Gas flow rate into the collector: <b>1,500</b> ACFM at <b>Ambient</b> °F and          PSIA			
ACFM: Design:                  PSIA		Maximum:                  PSIA          Average Expected:                  PSIA	
17. Water Vapor Content of Effluent Stream:                  lb. Water/lb. Dry Air			
18. Gas Stream Temperature: <b>Ambient</b> °F	19. Fan Requirements:                  hp  OR <b>1,500</b> ft <sup>3</sup> /min		
20. Stabilized static pressure loss across baghouse. Pressure Drop:    High <b>7.0</b> in. H <sub>2</sub> O Low <b>0.5</b> in. H <sub>2</sub> O			
21. Particulate Loading:    Inlet:                  grain/scf                  Outlet: <b>0.01</b> grain/scf			

22. Type of Pollutant(s) to be collected (if particulate give specific type): **Dusts associated with ingredients received pneumatically; currently salt, limestone and phosphate.**

23. Is there any SO<sub>3</sub> in the emission stream?  No  Yes SO<sub>3</sub> content: \_\_\_\_\_ ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

Pollutant	IN		OUT	
	lb/hr	grains/acf	lb/hr	grains/acf
PM			<b>0.129</b>	<b>0.01</b>
PM <sub>10</sub>			<b>0.129</b>	<b>0.01</b>

25. Complete the table:

**Particle Size Distribution at Inlet to Collector**

**Fraction Efficiency of Collector**

Particulate Size Range (microns)	Weight % for Size Range	Weight % for Size Range
0 – 2	Unknown	
2 – 4		
4 – 6		
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

26. How is filter monitored for indications of deterioration (e.g., broken bags)?

Continuous Opacity

Pressure Drop

Alarms-Audible to Process Operator

Visual opacity readings, Frequency:

Other, specify: **Monthly VE Check per current Permit Condition 4.2.1 and 4.4.4**

27. Describe any recording device and frequency of log entries:

28. Describe any filter seeding being performed:

N/A

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):

N/A

30. Describe the collection material disposal system:

**Collected material drops into storage bin underneath baghouse.**

31. Have you included **Baghouse Control Device** in the Emissions Points Data Summary Sheet? **Yes**

**32. Proposed Monitoring, Recordkeeping, Reporting, and Testing**

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:  
**None**

RECORDKEEPING:  
**Monthly VE Check. Records of Equipment preventative maintenance procedures.**

REPORTING:  
**None**

TESTING:  
**None**

MONITORING: Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.  
RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.  
REPORTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.  
TESTING: Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.

**Attachment N - Emission Inventory Calculations**  
 Pilgrim's Pride Corporation - Feed Mill, Hatchery and Truck Shop  
 Moorefield, West Virginia

Emission Unit I.D.	Emission Source	Material Input	Maximum Throughput	Operating Hours	Emission Factor	Units	Pollutant Type	Emissions Control	Control Device Efficiency (%)		Maximum Potential Controlled Emissions				Maximum Potential Uncontrolled Emissions									
									Bldg	Baghouse/ Cyclone	Stack	Stack	Fugitive	Fugitive	Stack	Stack	Fugitive	Fugitive						
									Emission Rate (Lbs/Hr)	Emission Rate (Tons/yr)	Emission Rate (Lbs/Hr)	Emission Rate (Tons/yr)	Emission Rate (Lbs/Hr)	Emission Rate (Tons/yr)	Emission Rate (Lbs/Hr)	Emission Rate (Tons/yr)	Emission Rate (Lbs/Hr)	Emission Rate (Tons/yr)						
<b>New/Proposed Sources</b>																								
2H	Hatchery Emergency Backup Generator Cummins Generator Set (1250 kVA, 1000 KW)	#2 Fuel Oil	1,490 BHP <sup>J</sup> 10.43 mmBtu/hr <sup>H</sup>	*500 hours/year is based on guidance from DEP. Generators are limited to 100 hours/year for non-emergencies per 40 CFR 60, Subpart IIII.	0.31	Lb/mmBtu <sup>E</sup>	PM <sup>G</sup>	None																
					0.31		PM <sub>10</sub>												3.233	0.808	3.233	0.808		
					0.31		PM <sub>2.5</sub>												3.233	0.808	3.233	0.808		
					4.41		NO <sub>x</sub> <sup>G</sup>												45.996	11.499	45.996	11.499		
					0.95		CO <sup>G</sup>												9.909	2.477	9.909	2.477		
					0.29		SO <sub>2</sub>												3.025	0.756	3.025	0.756		
					0.36	VOC <sup>F</sup>	3.755												0.939	3.755	0.939			
					9.33E-04	Lb/mmBtu <sup>E</sup>	Benzene												0.010	0.002	0.010	0.002		
					4.09E-04		Toluene												0.004	0.001	0.004	0.001		
					2.85E-04		Xylenes												0.003	0.001	0.003	0.001		
					3.91E-05		1,3-Butadiene												0.000	0.000	0.000	0.000		
					1.18E-03		Formaldehyde												0.012	0.003	0.012	0.003		
					7.67E-04		Acetaldehyde												0.008	0.002	0.008	0.002		
					9.25E-05	Lb/mmBtu <sup>E</sup>	Acrolein												0.001	0.000	0.001	0.000		
					8.48E-05		Naphthalene												0.001	0.000	0.001	0.000		
					3.79E-03		Total HAPs												0.040	0.010	0.040	0.010		
					163.05	Lb/mmBtu <sup>I</sup>	CO <sub>2</sub>												1,701	425	1,701	425		
0.01	CH <sub>4</sub>	0.069	0.017	0.069	0.017																			
0.001	N <sub>2</sub> O	0.014	0.003	0.014	0.003																			
-	CO <sub>2</sub> e	1,706	427	1,706	427																			
<b>Modified Sources</b>																								
4S	Pneumatic Receiving Systems (Truck Unloading) <sup>M</sup>	Softstock Ingredients	25 TPH	8,760	-	Lb/Ton	PM	2 Baghouses <sup>M</sup> (4C1, 4C2)	N/A	0.01 gr/dscf <sup>K</sup>	0.129	0.563	N/A	N/A	N/A	N/A	38.60	169.07	Maximum Uncontrolled Emissions Information taken from prior permit applications. Typically, failure of the control device would result in emissions indoors since baghouses are located indoors.					
			1,500 CFM		-		PM <sub>10</sub>													0.01 gr/dscf <sup>K</sup>	0.129	0.563	5.02	21.98
			-		-		PM <sub>2.5</sub>													0.01 gr/dscf <sup>K</sup>	0.129	0.563	5.02	21.98
11S	Feed Shipping	Finished Feed	150 TPH	-	0.0033	Lb/Ton <sup>A</sup>	PM	Enclosure, Building <sup>N</sup>	80%	N/A	N/A	N/A	0.10	0.16	N/A	N/A	0.50	0.79						
			478,000 TPY <sup>L</sup>		0.0008		PM <sub>10</sub>						0.02	0.04			0.12	0.19						
			-		0.0001		PM <sub>2.5</sub>						0.004	0.01			0.02	0.03						
<b>Currently Undocumented Sources</b>																								
2CS	Main Ingredient Receiving Distribution System	Grains, Softstock Ingredients	200 TPH	8,760	0.061	Lb/Ton <sup>A</sup>	PM	Baghouse (2C)	N/A	0.01 gr/dscf <sup>K</sup>	0.129	0.563	N/A	N/A	N/A	N/A	12.20	13.73						
			1,500 CFM		0.034		PM <sub>10</sub>			0.01 gr/dscf <sup>K</sup>							0.129	0.563	6.80	7.65				
			450,000 TPY <sup>L</sup>		0.0058		PM <sub>2.5</sub>			0.01 gr/dscf <sup>K</sup>							0.129	0.563	1.16	1.31				
1H	Hatchery Emergency Backup Generator Cummins Generator Set (625 kVA, 500 KW)	#2 Fuel Oil	750 BHP <sup>J</sup> 5.25 mmBtu/hr <sup>H</sup>	*500 hours/year is based on guidance from DEP. Generators are limited to 100 hours/year for non-emergencies per 40 CFR 60, Subpart ZZZZ.	0.31	Lb/mmBtu <sup>E</sup>	PM <sup>G</sup>	None																
					0.31		PM <sub>10</sub>												1.628	0.407	1.628	0.407		
					0.31		PM <sub>2.5</sub>												1.628	0.407	1.628	0.407		
					4.41		NO <sub>x</sub> <sup>G</sup>												23.153	5.788	23.153	5.788		
					0.95		CO <sup>G</sup>												4.988	1.247	4.988	1.247		
					0.29		SO <sub>2</sub>												1.523	0.381	1.523	0.381		
					0.36	VOC <sup>F</sup>	1.890												0.473	1.890	0.473			
					9.33E-04	Lb/mmBtu <sup>E</sup>	Benzene												0.005	0.001	0.005	0.001		
					4.09E-04		Toluene												0.002	0.001	0.002	0.001		
					2.85E-04		Xylenes												0.001	0.000	0.001	0.000		
					3.91E-05		1,3-Butadiene												0.000	0.000	0.000	0.000		
					1.18E-03		Formaldehyde												0.006	0.002	0.006	0.002		
					7.67E-04		Acetaldehyde												0.004	0.001	0.004	0.001		
					9.25E-05	Lb/mmBtu <sup>E</sup>	Acrolein												0.000	0.000	0.000	0.000		
					8.48E-05		Naphthalene												0.000	0.000	0.000	0.000		
					3.79E-03		Total HAPs												0.020	0.005	0.020	0.005		
					163.05	Lb/mmBtu <sup>I</sup>	CO <sub>2</sub>												856	214	856	214		
0.01	CH <sub>4</sub>	0.035	0.009	0.035	0.009																			
0.001	N <sub>2</sub> O	0.007	0.002	0.007	0.002																			
-	CO <sub>2</sub> e	859	215	859	215																			



