CLASS II ADMINISTRATIVE UPDATE TO REGULATION 13 PERMIT R13-1293F FOR THE MOOREFIELD RENDERING PLANT

Prepared for:

Pilgrim's Pride Corporation
214 South Main Street
Moorefield, West Virginia 26836

Prepared by:

Potesta & Associates, Inc.
7012 MacCorkle Avenue, SE
Charleston, West Virginia 25304
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Project No. 0101-17-0401

November 2017

POTESTA

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Attachments Not Applicable to this Application: H, K, Q, R and S.

SECTIONS I - III

GENERAL INFORMATION

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
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):*
Pilgrim's Pride Corporation

2. Federal Employer ID No. ***(FEIN):***
123205162

3. Name of facility *(if different from above):*
Moorefield Rendering Plant

4. The applicant is the:
☐ **OWNER** ☐ **OPERATOR** ☒ **BOTH**

5A. Applicant's mailing address:
214 South Main Street
Moorefield, West Virginia 26836

5B. Facility's present physical address:
129 Potomac Avenue
Moorefield, West Virginia 26836

6. **West Virginia Business Registration.** Is the applicant a resident of the State of West Virginia? ☒ **YES** ☐ **NO**

➪ If **YES,** provide a copy of the **Certificate of Incorporation/Organization/Limited Partnership** (one page) including any name change amendments or other Business Registration Certificate as **Attachment A.**

➪ If **NO,** provide a copy of the **Certificate of Authority/Authority of L.L.C./Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A.**

7. If applicant is a subsidiary corporation, please provide the name of parent corporation: NA

8. Does the applicant own, lease, have an option to buy or otherwise have control of the *proposed site?* ☒ **YES** ☐ **NO**

➪ If **YES,** please explain: Own

➪ If **NO,** you are not eligible for a permit for this source.

9. Type of plant or facility (stationary source) to be **constructed, modified, relocated, administratively updated** or **temporarily permitted** (e.g., coal preparation plant, primary crusher, etc.): Rendering Plant

10. North American Industry Classification System **(NAICS)** code for the facility:
311613

11A. DAQ Plant ID No. (for existing facilities only):
031-00004

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):
R13-1293F

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

12A.

- ➪ For **Modifications, Administrative Updates** or **Temporary permits** at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
- ➪ For **Construction** or **Relocation permits,** please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B**.

Take the Moorefield exit off of US 48 (Corridor H) at Moorefield, West Virginia. Take a left turn onto US 220 (Main Street) headed south. The plant is located adjacent to US 220 (South Main Street) in Moorefield. Take a left onto Potomac Avenue and the facility is located at the end of the street on the right.

12.B. New site address (if applicable):	12C. Nearest city or town:	12D. County:
NA	Moorefield	Hardy
12.E. UTM Northing (KM): 4,325.38	12F. UTM Easting (KM): 675.24	12G. UTM Zone: 17

13. Briefly describe the proposed change(s) at the facility:

Adjust PM_{10} emissions limits set in R13-1293, issued December 20, 1990, for Emission Points 6E and 7E (previously 4E and 5E) based on actual stack test data and update the fuel used in the Dupps Co. Ring Dryer (Natural Gas instead of No. 2 Fuel Oil).

14A. Provide the date of anticipated installation or change: Operating ➪ If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen:	14B. Date of anticipated Start-Up if a permit is granted: Operating

14C. Provide a **Schedule** of the planned **Installation** of/**Change** to and **Start-Up** of each of the units proposed in this permit application as **Attachment C** (if more than one unit is involved).

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:

24 Hours Per Day 7 Days Per Week 52 Weeks Per Year

16. Is demolition or physical renovation at an existing facility involved? ☐ **YES** ☒ **NO**

17**. Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your **Risk Management Plan (RMP)** to U. S. EPA Region III.

18**. Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process *(if known).* 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 *(if known).* Provide this information as **Attachment D.**

Section II. Additional attachments and supporting documents.

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

20. Include a **Table of Contents** as the first page of your application package.

21. Provide a **Plot Plan,** 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 **Attachment E** (Refer to ***Plot Plan Guidance***) **.**
Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F.**

23. Provide a **Process Description** as **Attachment G.**
Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

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

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.

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.**

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

☐ Bulk Liquid Transfer Operations	☐ Haul Road Emissions	☐ Quarry
☐ Chemical Processes	☐ Hot Mix Asphalt Plant	☐ Solid Materials Sizing, Handling and Storage Facilities
☐ Concrete Batch Plant	☐ Incinerator	☐ Storage Tanks
☐ Grey Iron and Steel Foundry	☐ Indirect Heat Exchanger	
☒ General Emission Unit, specify Dupps Co. Ring Dryer		

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

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

☐ Absorption Systems	☐ Baghouse	☐ Flare
☐ Adsorption Systems	☐ Condenser	☐ Mechanical Collector
☐ Afterburner	☐ Electrostatic Precipitator	☒ 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: NA

☐ Authority of Corporation or Other Business Entity	☐ Authority of Partnership
☐ Authority of Governmental Agency	☐ 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 Dave Townsend *(Please use blue ink)* DATE: 11/10/17 *(Please use blue ink)*

35B. Printed name of signee: Dave Townsend		35C. Title: Vice President
35D. E-mail: dave.townsend@pilgrims.com	36E. Phone: (970) 347-5730	36F. FAX: Use Email
36A. Printed name of contact person (if different from above): Brian Paulsen		36B. Title: Central Region, Environmental
36C. E-mail: brian.paulsen@pilgrims.com	36D. Phone: (270) 251-7776	36E. FAX: Use Email

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

- ☒ **Attachment A: Business Certificate**
- ☒ **Attachment B: Map(s)**
- ☒ **Attachment C: Installation and Start Up Schedule**
- ☒ **Attachment D: Regulatory Discussion**
- ☒ **Attachment E: Plot Plan**
- ☒ **Attachment F: Detailed Process Flow Diagram(s)**
- ☒ **Attachment G: Process Description**
- ☐ **Attachment H: Material Safety Data Sheets (MSDS)**
- ☒ **Attachment I: Emission Units Table**
- ☒ **Attachment J: Emission Points Data Summary Sheet**
- ☐ **Attachment K: Fugitive Emissions Data Summary Sheet**
- ☐ **Attachment L: Emissions Unit Data Sheet(s)**
- ☒ **Attachment M: Air Pollution Control Device Sheet(s)**
- ☒ **Attachment N: Supporting Emissions Calculations**
- ☒ **Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans**
- ☒ **Attachment P: Public Notice**
- ☐ **Attachment Q: Business Confidential Claims**
- ☐ **Attachment R: Authority Forms**
- ☐ **Attachment S: Title V Permit Revision Information**
- ☒ **Application Fee**

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 A

BUSINESS CERTIFICATE

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 issuec

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.

atL006 v.4
L2043904320

ATTACHMENT B

AREA MAP

POTESTA
Engineers and Environmental Consultants

DATE: August 2016

PROJECT NO. 0101-16-0249

MAPPING FOR VISUAL REPRESENTATION ONLY

SITE LOCATION MAP
MOOREFIELD RENDERING PLANT
MOOREFIELD, HARDY COUNTY, WV

NOT TO SCALE

ATTACHMENT C

INSTALLATION AND START UP SCHEDULE

ATTACHMENT C

INSTALLATION AND STARTUP SCHEDULE

This permit application is for adjustment of PM_{10} emissions from Emission Points 6E and 7E and to update the fuel used in the ring dryer (natural gas instead of No. 2 fuel oil). There is no installation of equipment associated with this request.

ATTACHMENT D

REGULATORY DISCUSSION

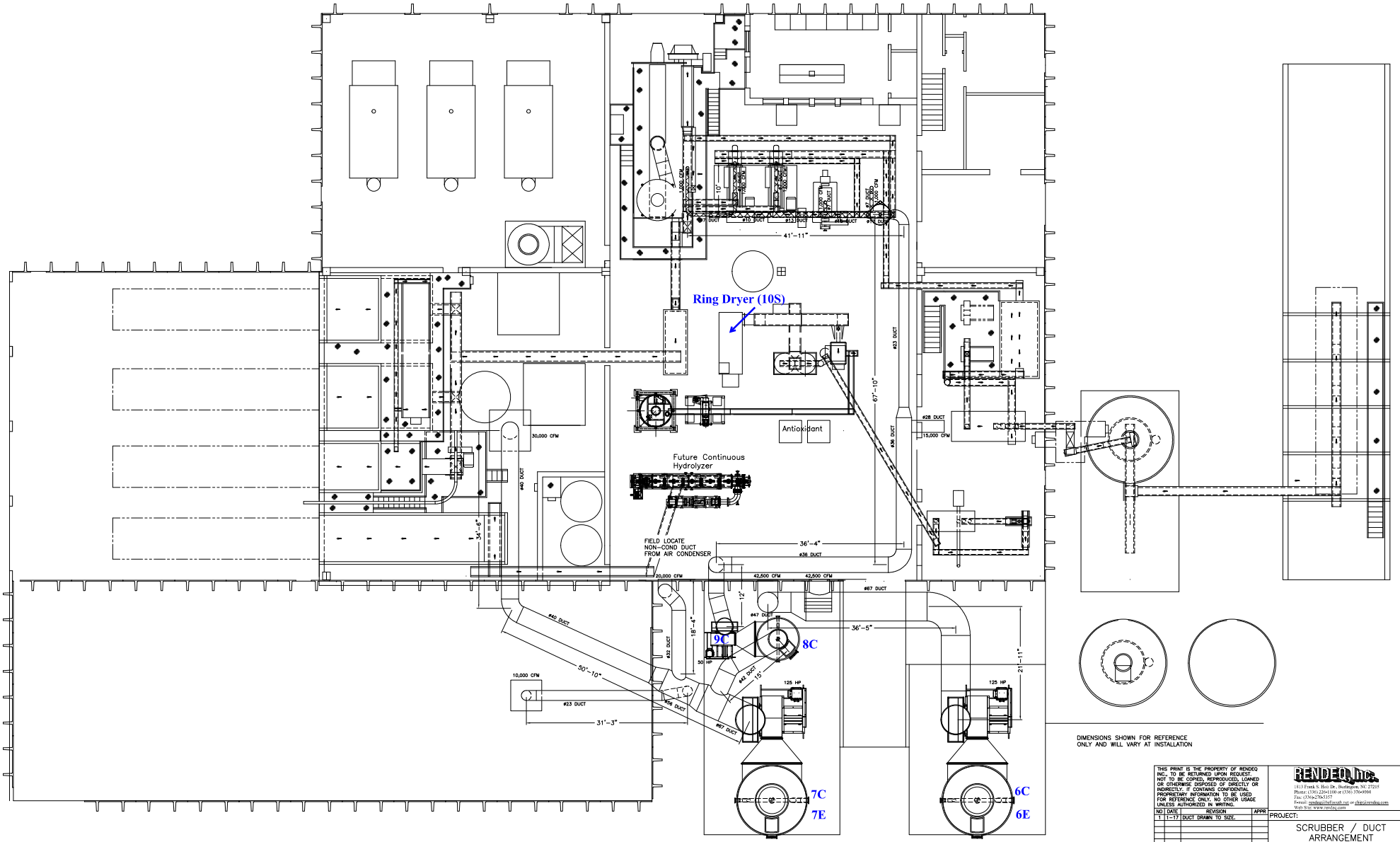
ATTACHMENT D

REGULATORY DISCUSSION

The revisions requested with this application do not modify the regulatory basis of the permit.

ATTACHMENT E

PLOT PLAN



NO	DATE	REVISION	APPR
1	11-17	DUCT DRAWN TO SIZE.	