**Attachment N - Emission Inventory Calculations**  
 Pilgrim's Pride Corporation - Feed Mill, Hatchery and Truck Shop  
 Moorefield, West Virginia

Emission Unit I.D.	Emission Source	Material Input	Maximum Throughput	Operating Hours	Emission Factor	Units	Pollutant Type	Emissions Control	Control Device Efficiency (%)		Maximum Potential Controlled Emissions				Maximum Potential Uncontrolled Emissions															
									Bldg	Baghouse/ Cyclone	Stack	Stack	Fugitive	Fugitive	Stack	Stack	Fugitive	Fugitive												
									Emission Rate (Lbs/Hr)	Emission Rate (Tons/yr)	Emission Rate (Lbs/Hr)	Emission Rate (Tons/yr)	Emission Rate (Lbs/Hr)	Emission Rate (Tons/yr)	Emission Rate (Lbs/Hr)	Emission Rate (Tons/yr)	Emission Rate (Lbs/Hr)	Emission Rate (Tons/yr)												
3H	Hatchery Hot Water Boiler	Natural Gas	1,680 mmBtu/Hr 1,680 Cf/Hr	8,760	7.60	Lb/10 <sup>6</sup> cf <sup>B</sup>	PM <sup>D</sup>	None			0.013	0.056	N/A				0.013	0.056												
					7.60		PM <sub>10</sub> <sup>D</sup>				0.013	0.056					0.013	0.056												
					7.60		PM <sub>2.5</sub> <sup>D</sup>				0.013	0.056					0.013	0.056												
					100.0		NO <sub>x</sub>				0.168	0.736					0.168	0.736												
					84.00		CO				0.141	0.618					0.141	0.618												
					0.60		SO <sub>2</sub>				0.001	0.004					0.001	0.004												
					5.50		VOC				0.009	0.040					0.009	0.040												
					-		Lb/10 <sup>6</sup> cf				Total HAPs						Insignificant Source of HAPs		Insignificant Source of HAPs											
					116.98	lb/mmBtu <sup>I</sup>	CO <sub>2</sub>				197	861					197	861												
					0.002		CH <sub>4</sub>				0.00	0.01					0.00	0.01												
					0.0002		N <sub>2</sub> O				0.00	0.00					0.00	0.00												
					-		CO <sub>2e</sub>				197	862					197	862												
					4H	Hatchery Comfort Heating Units (currently 31 heating units ranging from 0.10 - 0.54 mmBtu/hr)	Natural Gas				11,294 mmBtu/Hr 11,294 Cf/Hr	8,760					7.60	Lb/10 <sup>6</sup> cf <sup>B</sup>	PM <sup>D</sup>	None			0.086	0.376	N/A				0.086	0.376
																	7.60		PM <sub>10</sub> <sup>D</sup>				0.086	0.376					0.086	0.376
7.60	PM <sub>2.5</sub> <sup>D</sup>	0.086	0.376	0.086				0.376																						
100.0	NO <sub>x</sub>	1.129	4.947	1.129				4.947																						
84.00	CO	0.949	4.155	0.949				4.155																						
0.60	SO <sub>2</sub>	0.007	0.030	0.007				0.030																						
5.50	VOC	0.062	0.272	0.062				0.272																						
-	Lb/10 <sup>6</sup> cf	Total HAPs		Insignificant Source of HAPs				Insignificant Source of HAPs																						
116.98	lb/mmBtu <sup>I</sup>	CO <sub>2</sub>	1,321	5,787				1,321	5,787																					
0.002		CH <sub>4</sub>	0.02	0.10				0.02	0.10																					
0.0002		N <sub>2</sub> O	0.00	0.01				0.00	0.01																					
-		CO <sub>2e</sub>	1,322	5,792				1,322	5,792																					
1TS	Truck Shop Used Oil Heater Clean Burn CB-5000 (500,000 Btu/hr)	Used Oil generated onsite from fleet vehicle maintenance activities	3.30 gal/hr <sup>J</sup> 0.50 mmBtu/hr <sup>J</sup>	8,760				30.36	lb/10 <sup>3</sup> gal <sup>C</sup>	PM			None			0.100	0.439												0.100	0.439
								26.22		PM <sub>10</sub>						0.087	0.379												0.087	0.379
					26.22	PM <sub>2.5</sub>	0.087	0.379		0.087	0.379																			
					16	NO <sub>x</sub>	0.053	0.231		0.053	0.231																			
					2.1	CO	0.007	0.030		0.007	0.030																			
					26.75	SO <sub>2</sub>	0.088	0.387		0.088	0.387																			
					1	VOC	0.003	0.014		0.003	0.014																			
					0.285	lb/10 <sup>3</sup> gal <sup>C</sup>	Pb	9.41E-04		0.004	9.41E-04	0.004																		
					4.50E-03		Antimony	1.49E-05	6.50E-05	1.49E-05	6.50E-05																			
					6.00E-02		Arsenic	1.98E-04	8.67E-04	1.98E-04	8.67E-04																			
					1.80E-03		Beryllium	5.94E-06	2.60E-05	5.94E-06	2.60E-05																			
					1.20E-02		Cadmium	3.96E-05	1.73E-04	3.96E-05	1.73E-04																			
					1.80E-02		Chromium	5.94E-05	2.60E-04	5.94E-05	2.60E-04																			
					5.20E-03		Cobalt	1.72E-05	7.52E-05	1.72E-05	7.52E-05																			
					5.00E-02		Manganese	1.65E-04	7.23E-04	1.65E-04	7.23E-04																			
					1.60E-01	Lb/mmBtu <sup>I</sup>	Nickel	5.28E-04	2.31E-03	5.28E-04	2.31E-03																			
					2.80E-05		Phenol	9.24E-08	4.05E-07	9.24E-08	4.05E-07																			
					9.20E-05		Naphthalene	3.04E-07	1.33E-06	3.04E-07	1.33E-06																			
					3.40E-05		Dibutylphthalate	1.12E-07	4.91E-07	1.12E-07	4.91E-07																			
					5.97E-01	Total HAPs		1.97E-03	8.62E-03	1.97E-03	8.62E-03																			
					163.14	Lb/mmBtu <sup>I</sup>	CO <sub>2</sub>	82	357	82	357																			
					0.01		CH <sub>4</sub>	0.003	0.014	0.003	0.014																			
					0.001		N <sub>2</sub> O	0.001	0.003	0.001	0.003																			
					-		CO <sub>2e</sub>	82	359	82	359																			