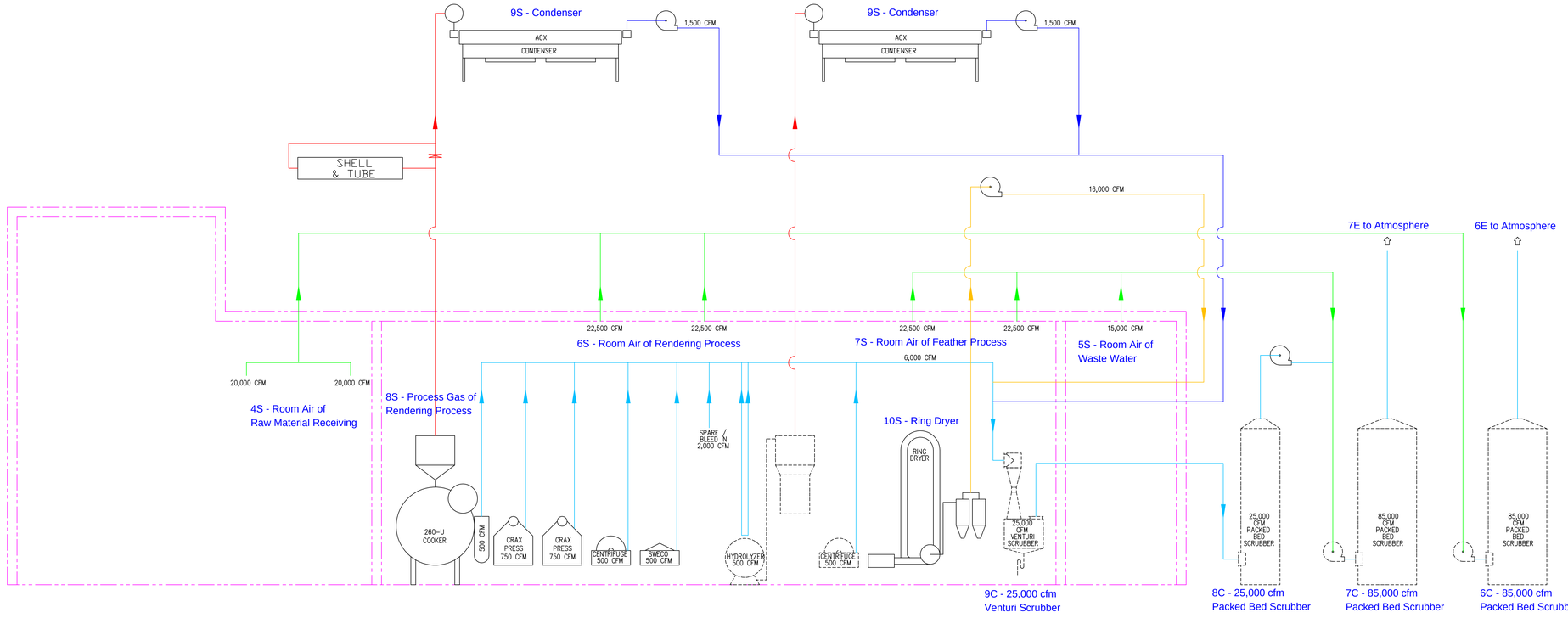
TOLERANCES (EXCEPT AS NOTED)
DECIMALS
FRACTIONS
ANGLES
REF:

RENDEQ, Inc.
1413 Frank S. Holt Dr., Burlington, NC 27215
Phone: (336) 229-1100 or (336) 376-9900
Fax: (336) 278-5357
E-mail: rendeq@bellsouth.net or chip@rendeq.com
Web Site: www.rendeq.com

PROJECT:
SCRUBBER / DUCT ARRANGEMENT
CUSTOMER: PILGRIMS
LOCATION: MOOREFIELD, W VA
SCALE NONE
DATE
DRAWN
SHEET 1 OF 1
PROJECT NO. 16-569
DRAWING NO. 16569-05
REV. 1

ATTACHMENT F

DETAILED PROCESS FLOW DIAGRAM



AIR FLOW DIAGRAM

COLOR KEY

- PROCESS VAPORS
- PROCESS HOT AIR DRYER
- NON CONDENSABLE GASES
- HIGH INTENSITY ODOROUS AIR
- PLANT AIR
- SOLID LINE INDICATES EXISTING EQUIPMENT
- DASHED LINE INDICATES NEW EQUIPMENT
- PHANTOM LINE INDICATES BUILDING OUTLINE

Blue text added by
Potesta & Associates, Inc.

REVISIONS

DATE CREATED: 7/7/16
LAST MODIFIED: Jul 15, 2016
SCALE: NO SCALE
PLOT SCALE: 12" = 1'-0"
DRAWN BY: JBW
CHECKED BY:
APPROVED BY:
ACAD NO.: E-8160051.02.DWG

AC Corporation
Established 1935
P.O. Box 16367
Greensboro, NC
27416-0367
(336) 273-4472
301 Creek Ridge Rd.
Greensboro, NC
27406-4421
FAX: (336) 274-6035
Corporate Office -- 301 Creek Ridge Rd., Greensboro, NC 27406 (336) 273-4472

AIR FLOW DIAGRAM
PILGRIM'S PRIDE CORPORATION
SCRUBBER UPFIT PROJECT
MOOREFIELD, WV

JOB NO. | SHEET OF

DRAWING NO.
E8160051-02

ATTACHMENT G

PROCESS DESCRIPTION

ATTACHMENT G

PROCESS DESCRIPTION

Pilgrim's Pride Corporation (Pilgrim's) is requesting two changes in this application: (1) Scrubber PM emission update and (2) Dupps Co., Ring Dryer Fuel update.

Scrubber PM Emission Update

Pilgrim's recently permitted new scrubbers on the rendering plant under R13-1293F issued on October 6, 2016. The new scrubbers replaced existing scrubbers that had been in place since the initial construction of the site. The emission points 4E and 5E were replaced with 6E and 7E. The new scrubbers vented through these emissions points to atmosphere.

6E is the emission point for Scrubber 6C, a packed bed scrubber for odor control, which controls the room air of raw material receiving and the rendering process. 7E is the emission point for Scrubber 7C, a packed bed scrubber for odor control, which also has Scrubber 9C, a particulate scrubber, and Scrubber 8C, a packed bed scrubber for odor control, operating in series with Scrubber 7C for process operations. Scrubber 7C also controls the room air from feather processing and waste water. See the Air Flow Diagram in Attachment F for a pictorial view of this arrangement.

Stack testing was required as a condition of the permit to determine the actual emissions rates from 6E and 7E. The following tables show the emission limits and the stack test results for emission points 6E and 7E.

Emission Point 6E		
Pollutant	**Permit Limit (lb/hr)**	**Stack Test Result (lb/hr)**
PM10	0.7	1.20
VOC	1.0	0.93
H2S	2.0	0.77

Emission Point 7E		
Pollutant	**Permit Limit (lb/hr)**	**Stack Test Result (lb/hr)**
PM10	0.5	0.74
VOC	1.0	0.69
H2S	2.0	0.69

The VOC (volatile organic compounds) and odorous H2S (hydrogen sulfide) passed the stack testing requirement. These emissions are well known to the site/industry and the scrubbers (6C,

7C, and 8C) are specifically designed to control these odorous emissions. There is no change proposed to these emissions.

PM_{10} (particulate) emissions did not pass the emissions limits. These emission limits have been in place since the issuance of the original permit in December 1990 and are less of a known value to the site and industry since the emission will be more site-specific based on the setup of the processing equipment and the scrubber design. Scrubber 9C is specifically designed to control PM10 from processing; however, not all the emissions pass through this scrubber. The room air emissions, which are a known odor issue, are controlled only by the odor Scrubbers 6C, 7C, and 8C.

The emission results for 6E average 1.20 lb/hr with each hour test run of 1.57 lb/hr, 0.33 lb/hr, and 1.69 lb/hr (see Appendix). We are requesting a new emission limit of 2.0 lb/hr, approximately 20 percent above the highest measured hourly emission.

The emission results for 7E average 0.74 lb/hr with each hour test run of 0.41 lb/hr, 1.00 lb/hr, and 0.81 lb/hr (see Appendix). Since this emission point also has room air that vents directly to the last odor scrubber (Scrubber 7C) as it does with 6E (Scrubber 6C) we are also requesting a new emissions limit of 2.0 lb/hr.

Revising these emission limits will also increase the yearly emission to 8.76 tpy for each emission point. The new emission limits for 6E and 7E are presented in the following sections of the permit application. Additionally, we have updated Attachment M with the information on the actual scrubbers that were installed.

Dupps Co., Ringer Dryer Fuel Update

The fuel to the ring dryer (10S) has been changed to natural gas instead of the listed fuel of No. 2 Fuel Oil. The change in emissions is based on the original emissions from the 1988 permit application (permit issued December 20, 1990) and the current natural gas emission factors from AP-42 Section 1.4, Natural Gas Combustion.

ATTACHMENT I

EMISSION UNITS TABLE

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[1]	Emission Point ID[2]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type[3] and Date of Change	Control Device[4]
4S	6E	Room Air of Raw Material Receiving	1992	NA	2017*	6C
5S	7E	Room Air of Waste Water	1992	NA	2017*	7C
6S	6E	Room Air of Rendering Process	1992	NA	2017*	6C
7S	7E	Room Air of Feather Process	1992	NA	2017*	7C
8S	7E	Process Gas of Rendering Process	1992	NA	2017*	9C/8C/7C
9S	7E	Air Cooled Condensers (2)	1992	NA	2017*	9C/8C/7C
10S	7E	Ring Dryer	2005	7.5 MMBtu/hr	2017*	9C/8C/7C

*Administrative update to increase PM_{10} emissions at Emission Points 6E and 7E based on stack test data and change fuel used in 10S.

[1] For Emission Units (or Sources) use the following numbering system: 1S, 2S, 3S, or other appropriate designation.
[2] For Emission Points use the following numbering system: 1E, 2E, 3E, or other appropriate designation.
[3] New, modification, removal
[4] For Control Devices use the following numbering system: 1C, 2C, 3C, or other appropriate designation.

ATTACHMENT J

EMISSION POINTS DATA SUMMARY SHEET

Attachment J

EMISSION POINTS DATA SUMMARY SHEET

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	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[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions [4]		Maximum Potential Controlled Emissions [5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/ Vapor)*	Est. Method Used [6]	Emission Concentration [7] (ppmv or mg/m^4)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
6E	Vertical Stack	4S, 6S	Various	6C	Packed Bed Scrubber	NA	NA	PM10 VOC H2S	** 20.0 40.0	** 87.6 157.6	2.0 1.0 2.0	8.76 4.38 7.88	Solid Vapor Vapor	AP42	NA
7E	Vertical Stack	5S, 7S, 8S, 9S, & 10S	Various	*	Venturi Scrubber/ Packed Bed Scrubbers	NA	NA	PM10 VOC H2S Combustion Byproducts from 10S PM/PM10/PM2.5 VOC NOX SO2 CO Total HAPS	** 20.0 40.0 0.06 0.04 0.74 0.005 0.62 0.01	** 87.6 157.6 0.24 0.18 3.22 0.02 2.71 0.06	2.0 1.0 2.0 0.06 0.04 0.74 0.005 0.62 0.01	8.76 4.38 7.88 0.24 0.18 3.22 0.02 2.71 0.06	Solid Vapor Vapor Solid Vapor Vapor Vapor Vapor Vapor	AP42 AP42	NA NA

* Emission Units 5S and 7S are controlled by Packed Bed Scrubber 7C while Emission Units 8S, 9S, and 10S are controlled by Venturi Scrubber - 9C, then Packed Bed Scrubber - 8C, and then a second Packed Bed Scrubber - 7C.

** Controlled emissions are based on actual stack test data. Actual uncontrolled emissions are not estimated or known.

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.

[1] Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

[2] 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).

[3] List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. **LIST** Acids, CO, CS_2, VOCs, H_2S, Inorganics, Lead, Organics, O_3, NO, NO_2, SO_2, SO_3, all applicable Greenhouse Gases (including CO_2 and methane), etc. **DO NOT LIST** H_2, H_2O, N_2, O_2, and Noble Gases.

[4] 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).

[5] 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).

[6] 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).

[7] 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^3) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO_2, use units of ppmv (See 45CSR10).

Attachment J
EMISSION POINTS DATA SUMMARY SHEET

Table 2: Release Parameter Data								
Emission Point ID No. *(Must match Emission Units Table)*	Inner Diameter (ft.)	Exit Gas			Emission Point Elevation (ft)		UTM Coordinates (km)	
		Temp. (°F)	Volumetric Flow [1] (acfm) *at operating conditions*	Velocity (fps)	Ground Level *(Height above mean sea level)*	Stack Height [2] *(Release height of emissions above ground level)*	Northing	Easting
6E	5.5	95	85,000	10.2	NA	60	4,325.38	675.24
7E	5.5	95	85,000	10.2	NA	60	4,325.38	675.24

[1] Give at operating conditions. Include inerts.
[2] Release height of emissions above ground level.
*See design details in the Appendix.

ATTACHMENT L

EMISSION UNIT DATA SHEET

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*): 10S

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

   Dupps Co., Ring Dryer Model 2400B.

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:

   8,000 lbs/hr - hydrolized poultry feathers.

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

   4,400 lbs/hr - feather and blood meal.

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

   None

* 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:

Natural Gas at 7,353 scf/hr based on 1,020 Btu/scf.

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

Pipeline quality natural gas.

(c) Theoretical combustion air requirement (ACF/unit of fuel):

NA @ °F and psia.

(d) Percent excess air: NA

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

Typical natural gas burners.

(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:

NA

(g) Proposed maximum design heat input: 7.5 × 10^6 BTU/hr.