**Attachment N - Emission Inventory Calculations**  
 Pilgrim's Pride Corporation - Feed Mill, Hatchery and Truck Shop  
 Moorefield, West Virginia

Emission Unit I.D.	Emission Source	Material Input	Maximum Throughput	Operating Hours	Emission Factor	Units	Pollutant Type	Emissions Control	Control Device Efficiency (%)		Maximum Potential Controlled Emissions				Maximum Potential Uncontrolled Emissions			
									Bldg	Baghouse/ Cyclone	Stack	Stack	Fugitive	Fugitive	Stack	Stack	Fugitive	Fugitive
									Emission Rate (Lbs/Hr)	Emission Rate (Tons/yr)	Emission Rate (Lbs/Hr)	Emission Rate (Tons/yr)	Emission Rate (Lbs/Hr)	Emission Rate (Tons/yr)	Emission Rate (Lbs/Hr)	Emission Rate (Tons/yr)	Emission Rate (Lbs/Hr)	Emission Rate (Tons/yr)
2TS	Truck Shop Used Oil Heater Clean Burn CB-2500 (250,000 Btu/hr)	Used Oil generated onsite from fleet vehicle maintenance activities	1.70 gal/hr <sup>J</sup> 0.25 mmBtu/hr <sup>J</sup>	8,760	*In reality, Used Oil Heaters are used for space heating during cold weather periods only. Actual operating hours less than 1,000 per year.	lb/10 <sup>3</sup> gal <sup>C</sup>	PM	None			0.052	0.226	-	-	0.052	0.226	-	-
							PM <sub>10</sub>				0.045	0.195			0.045	0.195		
							PM <sub>2.5</sub>				0.045	0.195			0.045	0.195		
							NO <sub>x</sub>				0.027	0.119			0.027	0.119		
							CO				0.004	0.016			0.004	0.016		
							SO <sub>2</sub>				0.045	0.199			0.045	0.199		
							VOC				0.002	0.007			0.002	0.007		
							Pb				4.85E-04	0.002			4.85E-04	0.002		
							Antimony				7.65E-06	3.35E-05			7.65E-06	3.35E-05		
							Arsenic				1.02E-04	4.47E-04			1.02E-04	4.47E-04		
						Beryllium	3.06E-06	1.34E-05	3.06E-06	1.34E-05								
						Cadmium	2.04E-05	8.94E-05	2.04E-05	8.94E-05								
						Chromium	3.06E-05	1.34E-04	3.06E-05	1.34E-04								
						Cobalt	8.84E-06	3.87E-05	8.84E-06	3.87E-05								
						Manganese	8.50E-05	3.72E-04	8.50E-05	3.72E-04								
						Nickel	2.72E-04	1.19E-03	2.72E-04	1.19E-03								
						Phenol	4.76E-08	2.08E-07	4.76E-08	2.08E-07								
						Naphthalene	1.56E-07	6.85E-07	1.56E-07	6.85E-07								
						Dibutylphthalate	5.78E-08	2.53E-07	5.78E-08	2.53E-07								
						Total HAPs	1.01E-03	4.44E-03	1.01E-03	4.44E-03								
						CO <sub>2</sub>	41	179	41	179								
						CH <sub>4</sub>	0.002	0.007	0.002	0.007								
						N <sub>2</sub> O	0.000	0.001	0.000	0.001								
CO <sub>2e</sub>	41	179	41	179														

**NOTES**

- A = Emission factors obtained from AP-42 Table 9.9.1-1 and 9.9.1-2. Often, PM<sub>10</sub> factors assumed to be 50% of PM factors and PM<sub>2.5</sub> factors assumed to be 17% of PM<sub>10</sub> factors.
- B = Emission factors obtained from AP-42 Table 1.4-1 and 1.4-2.
- C = Emission factors obtained from AP-42 Table 1.11-1, 1.11-2, 1.11-3, 1.11-4, 1.11-5 for Waste Oil Combusters. Assumed used oil is 0.46% ash and 0.25% sulfur and 0.0057% lead. Assumed PM<sub>10</sub> = PM<sub>2.5</sub>. BTU value of used oil assumed to be 140,000 Btu/gal. Vermont Agency of Natural Resources, March 1996. Vermont Used Oil Analysis and Waste Oil Furnace Emissions Study.
- D = Assumed that Natural Gas Combustion releases PM<sub>10</sub> or smaller particles.
- E = Emission factors obtained from AP-42 Table 3.3-1 or Table 3.3-2. Assumed all PM less than 2.5 μm.
- F = Emission factor for VOC is assumed to be equivalent to the emission factor for TOC.
- G = EPA Engine Certification Data available for the engine with PM, NOx, and CO emissions information. AP-42 factors are used in lieu of Engine Certification Data to be more conservative in the emissions approach (i.e., emissions from engine likely to slowly increase over time as compared to emissions testing of brand new engine). See Attachment 2 for EPA Engine Certification Data.
- H = Converted using the conversion factor of 7,000 Btu/hp-hr.
- I = Generally, GHG emission factors taken from 40 CFR 98, Subpart C (converted from kg to lb).
- J = Information from Manufacturer.
- K = Typical MAC Baghouse guaranteed performance.
- L = Currently permitted design capacity.
- M = Due to physical location of receiving connection, only one ingredient can be received pneumatically at a time. Pneumatic receiving systems aspirate through baghouses/cartridge filters. Two baghouses exhaust outdoors and are considered emission points.
- N = Control efficiency allowed under prior permit applications.
- O = Small generator base fuel tanks not included above as these are considered insignificant emission sources. Also, liquid feed ingredient tanks previously determined to be insignificant source.

Pilgrim's Pride Corporation  
Moorefield Feedmill, Hatchery and Truck Shop  
Moorefield, West Virginia

**Attachment O**  
**Monitoring, Recordkeeping, Reporting and Testing Plans**

Pilgrim's requests that the current monitoring, recordkeeping, reporting and testing requirements remain the same as in the current Permit.

**Attachment P**  
**AIR QUALITY PERMIT NOTICE**  
**Notice of Application**

Notice is given that Pilgrim's Pride Corporation has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Construction Permit and Class II Administrative Update for the Pilgrim's Pride Corporation Feed Mill and Hatchery for the installation of a new Hatchery emergency generator and amending the control devices on various Mill ingredient conveying systems located on Industrial Park Road in Moorefield, Hardy County, West Virginia. The latitude and longitude coordinates are: 39.0444 and -78.9861.

The applicant estimates the increased potential to discharge the following Regulated Air Pollutants will be: PM of 3.31 tons per year (tpy), PM<sub>10</sub> of 3.33 tpy, PM<sub>2.5</sub> of 3.33 tpy, NO<sub>x</sub> of 23.32 tpy, CO of 8.54 tpy, SO<sub>2</sub> of 1.76 tpy, VOC of 1.75 tpy and total HAPs of less than 0.1 tpy.

Startup of operation of the new generator is planned to begin on or about the 1st day of February, 2017. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57<sup>th</sup> Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1250, during normal business hours.

Dated this the (Insert Date) day of December, 2016.

By: Pilgrim's Pride Corporation  
Peyton Umstot  
Complex Manager  
P.O. Box 539  
Moorefield, West Virginia 26836



## Specification sheet

# Diesel generator set QST30 series engine

680 kW - 1000 kW 60 Hz



### Description

Cummins Power Generation commercial generator sets are fully integrated power generation systems providing optimum performance, reliability and versatility for stationary standby and prime power applications.

### Features

**Cummins® heavy-duty engine** - Rugged 4-cycle, industrial diesel delivers reliable power, low emissions and fast response to load changes.

**Alternator** - Several alternator sizes offer selectable motor starting capability with low reactance 2/3 pitch windings, low waveform distortion with non-linear loads and fault clearing short-circuit capability.

**Permanent magnet generator (PMG)** - Offers enhanced motor starting and fault clearing short-circuit capability.

**Control system** - The PowerCommand® electronic control is standard equipment and provides total genset system integration including automatic remote starting/stopping, precise frequency and voltage regulation, alarm and status message display, AmpSentry™ protection, output metering, auto-shutdown at fault detection and NFPA 110 Level 1 compliance.

**Cooling system** - Standard integral set-mounted radiator system, designed and tested for rated ambient temperatures, simplifies facility design requirements for rejected heat.

**NFPA** - The genset accepts full rated load in a single step in accordance with NFPA 110 for Level 1 systems.

**Warranty and service** - Backed by a comprehensive warranty and worldwide distributor network.

Model	Standby rating		Prime rating		Continuous rating		Data sheets	
	60 Hz kW (kVA)	50 Hz kW (kVA)	60 Hz kW (kVA)	50 Hz kW (kVA)	60 Hz kW (kVA)	50 Hz kW (kVA)	60 Hz	50 Hz
<b>DQFAA</b>	750 (938)		680 (850)				D-3329	
<b>DQFAB</b>	800 (1000)		725 (907)				D-3330	
<b>DQFAC</b>	900 (1125)		818 (1023)				D-3331	
<b>DQFAD</b>	1000 (1250)		900 (1125)				D-3332	

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# Attachment S - Manufacturer Information for New Generator

## Generator set specifications

Governor regulation class	ISO 8528 Part 1 Class G3
Voltage regulation, no load to full load	± 0.5%
Random voltage variation	± 0.5%
Frequency regulation	Isochronous
Random frequency variation	± 0.25%
Radio frequency emissions compliance	IEC 801.2 through IEC 801.5; MIL STD 461C, Part 9

## Engine specifications

Bore	140 mm (5.51 in)
Stroke	165.0 mm (6.5 in)
Displacement	30.5 litres (1860 in <sup>3</sup> )
Configuration	Cast iron, V, 12 cylinder
Battery capacity	1800 amps minimum at ambient temperature of -18 °C to 0 °C (0 °F to 32 °F)
Battery charging alternator	35 amps
Starting voltage	24 volt, negative ground
Fuel system	Direct injection: number 2 diesel fuel, fuel filter, automatic electric fuel shutoff
Fuel filter	Triple element, 10 micron filtration, spin-on fuel filters with water separator
Air cleaner type	Dry replaceable element
Lube oil filter type(s)	Four spin-on, combination full flow filter and bypass filters
Standard cooling system	High ambient radiator

## Alternator specifications

Design	Brushless, 4 pole, drip proof, revolving field
Stator	2/3 pitch
Rotor	Single bearing flexible discs
Insulation system	Class H on low and medium voltage, Class F on high voltage
Standard temperature rise	150 °C standby at 40 °C ambient
Exciter type	PMG (permanent magnet generator)
Phase rotation	A (U), B (V), C (W)
Alternator cooling	Direct drive centrifugal blower fan
AC waveform total harmonic distortion	< 5% no load to full linear load, < 3% for any single harmonic
Telephone influence factor (TIF)	< 50 per NEMA MG1-22.43
Telephone harmonic factor (THF)	< 3

## Available voltages

60 Hz line-neutral/line-line	50 Hz line-neutral/line-line
<ul style="list-style-type: none"> <li>• 120/208</li> <li>• 220/380</li> <li>• 240/416</li> <li>• 347/600</li> <li>• 139/240</li> <li>• 230/400</li> <li>• 277/480</li> </ul>	

Note: Consult factory for other voltages.

## Generator set options and accessories

### Engine

- 208/240/480 V coolant heater for ambient above 4.5 °C (40 °F)
- 208/240/480 V coolant heater for ambient below 4.5 °C (40 °F)

### Control panel

- 120/240 V 100 W control anti-condensation heater
- Paralleling configuration
- Remote fault signal package
- Run relay package

### Alternator

- 80 °C rise
- 105 °C rise
- 125 °C rise
- 120/240 V 300 W, anti-condensation heater
- Temperature sensor - RTDs, 2/phase
- Temperature sensor - alternator bearing RTD
- Differential current transformers

### Exhaust system

- Industrial grade exhaust silencer
- Residential grade exhaust silencer
- Critical grade exhaust silencer

### Cooling system

- Remote radiator

### Generator set

- AC entrance box
- Battery

- Battery rack with hold-down - floor standing
- Circuit breaker - set mounted
- Disconnect switch - set mounted
- PowerCommand Network
- Remote annunciator panel
- Spring isolators
- 2 year warranty
- 5 year warranty
- 10 year major components warranty

Note: Some options may not be available on all models - consult factory for availability.

# Attachment S - Manufacturer Information for New Generator

## Control system PCC3201



**PowerCommand control** is an integrated generator set control system providing governing, voltage regulation, engine protection and operator interface functions. Major features include:

- Integral AmpSentry™ Protective Relay providing a full range of alternator protection functions that are matched to the alternator provided.
- Battery monitoring and testing features and smart starting control system.
- Three phase sensing, full wave rectified voltage regulation system, with a PWM output for stable operation with all load types.
- Control suitable for operation in ambient temperatures from -40 °C to +70 °C (-40 °F to +158 °F) and altitudes to 5000 meters (13,000 feet).
- Prototype tested; UL, CSA, and CE compliant.
- InPower™ PC-based service tool available for detailed diagnostics.
- Optional Echelon® LONWORKS® network interface.