7. Projected operating schedule:

Hours/Day	24	Days/Week	7	Weeks/Year	52

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

@ NA °F and NA psia

a.	NO_X	0.74	lb/hr	NA	grains/ACF
b.	SO_2	0.005	lb/hr	NA	grains/ACF
c.	CO	0.62	lb/hr	NA	grains/ACF
d.	PM_{10}	0.06	lb/hr	NA	grains/ACF
e.	Hydrocarbons	NA	lb/hr	NA	grains/ACF
f.	VOCs	0.04	lb/hr	NA	grains/ACF
g.	Pb	NA	lb/hr	NA	grains/ACF
h.	Specify other(s)				
	Total HAPS (See Appendix N for Speciated HAPS)	0.01	lb/hr	NA	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	RECORDKEEPING
None	None
REPORTING	TESTING
None	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 M

AIR POLLUTION CONTROL DEVICE SHEETS

Attachment M
Air Pollution Control Device Sheet
(WET COLLECTING SYSTEM-SCRUBBER)

Control Device ID No. (must match Emission Units Table): 6C, 7C

Equipment Information

1. Manufacturer: RENDEQ, INC. Model No. ROSCU-085	2. Method: ☒ Packed Bed ☐ Venturi ☐ Spray Tower ☐ Cyclone ☐ Mechanical ☐ Orifice ☐ Other, specify

3. 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.

4. Provide a scale diagram of the scrubber showing internal construction. Please include packing type and size, spray configurations, baffle plates, and mist eliminators.

5. What type of liquid entrainment eliminators or system will be used? Submit a schematic diagram showing thickness, mesh, and material of construction.

6. Describe the scrubber's construction material:
T-316L Stainless Steel (SS) sumps and the remaining construction is 304 SS.

7. What will be the power requirements of the collector?

Fan 125 HP Inlet scrubbing liquid pump: 25 HP

8. What type of fan(s) will be used?

Type of fan blade: Backward Incline Number of blades: Diameter of blade: 60 in.

Also supply a fan curve for each fan to be used.

9. Estimated gas pressure drop at maximum flow rate: 3.0 inches H_2O

Scrubbing Liquor Characteristics

10. Scrubbing Liquor

Composition	Weight %
1 Water	100
2	
3	
4	

11. Scrubbing liquor losses (evaporation, etc.):
gal/1000 ACF gas

12. Liquor pressure to scrubber: 7.0 PSIA

13. Pressure drop through scrubber: 3.0 in. H_2O

14. Source of liquor (explain):
City Water

15. Liquor flow rates to scrubber:
Design maximum: 1,000 gal/min
Average expected: 885 gal/min

16. Describe system to be used to supply liquor to collector:
A single pump rated for 885 gpm will be used to supply 885 gpm to the cone nozzle.

17. Give the expected solids content of the liquor:
Approximately 1% or less.

18. If the liquor is to be recirculated, describe any treatment performed:
Chemicals will be added to oxidize odor causing compounds. The scrubber will have a blow down rate of 2-5 gpm to keep the water clean over time.

19. Data for Venturi Scrubber:

Throat Dimensions:
(Specify Units)

Throat Velocity: ft/sec

20. Data for Packed Towers:

Type of Packing: 3.5" High Flow PP

Superficial Gas Velocity through Bed:
609 fpm

Gas Stream Characteristics

21. Gas flow into the collector:

85,000 ACF @ 95 °F and 14.7 PSIA

22. Gas stream temperature:

Inlet: 95 °F

Outlet: 95 °F

23. Gas flow rate:

Design Maximum: 90,000 ACFM

Average Expected: 85,000 ACFM

24. Particulate Grain Loading in grains/scf:

Inlet:

Outlet:

25. Emission rate of each pollutant (specify) into and out of collector: Emissions are for each collector (6C & 7C)

	Pollutant	IN		OUT		Guaranteed Minimum Collection Efficiency
		lb/hr	grains/acf	lb/hr	grains/acf	
A	H2S	40.0*		2.0		
B	VOC	20.0*		1.0		
C	PM_{10}	Unknown**		2.0		
D						
E						

*H2S and VOC IN based on back calculating from lb/hr OUT based on 95% control.
**Controlled emissions are based on actual stack test data. Actual uncontrolled emissions are not estimated or known.

26. Type of pollutant(s) controlled: ☐ SO_x ☒ Odor
☐ Particulate (type): 10 microns & larger ☒ Other: VOC

27. By what method were the uncontrolled emissions calculated? ☐ Material Balance ☒ Stack Test*
☐ Pilot Test ☐ Other: *Back calculated based on 95% control efficiency.

28. Dimensions of stack: Height 60 ft. Diameter 5.50 ft

29. Supply an equilibrium curve and/or solubility data (at various temperatures) for the proposed system.

30. Supply a curve showing proposed collection efficiency versus gas volume from 25 to 100 percent of design rating of collector.

Particulate Distribution

31. 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	NA	NA
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		

32. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):
None.

33. Describe the collection material disposal system:
Waste water will be sent to the waste water treatment plant.

34. Have you included ***Wet Collecting (Scrubber) Control Device*** in the Emissions Points Data Summary Sheet?

35. **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:	RECORDKEEPING:
Monitoring of pH once per day.	Record pH values.
REPORTING:	TESTING:
Reporting is not proposed.	Testing is not proposed.

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.

36. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.
100%

37. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
The packed tower scrubber will be 95%+ efficient at capturing odor causing compounds. Two 85,000 CFM packed tower scrubbers will provide 28.6 air changes per hour in the main processing area.

38. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
The scrubbers are being specifically designed for this process. Pilgrim's will follow recommended maintenance procedures.

Attachment M
Air Pollution Control Device Sheet
(WET COLLECTING SYSTEM-SCRUBBER)

Control Device ID No. (must match Emission Units Table): 8C

Equipment Information

1. Manufacturer: RENDEQ, INC. Model No. HISCU-025	2. Method: ☒ Packed Bed ☐ Venturi ☐ Spray Tower ☐ Cyclone ☐ Mechanical ☐ Orifice ☐ Other, specify

3. 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.

4. Provide a scale diagram of the scrubber showing internal construction. Please include packing type and size, spray configurations, baffle plates, and mist eliminators.

5. What type of liquid entrainment eliminators or system will be used? Submit a schematic diagram showing thickness, mesh, and material of construction.

6. Describe the scrubber's construction material:
T-316L Stainless Steel (SS) sump and the remaining construction is 304 SS.

7. What will be the power requirements of the collector?

Fan 50 HP Inlet scrubbing liquid pump: 7.5 HP

8. What type of fan(s) will be used?

Type of fan blade: Backward Incline Number of blades: Diameter of blade: 40.25 in.

Also supply a fan curve for each fan to be used.