### Operator/display panel

- Off/manual/auto mode switch
- Manual run/stop switch
- Panel lamp test switch
- Emergency stop switch
- Exercise switch
- Alpha-numeric display with pushbutton access for viewing engine and alternator data and providing setup, controls and adjustments
- LED lamps indicating not in auto, common warning, common shutdown, remote start
- Configurable for local language

### Engine protection

- Overspeed shut down
- Low oil pressure warning and shut down
- High coolant temperature warning and shut down
- High oil temperature warning
- Low coolant level warning or shut down
- Low coolant temperature warning
- High and low battery voltage warning
- Weak battery warning
- Dead battery shut down
- Fail to start (overcrank) shut down
- Fail to crank shut down
- Redundant start disconnect
- Cranking lockout
- Sensor failure indication

### Engine data

- DC voltage
- Lube oil pressure
- Coolant temperature
- Lube oil temperature
- Engine speed
- Engine ECM data

### AmpSentry AC protection

- Over current and short-circuit shut down
- Over current warning
- Single and three phase fault regulation
- Over and under voltage shut down
- Over and under frequency shut down
- Overload warning with alarm contact
- Reverse power and reverse Var shut down

### Alternator data

- Line-to-line and line-to-neutral AC volts
- Three phase AC current
- Frequency
- Total and individual phase power factor, kW and kVA
- Bus voltage and frequency (with paralleling options)

### Other data

- Genset model data
- Start attempts, starts, running hours
- kW hours (total and since reset)
- Fault history
- Load profile (accessible with InPower)

### Governing

- Digital electronic isochronous governor
- Temperature dynamic governing
- Smart idle speed mode

### Voltage regulation

- Digital PWM electronic voltage regulation
- Three phase line-to-neutral sensing
- Single and three phase fault regulation
- Configurable torque matching

### Control functions

- Data logging on faults
- Fault simulation (requires InPower)
- Time delay start and cooldown
- Cycle cranking
- Configurable customer outputs (4)
- Configurable network inputs (8) and outputs (16) (with optional network)
- Remote emergency stop

### Paralleling (Option)

- Active digital phase lock loop synchronizer
- Isochronous kW and kVar load sharing controls
- kW import/export and kVar/PF control for utility (mains) paralleling

### Options

- Thermostatically controlled space heater
- Key-type mode switch
- Ground fault module
- Auxiliary relays (3)
- Echelon LONWORKS interface
- Modion Gateway to convert to Modbus (loose)
- PowerCommand iWatch web server for remote monitoring and alarm notification (loose)
- Digital input and output module(s) (loose)
- Remote annunciator (loose)
- Paralleling
- Power transfer control

For further detail see document S-1444.

# Attachment S - Manufacturer Information for New Generator

## Emergency standby power (ESP):

Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

## Limited-time running power (LTP):

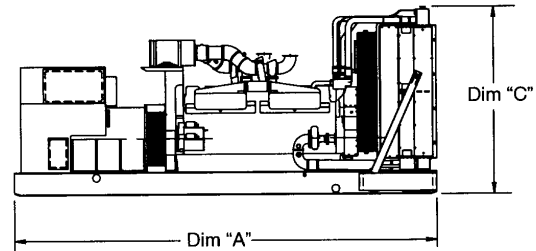
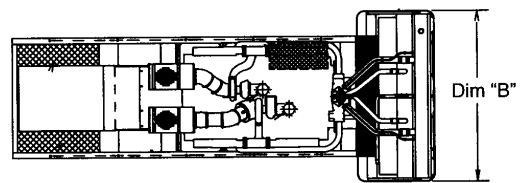
Applicable for supplying power to a constant electrical load for limited hours. Limited Time Running Power (LTP) is in accordance with ISO 8528.

## Prime power (PRP):

Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

## Base load (continuous) power (COP):

Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514.



This outline drawing is for reference only. See respective model data sheet for specific model outline drawing number.

**Do not use for installation design**

Model	Dim "A" mm (in.)	Dim "B" mm (in.)	Dim "C" mm (in.)	Set Weight* dry kg (lbs)	Set Weight* wet kg (lbs)
<b>DQFAA</b>	4338 (170.7)	2000 (79)	2353 (93)	6673 (14707)	6971 (15363)
<b>DQFAB</b>	4338 (170.7)	2000 (79)	2353 (93)	6696 (15199)	7194 (15855)
<b>DQFAC</b>	4338 (170.7)	2000 (79)	2353 (93)	7375 (16254)	7672 (16910)
<b>DQFAD</b>	4338 (170.7)	2000 (79)	2353 (93)	7633 (16824)	7931 (17480)

\* Weights represent a set with standard features. See outline drawings for weights of other configurations.

## Codes and standards

Codes or standards compliance may not be available with all model configurations – consult factory for availability.

	<p>This generator set is designed in facilities certified to ISO 9001 and manufactured in facilities certified to ISO 9001 or ISO 9002.</p>		<p>The generator set is available listed to UL 2200, Stationary Engine Generator Assemblies for all 60 Hz low voltage models. The PowerCommand control is Listed to UL 508 - Category NITW7 for U.S. and Canadian usage. Circuit breaker assemblies are UL 489 Listed for 100% continuous operation and also UL 869A Listed Service Equipment.</p>
	<p>The Prototype Test Support (PTS) program verifies the performance integrity of the generator set design. Cummins Power Generation products bearing the PTS symbol meet the prototype test requirements of NFPA 110 for Level 1 systems.</p>	<p><b>U.S. EPA</b></p>	<p>Engine certified to Stationary Emergency U.S. EPA New Source Performance Standards, 40 CFR 60 subpart IIII Tier 2 exhaust emission levels. U.S. applications must be applied per this EPA regulation.</p>
	<p>All low voltage models are CSA certified to product class 4215-01.</p>	<p><b>International Building Code</b></p>	<p>The generator set package is available certified for seismic application in accordance with the following International Building Code: IBC2000, IBC2003, IBC2006, IBC2009 and IBC2012.</p>

**Warning:** Back feed to a utility system can cause electrocution and/or property damage. Do not connect to any building's electrical system except through an approved device or after building main switch is open.

North America  
1400 73rd Avenue N.E.  
Minneapolis, MN 55432  
USA

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# Attachment S - Manufacturer Information for New Generator

Model: DQFAD

Frequency: 60

Fuel type: Diesel

KW rating: 1000 standby  
900 prime

Emissions level: EPA NSPS Stationary Emergency Tier 2

† Generator set data sheet



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Exhaust emission data sheet:	EDS-1063
Exhaust emission compliance sheet:	EPA-1097
Sound performance data sheet:	MSP-1038
Cooling performance data sheet:	MCP-156
Prototype test summary data sheet:	PTS-266
Standard set-mounted radiator cooling outline:	0500-4391
Optional set-mounted radiator cooling outline:	
Optional heat exchanger cooling outline:	
Optional remote radiator cooling outline:	0500-4390

Fuel consumption	Standby				Prime				Continuous
	kW (kVA)				kW (kVA)				kW (kVA)
Ratings	1000 (1250)				900 (1125)				
Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full	Full
US gph	19.1	35.8	54.1	72.2	17.3	32.1	47.5	63.9	
L/hr	72.3	135.5	204.8	273.3	65.5	121.5	179.8	241.9	

Engine	Standby rating	Prime rating	Continuous rating
Engine manufacturer	Cummins Inc.		
Engine model	QST30-G5 NR2		
Configuration	Cast iron, V 12 cylinder		
Aspiration	Turbocharged and low temperature aftercooled		
Gross engine power output, kWm (bhp)	1112 (1490)	1007 (1350)	
BMEP at set rated load, kPa (psi)	2417 (351)	2160 (313)	
Bore, mm (in)	140 (5.51)		
Stroke, mm (in)	165 (6.5)		
Rated speed, rpm	1800		
Piston speed, m/s (ft/min)	9.91 (1950)		
Compression ratio	14.7:1		
Lube oil capacity, L (qt)	154 (162.8)		
Overspeed limit, rpm	2100 ±50		
Regenerative power, kW	82		

Fuel flow	
Maximum fuel flow, L/hr (US gph)	570 (150)
Maximum fuel inlet restriction, kPa (in Hg)	27 (8.0)
Maximum fuel inlet temperature, °C (°F)	66 (150)

# Attachment S - Manufacturer Information for New Generator

Air	Standby rating	Prime rating	Continuous rating
Combustion air, m <sup>3</sup> /min (scfm)	88 (3150)	81 (2880)	
Maximum air cleaner restriction, kPa (in H <sub>2</sub> O)	6.2 (25)		
Alternator cooling air, m <sup>3</sup> /min (cfm)	204 (7300)		

## Exhaust

Exhaust flow at set rated load, m <sup>3</sup> /min (cfm)	211 (7540)	195 (6950)	
Exhaust temperature, °C (°F)	477 (890)	467 (873)	
Maximum back pressure, kPa (in H <sub>2</sub> O)	6.8 (27)		

## Standard set-mounted radiator cooling

Ambient design, °C (°F)	50 (122)		
Fan load, kW <sub>m</sub> (HP)	43 (57)		
Coolant capacity (with radiator), L (US gal)	201 (53.2)		
Cooling system air flow, m <sup>3</sup> /min (scfm)	952 (34000)		
Total heat rejection, MJ/min (Btu/min)	48.9 (46455)	43.9 (41660)	
Maximum cooling air flow static restriction, kPa (in H <sub>2</sub> O)	0.12 (0.5)		
Maximum fuel return line restriction kPa (in Hg)	67.5 (20)		

## Optional set-mounted radiator cooling

Ambient design, °C (°F)			
Fan load, kW <sub>m</sub> (HP)			
Coolant capacity (with radiator), L (US gal)			
Cooling system air flow, m <sup>3</sup> /min (scfm)			
Total heat rejection, MJ/min (Btu/min)			
Maximum cooling air flow static restriction, kPa (in H <sub>2</sub> O)			
Maximum fuel return line restriction, kPa (in Hg)			

## Optional heat exchanger cooling

Set coolant capacity, L (US gal)			
Heat rejected, jacket water circuit, MJ/min (Btu/min)			
Heat rejected, aftercooler circuit, MJ/min (Btu/min)			
Heat rejected, fuel circuit, MJ/min (Btu/min)			
Total heat radiated to room, MJ/min (Btu/min)			
Maximum raw water pressure, jacket water circuit, kPa (psi)			
Maximum raw water pressure, aftercooler circuit, kPa (psi)			
Maximum raw water pressure, fuel circuit, kPa (psi)			
Maximum raw water flow, jacket water circuit, L/min (US gal/min)			
Maximum raw water flow, aftercooler circuit, L/min (US gal/min)			
Maximum raw water flow, fuel circuit, L/min (US gal/min)			
Minimum raw water flow at 27 °C (80 °F) inlet temp, jacket water circuit, L/min (US gal/min)			
Minimum raw water flow at 27 °C (80 °F) inlet temp, aftercooler circuit, L/min (US gal/min)			
Minimum raw water flow at 27 °C (80 °F) inlet temp, fuel circuit, L/min (US gal/min)			
Raw water delta P at min flow, jacket water circuit, kPa (psi)			
Raw water delta P at min flow, aftercooler circuit, kPa (psi)			
Raw water delta P at min flow, fuel circuit, kPa (psi)			
Maximum jacket water outlet temp, °C (°F)			
Maximum aftercooler inlet temp, °C (°F)			
Maximum aftercooler inlet temp at 25 °C (77 °F) ambient, °C (°F)			
Maximum fuel return line restriction, kPa (in Hg)			

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# Attachment S - Manufacturer Information for New Generator

Optional remote radiator cooling <sup>1</sup>	Standby rating	Prime rating	Continuous rating
Set coolant capacity, L (US gal)			
Max flow rate at max friction head, jacket water circuit, L/min (US gal/min)	992 (262)		
Max flow rate at max friction head, aftercooler circuit, L/min (US gal/min)	303 (80)		
Heat rejected, jacket water circuit, MJ/min (Btu/min)	22.67 (21500)	21.01 (19925)	
Heat rejected, aftercooler circuit, MJ/min (Btu/min)	18.35 (17400)	15.69 (14885)	
Heat rejected, fuel circuit, MJ/min (Btu/min)			
Total heat radiated to room, MJ/min (Btu/min)	6.1 (5753)	5.6 (5301)	
Maximum friction head, jacket water circuit, kPa (psi)	69 (10)		
Maximum friction head, aftercooler circuit, kPa (psi)	48 (7)		
Maximum static head, jacket water circuit, m (ft)	14 (46)		
Maximum static head, aftercooler circuit, m (ft)	14 (46)		
Maximum jacket water outlet temp, °C (°F)	104 (220)	100 (212)	
Maximum aftercooler inlet temp at 25 °C (77 °F) ambient, °C (°F)	41 (105)		
Maximum aftercooler inlet temp, °C (°F)	62 (143)	56 (133)	
Maximum fuel flow, L/hr (US gph)			
Maximum fuel return line restriction, kPa (in Hg)	67.5 (20)		

## Weights<sup>2</sup>

Unit dry weight kgs (lbs)	7633 (16824)
Unit wet weight kgs (lbs)	7931 (17480)

Notes:

<sup>1</sup> For non-standard remote installations contact your local Cummins Power Generation representative.

<sup>2</sup> Weights represent a set with standard features. See outline drawing for weights of other configurations.

## Derating factors

Standby	Engine power available up to 701 m (2300 ft) at ambient temperatures up to 40 °C (104 °F). Above these elevations, derate at 3.5% per 305 m (1000 ft) and 7% per 10 °C (18 °F).
Prime	Engine power available up to 727 m (2385 ft) at ambient temperatures up to 40 °C (104 °F). Above these elevations, derate at 3.5% per 305 m (1000 ft) and 7% per 10 °C (18 °F).
Continuous	

## Ratings definitions

Emergency standby power (ESP):	Limited-time running power (LTP):	Prime power (PRP):	Base load (continuous) power (COP):
Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Applicable for supplying power to a constant electrical load for limited hours. Limited Time Running Power (LTP) is in accordance with ISO 8528.	Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) is in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514.

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# Attachment S - Manufacturer Information for New Generator

## Alternator data

Voltage	Connection <sup>1</sup>	Temp rise degrees C	Duty <sup>2</sup>	Single phase factor <sup>3</sup>	Max surge kVA <sup>4</sup>	Winding No.	Alternator data sheet	Feature Code
120/208-139/240	12-lead	125/105	S/P		4234	1019	ADS-312	B252
240/416-277/480	12-lead	125/105	S/P		4234	1019	ADS-312	B252
277/480	Wye, 3-phase	125/105	S/P		3866	1018	ADS-311	B276
220/380-277/480	Wye, 3-phase	125/105	S/P		4602	1018	ADS-330	B282
220/380-277/480	Wye, 3-phase	105/80	S/P		4602	1018	ADS-330	B283
210/380-277/480	Wye, 3-phase	80	S		5521	1024	ADS-331	B284
240/416-277/480	Wye	125/105	S/P		4234	1019	ADS-312	B288
347/600	3-phase	125/105	S/P		3866	1021	ADS-311	B300
347/600	3-phase	105/80	S/P		4234	1024	ADS-312	B301
347/600	3-phase	80	S		4602	1004	ADS-330	B604

### Notes:

<sup>1</sup> Limited single phase capability is available from some three phase rated configurations. To obtain single phase rating, multiply the three phase kW rating by the Single Phase Factor<sup>3</sup>. All single phase ratings are at unity power factor.

<sup>2</sup> Standby (S), Prime (P) and Continuous ratings (C).

<sup>3</sup> Factor for the *Single Phase Output from Three Phase Alternator* formula listed below.

<sup>4</sup> Maximum rated starting kVA that results in a minimum of 90% of rated sustained voltage during starting.