9. Estimated gas pressure drop at maximum flow rate: 3.0 inches H_2O

Scrubbing Liquor Characteristics

10. Scrubbing Liquor

Composition	Weight %
1 Water	100
2	
3	
4	

11. Scrubbing liquor losses (evaporation, etc.): gal/1000 ACF gas

12. Liquor pressure to scrubber: 7.0 PSIA

13. Pressure drop through scrubber: 3.0 in. H_2O

14. Source of liquor (explain):
City Water

15. Liquor flow rates to scrubber:
Design maximum: 350 gal/min
Average expected: 250 gal/min

16. Describe system to be used to supply liquor to collector:
A single pump rated for 250 gpm will be used to supply 250 gpm to a single 4" nozzle above the packing section.

17. Give the expected solids content of the liquor:
Approximately 1% or less.

18. If the liquor is to be recirculated, describe any treatment performed:
Chemicals will be added to oxidize odor causing compounds. The scrubber will have a blow down rate of 2-5 gpm to keep the water clean over time.

19. Data for Venturi Scrubber:

Throat Dimensions:
(Specify Units)

Throat Velocity: ft/sec

20. Data for Packed Towers:

Type of Packing: 3.5" High Flow PP

Superficial Gas Velocity through Bed:
497 fpm

Gas Stream Characteristics

21. Gas flow into the collector:

25,000 ACF @ 95 °F and 14.7 PSIA

22. Gas stream temperature:

Inlet: 95 °F

Outlet: 95 °F

23. Gas flow rate:

Design Maximum: 35,000 ACFM

Average Expected: 25,000 ACFM

24. Particulate Grain Loading in grains/scf:

Inlet:

Outlet:

25. Emission rate of each pollutant (specify) into and out of collector:

Pollutant	IN		OUT		Guaranteed Minimum Collection Efficiency
	lb/hr	grains/acf	lb/hr	grains/acf	
A					
B					
C					
D					
E					

The venturi scrubber (9C), the small packed bed scrubber (8C), and one of the large packed bed scrubbers (7C) are in series in this order: 9C, 8C, 7C. See page M2 for total H2S, VOC, and PM_{10} emissions from the scrubbing.

26. Type of pollutant(s) controlled: ☐ SO_x ☒ Odor
☐ Particulate (type): ☒ Other: VOC

27. By what method were the uncontrolled emissions calculated? ☐ Material Balance ☒ Stack Test
☐ Pilot Test ☐ Other:

28. Dimensions of stack: Height NA ft. Diameter NA ft

29. Supply an equilibrium curve and/or solubility data (at various temperatures) for the proposed system.

30. Supply a curve showing proposed collection efficiency versus gas volume from 25 to 100 percent of design rating of collector.

Particulate Distribution

31. 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		
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		

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

None.

33. Describe the collection material disposal system:

Waste water will be sent to the waste water treatment plant.

34. Have you included ***Wet Collecting (Scrubber) Control Device*** in the Emissions Points Data Summary Sheet?

35. **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:	RECORDKEEPING:
Monitoring of pH once per day.	Record pH values.
REPORTING:	TESTING:
Reporting is not proposed	Testing is not proposed.

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.

36. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.
100%

37. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
The packed tower scrubber will be 95%+ efficient at capturing odor causing compounds.

38. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
The scrubbers are being specifically designed for this process. Pilgrim's will follow recommended maintenance procedures.

Attachment M
Air Pollution Control Device Sheet
(WET COLLECTING SYSTEM-SCRUBBER)

Control Device ID No. (must match Emission Units Table): 9C

Equipment Information

1. Manufacturer: RENDEQ, INC. Model No. VSC-025	2. Method: ☐ Packed Bed ☒ Venturi ☐ Spray Tower ☐ Cyclone ☐ Mechanical ☐ Orifice ☐ Other, specify

3. 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.

4. Provide a scale diagram of the scrubber showing internal construction. Please include packing type and size, spray configurations, baffle plates, and mist eliminators.

5. What type of liquid entrainment eliminators or system will be used? Submit a schematic diagram showing thickness, mesh, and material of construction.

6. Describe the scrubber's construction material:
T-304 Stainless Steel Construction

7. What will be the power requirements of the collector?

Fan 50 HP Inlet scrubbing liquid pump: 7.5 HP

8. What type of fan(s) will be used?

Type of fan blade: Backward Incline Number of blades: Diameter of blade: 40.25 in.

Also supply a fan curve for each fan to be used.

9. Estimated gas pressure drop at maximum flow rate: 7.90 inches H_2O

Scrubbing Liquor Characteristics

10. Scrubbing Liquor

Composition	Weight %
1 Water	100
2	
3	
4	

11. Scrubbing liquor losses (evaporation, etc.): gal/1000 ACF gas

12. Liquor pressure to scrubber: 3.0 PSIA

13. Pressure drop through scrubber: 7.50 in. H_2O

14. Source of liquor (explain):
City Water

15. Liquor flow rates to scrubber:
Design maximum: 300 gal/min
Average expected: 250 gal/min

16. Describe system to be used to supply liquor to collector:
A single pump rated for 250 gpm will be used to supply 125 gpm to the venturi nozzle and 125 gpm to the tank nozzle.

17. Give the expected solids content of the liquor:
Approximately 5% or less.

18. If the liquor is to be recirculated, describe any treatment performed:
No chemical treatment. The scrubber will have a blow down rate of 2-5 gpm to keep the water clean over time.

19. Data for Venturi Scrubber:

Throat Dimensions: 20"
(Specify Units)

Throat Velocity: 11,450 ft/sec

20. Data for Packed Towers:

Type of Packing:

Superficial Gas Velocity through Bed:

Gas Stream Characteristics

21. Gas flow into the collector:

25,000 ACF @ 125 °F and 14.7 PSIA

22. Gas stream temperature:

Inlet: 125 °F

Outlet: 95 °F

23. Gas flow rate:

Design Maximum: 27,500 ACFM

Average Expected: 25,000 ACFM

24. Particulate Grain Loading in grains/scf:

Inlet:

Outlet:

25. Emission rate of each pollutant (specify) into and out of collector:

Pollutant	IN		OUT		Guaranteed Minimum Collection Efficiency
	lb/hr	grains/acf	lb/hr	grains/acf	
A					
B					
C					
D					
E					

The venturi scrubber (9C), the small packed bed scrubber (8C), and one of the large packed bed scrubbers (7C) are in series in this order: 9C, 8C, 7C. See page M2 for total H2S, VOC, and PM_{10} emissions from the scrubbing.