## Formulas for calculating full load currents:

Three phase output

$$\frac{\text{kW} \times 1000}{\text{Voltage} \times 1.73 \times 0.8}$$

Single phase output

$$\frac{\text{kW} \times \text{SinglePhaseFactor} \times 1000}{\text{Voltage}}$$

Cummins Power Generation  
1400 73<sup>rd</sup> Avenue N.E.  
Minneapolis, MN 55432 USA  
Phone: 763 574 5000  
Fax: 763 574 5298

Warning: Back feed to a utility system can cause electrocution and/or property damage. Do not connect to any building's electrical system except through an approved device or after building main switch is open.

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Attachment S - Manufacturer Information for Baghouses (2C, 4C1, 4C2)

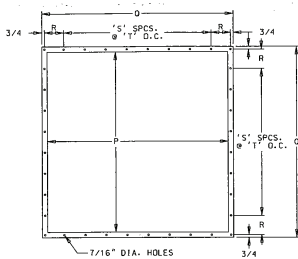
# Air Vent Square (AVS) Filter



The Mac Process Air-Vent Square (AVS) is a pulse jet filter. Electronically timed compressed air is released into a row of filter bags during operation. These pulses dislodge the captured dust and allow the filter to clean itself without shutting down the operation. Mac Process offers this filter in two styles: with and without a hopper.

With a 60° hopper (Style III) the filter receives dust through a hopper entry inlet and discharges the collected dust through an airlock for dust disposal or recycling.

Without the hopper (Style II) the filter is ideally suited as a bin vent filter for storage tanks, work bins and surge hoppers.



## Standard Specifications

- 12 gauge carbon or 304 stainless steel construction\*
- Rated to 17" w.c. static pressure
- Full welded exterior
- Skip welded interior
- 36 bag units and larger have reinforced housing and tubesheet
- Broke lip flange on top plenum and housing
- Timing board enclosures: NEMA 4
- Venturi nozzle and bag cups: Mineral reinforced nylon
- Bag cages: Galvanized carbon steel
- Bags: 16 oz. singed dacron polyester
- Lifting lugs: Two on top plenum
- Service door:
  - Units with 18" long bags have an 18" x 15" tall bolted inspection panel
  - Units with bags longer than 18" have an 18" wide hinged (to left side) T-handle style inspection door
- 60° hopper flanged to housing (Style III only)
- Mac Process white paint

\*stainless steel includes housing, hopper and tubesheet with all carbon steel flanges and reinforced ribs

## Options

- Pressure differential gauge kit
- 316 stainless steel
- 10 gauge carbon steel construction
- Rated to 20" w.c. static pressure
- High entry inlet with bag protectors
- 70° hopper slope
- Aluminum Venturi
- NEMA 7 Or 9 timer enclosure
- Exhaust weather hood with birdscreen
- 4x4 mesh grate
- Carbon steel service platform with ladder and safety cage
- Pneumatic noise reducers in solenoids
- Flanged air inlet
- Mount pads
- Side mounted or top mounted fans (restrictions exist - please contact your Mac Process Sales Representative)
- Support structures

### Dimensions (IN.)

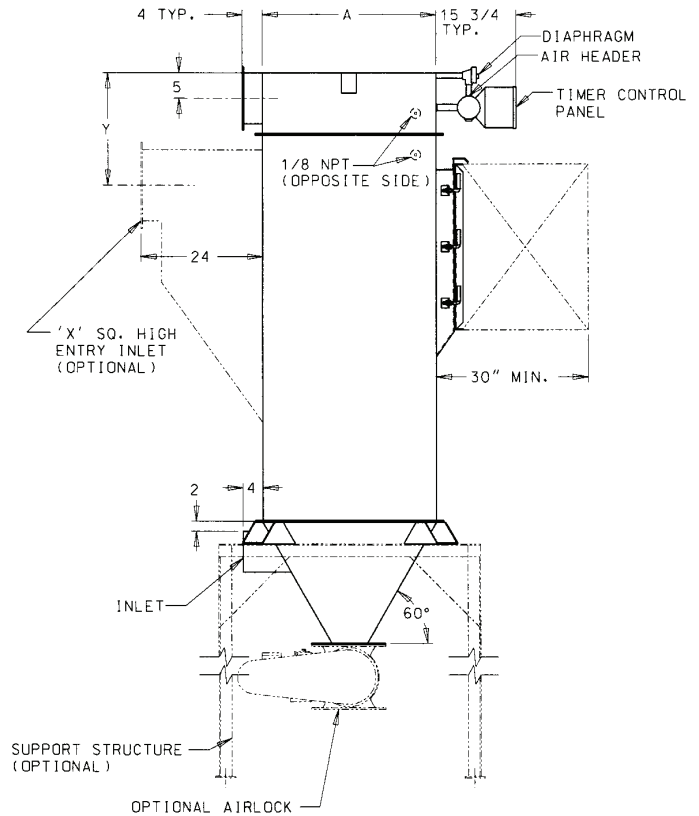
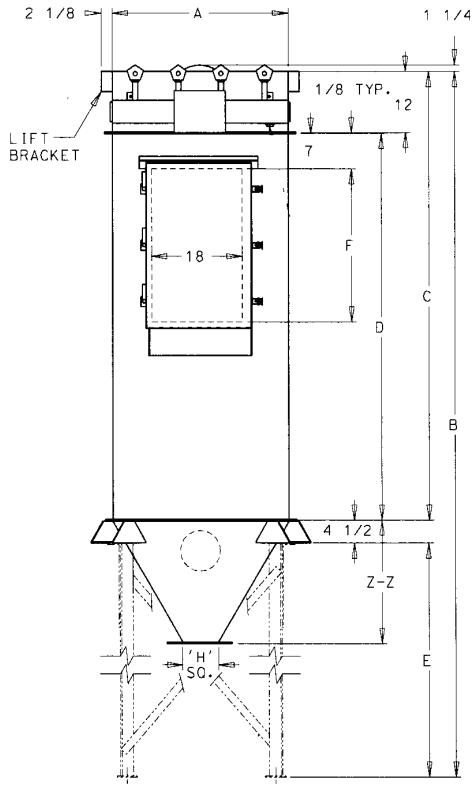
MODEL	P	Q	R	S	T
AVS/ST9	26	29	5 1/2	3	5 1/2
AVS/ST16	35 1/2	37 1/2	6	4	6
AVS/ST25	43	46	5 9/16	6	5 9/16
AVS/ST36	51 1/2	54 1/2	5 1/2	7	6
AVS/ST49	60	63	6 3/4	8	6
AVS/ST64	68 1/2	71 1/2	5	12	5

### HOPPER HEIGHT (Z-Z)

MODEL	DISCHARGE 'H'						
	MD20 8	MD20 9	MD40 10 STD.	MD40 12	MD75 14	MD75 15	MD139 16
AVS9	15 15/16	15 1/8	14 1/4	12 1/2	---	---	---
AVS16	23 5/16	22 7/16	21 9/16	19 7/8	18 1/8	17 1/4	16 3/8
AVS25	30 3/4	29 7/8	29	27 5/16	25 9/16	24 11/16	23 13/16
AVS36	38 1/8	37 1/4	36 3/8	34 5/8	32 15/16	32 1/16	31 3/16
AVS49	45 1/2	44 5/8	43 3/4	42	40 1/4	39 7/16	38 9/16
AVS64	52 13/16	51 15/16	51 1/8	49 3/8	47 5/8	46 3/4	45 7/8