26. Type of pollutant(s) controlled: ☐ SO_x ☐ Odor

☒ Particulate (type): 10 microns & larger ☐ Other:

27. By what method were the uncontrolled emissions calculated? ☐ Material Balance ☐ Stack Test

☐ Pilot Test ☐ Other:

28. Dimensions of stack: Height NA ft. Diameter NA ft

29. Supply an equilibrium curve and/or solubility data (at various temperatures) for the proposed system.

30. Supply a curve showing proposed collection efficiency versus gas volume from 25 to 100 percent of design rating of collector.

Particulate Distribution

31. 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		
2 – 4		
4 – 6		
6 – 8		
8 – 10		
10 – 12	NA	95
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

32. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):
None.

33. Describe the collection material disposal system:
Waste water will be sent to the waste water treatment plant.

34. Have you included ***Wet Collecting (Scrubber) Control Device*** in the Emissions Points Data Summary Sheet?

35. **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:	RECORDKEEPING:
Temperature will be monitored once per day.	Record temperature.
REPORTING:	TESTING:
No reporting proposed.	No testing is proposed.

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.

36. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.
100%

37. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
The venturi scrubber will be 99% efficient of removal of 10 microns and larger particulate.

38. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
The scrubbers are being specifically designed for this process. Pilgrim's will follow recommended maintenance procedures.

ATTACHMENT N

SUPPORTING EMISSIONS CALCULATIONS

POTESTA & ASSOCIATES, INC.
Project No. 0101-17-0401

By: PEW
Date: 11/7/2017

Checked By: LC
Date: 11/13/2017

Total Change in Emissions

Emission Type	Controlled	
	lb/hr	tpy
Total PM/PM10/PM2.5	2.75	12.24
CO	0.35	2.14
NO_X	-0.34	0.97
SO2	-1.56	-3.23
VOC	0.03	0.15
H2S	0	0
Total HAPS	0.01	0.06

Proposed PTE from Emission Points 6E and 7E

Emission Type	Uncontrolled		Controlled	
	lb/hr	tpy	lb/hr	tpy
PM10*	**	**	4.00	17.52
VOC	40.0	175.2	2.00	8.76
H2S	80.0	315.2	4.00	15.76

Existing Permit Limits for Emission Points 6E and 7E

Emission Type	Uncontrolled		Controlled	
	lb/hr	tpy	lb/hr	tpy
PM10*	**	**	1.20	5.30
VOC	40.0	175.2	2.00	8.76
H2S	80.0	315.2	4.00	15.76

Change in PTE for Scrubber PM

Emission Type	Uncontrolled		Controlled	
	lb/hr	tpy	lb/hr	tpy
PM10*	**	**	2.80	12.22
VOC	0.0	0.0	0.0	0.0
H2S	0.0	0.0	0.0	0.0

*PM, PM10, and PM2.5 are assumed to be equal for these sources.
** Uncontrolled PM values are unknown. Controlled emissions are based on stack test data.

By: PEW
Date: 11/7/2017

Checked By: LC
Date: 11/13/2017

10S Proposed Natural Gas Combustion Emissions Through 7E

Emission Type	Uncontrolled		Controlled	
	lb/hr	tpy	lb/hr	tpy
Total PM/PM10/PM2.5	0.06	0.24	0.06	0.24
CO	0.62	2.71	0.62	2.71
NO_X	0.74	3.22	0.74	3.22
SO2	0.005	0.02	0.005	0.02
VOC	0.04	0.18	0.04	0.18
Total HAPS	0.01	0.06	0.01	0.06

10S Existing Natural Gas Combustion Emissions Through 7E (R13-1293)

Emission Type	Uncontrolled		Controlled	
	lb/hr	tpy	lb/hr	tpy
Total PM/PM10/PM2.5	0.11	0.22	0.11	0.22
CO	0.27	0.56	0.27	0.56
NO_X	1.08	2.25	1.08	2.25
SO2	1.56	3.24	1.56	3.24
VOC	0.01	0.03	0.01	0.03
Total HAPS	NA	NA	NA	NA

10S Proposed Change in Emissions Through 7E

Emission Type	Uncontrolled		Controlled	
	lb/hr	tpy	lb/hr	tpy
Total PM/PM10/PM2.5	-0.05	0.02	-0.05	0.02
CO	0.35	2.14	0.35	2.14
NO_X	-0.34	0.97	-0.34	0.97
SO2	-1.56	-3.23	-1.56	-3.23
VOC	0.03	0.15	0.03	0.15
Total HAPS	0.01	0.06	0.01	0.06

By: PEW
Date: 11/7/2017

Checked By: LC
Date: 11/13/2017

Existing Emission Limits from Permit R13-1293F and Application

4S - Room Air of Raw Material Receiving	Controlled by 6C	Vented through Emission Point 6E
6S - Room Air of Rendering Process	Controlled by 6C	

Existing Emission Limits for 6E

Emission Type	Control Efficiency (%)	Uncontrolled***		Controlled	
		lb/hr	tpy	lb/hr	tpy
PM10*	0	**	**	0.7	3.1
VOC	95	20.0	87.6	1.0	4.38
H2S	95	40.0	157.6	2.0	7.88

5S - Room Air of Waste Water	Controlled by 7C	Vented through Emission Point 7E
7S - Room Air of Feather Process	Controlled by 7C	
8S - Process Gas of Rendering Process	Controlled by 9C/8C/7C	
9S - Air Cooled Condensers (2)	Controlled by 9C/8C/7C	
10S - Ring Dryer	Controlled by 9C/8C/7C	

Existing Emission Limits for 7E

Emission Type	Control Efficiency (%)	Uncontrolled***		Controlled	
		lb/hr	tpy	lb/hr	tpy
PM10*	99	**	**	0.5	2.2
VOC	95	20.0	87.6	1.0	4.38
H2S	95	40.0	157.6	2.0	7.88

*PM, PM10, and PM2.5 are assumed to be equal for these sources.

** Uncontrolled PM values are unknown. Controlled emissions are based on stack test data.

***Uncontrolled emissions based on permit application for R13-1293F and were back calculated based on VOC and H2S control efficiencies of 95%.