# Attachment S - Manufacturer Information for Baghouses (2C, 4C1, 4C2)

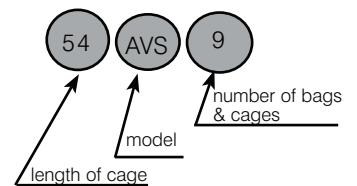
**macprocess**  
schenckprocess group



MODEL	CLOTH AREA	NO. OF BAGS	Dimensions (IN.)										MAX. A/L	SCFM	WEIGHT LBS.
			A	B	C	D	E	F	G	X	Y				
18AVS9	17	9	26	82 <sup>5</sup> / <sub>8</sub>	40 <sup>1</sup> / <sub>8</sub>	28	38	20	10 DIA.	14	22 <sup>1</sup> / <sub>8</sub>	MD 40	3.6	370	
36AVS9	38	9	26	94 <sup>5</sup> / <sub>8</sub>	52 <sup>1</sup> / <sub>8</sub>	40	38	22	10 DIA.	14	22 <sup>1</sup> / <sub>8</sub>	MD 40	3.6	500	
54AVS9	60	9	26	112 <sup>5</sup> / <sub>8</sub>	70 <sup>1</sup> / <sub>8</sub>	58	38	30	10 DIA.	14	22 <sup>1</sup> / <sub>8</sub>	MD 40	3.6	590	
72AVS9	81	9	26	130 <sup>5</sup> / <sub>8</sub>	88 <sup>1</sup> / <sub>8</sub>	76	38	38	10 DIA.	14	22 <sup>1</sup> / <sub>8</sub>	MD 40	3.6	680	
18AVS16	30	16	34 <sup>1</sup> / <sub>2</sub>	90 <sup>5</sup> / <sub>8</sub>	40 <sup>1</sup> / <sub>8</sub>	28	46	20	10 DIA.	14	22 <sup>1</sup> / <sub>8</sub>	MD 40	5.0	540	
36AVS16	69	16	34 <sup>1</sup> / <sub>2</sub>	102 <sup>5</sup> / <sub>8</sub>	52 <sup>1</sup> / <sub>8</sub>	40	46	22	10 DIA.	14	22 <sup>1</sup> / <sub>8</sub>	MD 40	5.0	700	
54AVS16	107	16	34 <sup>1</sup> / <sub>2</sub>	120 <sup>5</sup> / <sub>8</sub>	70 <sup>1</sup> / <sub>8</sub>	58	46	30	10 DIA.	14	22 <sup>1</sup> / <sub>8</sub>	MD 40	5.0	820	
72AVS16	145	16	34 <sup>1</sup> / <sub>2</sub>	138 <sup>5</sup> / <sub>8</sub>	88 <sup>1</sup> / <sub>8</sub>	76	46	38	10 DIA.	14	22 <sup>1</sup> / <sub>8</sub>	MD 40	5.0	950	
96AVS16	196	16	34 <sup>1</sup> / <sub>2</sub>	162 <sup>5</sup> / <sub>8</sub>	112 <sup>1</sup> / <sub>8</sub>	100	46	48	10 DIA.	14	22 <sup>1</sup> / <sub>8</sub>	MD 40	5.0	1110	
18AVS25	48	25	43	98 <sup>5</sup> / <sub>8</sub>	40 <sup>1</sup> / <sub>8</sub>	28	54	20	10 X 20	18	24 <sup>1</sup> / <sub>8</sub>	MD 40	5.8	730	
36AVS25	104	25	43	110 <sup>5</sup> / <sub>8</sub>	52 <sup>1</sup> / <sub>8</sub>	40	54	22	10 X 20	18	24 <sup>1</sup> / <sub>8</sub>	MD 40	5.8	930	
54AVS25	167	25	43	128 <sup>5</sup> / <sub>8</sub>	70 <sup>1</sup> / <sub>8</sub>	58	54	30	10 X 20	18	24 <sup>1</sup> / <sub>8</sub>	MD 40	5.8	1090	
72AVS25	227	25	43	146 <sup>5</sup> / <sub>8</sub>	88 <sup>1</sup> / <sub>8</sub>	76	54	38	10 X 20	18	24 <sup>1</sup> / <sub>8</sub>	MD 40	5.8	1190	
96AVS25	307	36	43	170 <sup>5</sup> / <sub>8</sub>	112 <sup>1</sup> / <sub>8</sub>	100	54	48	10 X 20	18	24 <sup>1</sup> / <sub>8</sub>	MD 40	5.8	1390	
36AVS36	155	36	51 <sup>1</sup> / <sub>2</sub>	118 <sup>5</sup> / <sub>8</sub>	52 <sup>1</sup> / <sub>8</sub>	40	62	22	10 X 20	18	24 <sup>1</sup> / <sub>8</sub>	MD 40	7.3	1210	
54AVS36	241	36	51 <sup>1</sup> / <sub>2</sub>	136 <sup>5</sup> / <sub>8</sub>	70 <sup>1</sup> / <sub>8</sub>	58	62	30	10 X 20	18	24 <sup>1</sup> / <sub>8</sub>	MD 40	7.3	1440	
72AVS36	327	36	51 <sup>1</sup> / <sub>2</sub>	154 <sup>5</sup> / <sub>8</sub>	88 <sup>1</sup> / <sub>8</sub>	76	62	38	10 X 20	18	24 <sup>1</sup> / <sub>8</sub>	MD 40	7.3	1660	
96AVS36	442	36	51 <sup>1</sup> / <sub>2</sub>	178 <sup>5</sup> / <sub>8</sub>	112 <sup>1</sup> / <sub>8</sub>	100	62	48	10 X 20	18	24 <sup>1</sup> / <sub>8</sub>	MD 40	7.3	1810	
36AVS49	211	49	60	126 <sup>5</sup> / <sub>8</sub>	52 <sup>1</sup> / <sub>8</sub>	40	70	22	10 X 36	24	27 <sup>1</sup> / <sub>8</sub>	MD 75	8.5	1450	
54AVS49	328	49	60	144 <sup>5</sup> / <sub>8</sub>	70 <sup>1</sup> / <sub>8</sub>	58	70	30	10 X 36	24	27 <sup>1</sup> / <sub>8</sub>	MD 75	8.5	1820	
72AVS49	445	49	60	162 <sup>5</sup> / <sub>8</sub>	88 <sup>1</sup> / <sub>8</sub>	76	70	38	10 X 36	24	27 <sup>1</sup> / <sub>8</sub>	MD 75	8.5	1990	
96AVS49	602	49	60	186 <sup>5</sup> / <sub>8</sub>	112 <sup>1</sup> / <sub>8</sub>	100	70	48	10 X 36	24	27 <sup>1</sup> / <sub>8</sub>	MD 75	8.5	2280	
36AVS64	276	64	68 <sup>1</sup> / <sub>2</sub>	134 <sup>5</sup> / <sub>8</sub>	52 <sup>1</sup> / <sub>8</sub>	40	78	22	10 X 36	24	27 <sup>1</sup> / <sub>8</sub>	MD 139	10.9	1820	
54AVS64	429	64	68 <sup>1</sup> / <sub>2</sub>	152 <sup>5</sup> / <sub>8</sub>	70 <sup>1</sup> / <sub>8</sub>	58	78	30	10 X 36	24	27 <sup>1</sup> / <sub>8</sub>	MD 139	10.9	2180	
72AVS64	582	64	68 <sup>1</sup> / <sub>2</sub>	170 <sup>5</sup> / <sub>8</sub>	88 <sup>1</sup> / <sub>8</sub>	76	78	38	10 X 36	24	27 <sup>1</sup> / <sub>8</sub>	MD 139	10.9	2510	
96AVS64	786	64	68 <sup>1</sup> / <sub>2</sub>	194 <sup>5</sup> / <sub>8</sub>	112 <sup>1</sup> / <sub>8</sub>	100	78	48	10 X 36	24	27 <sup>1</sup> / <sub>8</sub>	MD 139	10.9	2950	



Bags page 2-53



Each AVS filter comes with an informational model number to better identify it.