By: PEW
Date: 11/7/2017

Checked By: LC
Date: 11/13/2017

Proposed Control Methods and Emissions

4S - Room Air of Raw Material Receiving	Controlled by 6C	Vented through Emission Point 6E
6S - Room Air of Rendering Process	Controlled by 6C	

Proposed Emissions for 6E

Emission Type	Control Efficiency (%)	Uncontrolled***		Controlled	
		lb/hr	tpy	lb/hr	tpy
PM10*	0	**	**	2.00	8.76
VOC	95	20.00	87.60	1.00	4.38
H2S	95	40.00	157.60	2.00	7.88

5S - Room Air of Waste Water	Controlled by 7C	Vented through Emission Point 7E
7S - Room Air of Feather Process	Controlled by 7C	
8S - Process Gas of Rendering Process	Controlled by 9C/8C/7C	
9S - Air Cooled Condensers (2)	Controlled by 9C/8C/7C	
10S - Ring Dryer	Controlled by 9C/8C/7C	

Proposed Emissions for 7E

Emission Type	Control Efficiency (%)	Uncontrolled***		Controlled	
		lb/hr	tpy	lb/hr	tpy
PM10*	99	**	**	2.00	8.76
VOC	95	20.00	87.60	1.00	4.38
H2S	95	40.00	157.60	2.00	7.88

*PM, PM10, and PM2.5 are assumed to be equal for these sources and only Scrubber 9C is designed to control particulate matter.

** Uncontrolled PM values are unknown. Controlled emissions are based on stack test data.

***Uncontrolled emissions based on permit application for R13-1293F and were back calculated based on VOC and H2S control efficiencies of 95%.

By: PEW
Date: 11/7/2017

Checked By: LC
Date: 11/13/2017

Ring Dryer (10S) - Natural Gas Emissions

Burner Rating =	7.5	MMBtu/hr
Gas Consumption =	7,353	scf/hr
Operating Hours =	8,760	hrs/yr
Heating Value of Natural Gas =	1,020	BTU/scf
Fuel Use =	0.007	10^6scf/hr
Fuel Use =	64	10^6scf/yr

Criteria Pollutants	Natural Gas (based on 8,760 hrs/yr)			No. 2 Fuel Oil (based on 16 hrs/day, 5 days/wk, 52 wk/yr or 4,160 hrs/year)		Difference	
	EF	Emissions		Emissions		Emissions	
	($lb/10^6$ scf)[1]	(lb/hr)	(tons/year)	(lb/hr)[2]	(tons/year)	(lb/hr)	(tons/year)
PM Filterable	1.9	0.01	0.06	0.11	0.22	-0.09	-0.16
PM Condensable	5.7	0.04	0.18	NA	NA	NA	NA
Total PM/PM10/PM2.5	7.6	0.06	0.24	0.11	0.22	-0.05	0.02
CO	84	0.62	2.71	0.27	0.56	0.35	2.14
NO_X	100	0.74	3.22	1.08	2.25	-0.34	0.97
SO2	0.6	0.005	0.02	1.56	3.24	-1.56	-3.23
VOC	5.5	0.04	0.18	0.01	0.03	0.03	0.15

Rounding to = 4

Notes:
1. Emission factors from AP-42 Table1.4-2.
2. Based on emissions in permit application for hourly and then yearly are based on the operating schedule in the permit application.

By: PEW
Date: 11/7/2017

Checked By: LC
Date: 11/13/2017

Ring Dryer - Natural Gas Combustion - HAPS

Burner Rating =	7.5	MMBtu/hr
Operating Hours =	8,760	hrs/yr
Conversion from lb/10^6 scf to lb/MMBtu (divide by)[(1)] =	1,020	Btu/cf

CAS No.	Hazardous Air Pollutants	EF[1]		Uncontrolled		Controlled	
		lb/10^6 scf	lb/MMBtu	lb/hr	tpy	lb/hr	tpy
91-57-6	2-Methylnaphthalene	2.40E-05	2.35E-08	1.76E-07	7.73E-07	1.76E-07	7.73E-07
56-49-5	3-Methylchloranthrene	1.80E-06	1.76E-09	1.32E-08	5.80E-08	1.32E-08	5.80E-08
57-97-6	7,12-Dimethylbenz(a)anthracene	1.60E-05	1.57E-08	1.18E-07	5.15E-07	1.18E-07	5.15E-07
83-32-9	Acenaphthene	1.80E-06	1.76E-09	1.32E-08	5.80E-08	1.32E-08	5.80E-08
203-96-8	Acenaphthylene	1.80E-06	1.76E-09	1.32E-08	5.80E-08	1.32E-08	5.80E-08
120-12-7	Anthracene	2.40E-06	2.35E-09	1.76E-08	7.73E-08	1.76E-08	7.73E-08
56-55-3	Benz(a)anthracene	1.80E-06	1.76E-09	1.32E-08	5.80E-08	1.32E-08	5.80E-08
71-43-2	Benzene	2.10E-03	2.06E-06	1.54E-05	6.76E-05	1.54E-05	6.76E-05
50-32-8	Benzo(a)pyrene	1.20E-06	1.18E-09	8.82E-09	3.86E-08	8.82E-09	3.86E-08
205-99-2	Benzo(b)fluoranthene	1.80E-06	1.76E-09	1.32E-08	5.80E-08	1.32E-08	5.80E-08
191-24-2	Benzo(g,h,i)perylene	1.20E-06	1.18E-09	8.82E-09	3.86E-08	8.82E-09	3.86E-08
207-08-9	Benzo(k)fluoranthene	1.80E-06	1.76E-09	1.32E-08	5.80E-08	1.32E-08	5.80E-08
218-01-9	Chrysene	1.80E-06	1.76E-09	1.32E-08	5.80E-08	1.32E-08	5.80E-08
53-70-3	Dibenzo(a,h)anthracene	1.20E-06	1.18E-09	8.82E-09	3.86E-08	8.82E-09	3.86E-08
25321-22-6	Dichlorobenzene	1.20E-03	1.18E-06	8.82E-06	3.86E-05	8.82E-06	3.86E-05
206-44-0	Fluoranthene	3.00E-06	2.94E-09	2.21E-08	9.66E-08	2.21E-08	9.66E-08
86-73-7	Fluorene	2.80E-06	2.75E-09	2.06E-08	9.02E-08	2.06E-08	9.02E-08
50-00-0	Formaldehyde	7.20E-02	7.06E-05	0.0005	0.002	0.0005	0.002
110-54-3	Hexane	1.80E+00	1.76E-03	1.32E-02	5.80E-02	1.32E-02	5.80E-02
193-39-5	Indeno(1,2,3-cd)pyrene	1.80E-06	1.76E-09	1.32E-08	5.80E-08	1.32E-08	5.80E-08
91-20-3	Naphthalene	6.10E-04	5.98E-07	4.49E-06	1.96E-05	4.49E-06	1.96E-05
85-01-8	Phenanathrene	1.70E-05	1.67E-08	1.25E-07	5.48E-07	1.25E-07	5.48E-07
129-00-0	Pyrene	5.00E-06	4.90E-09	3.68E-08	1.61E-07	3.68E-08	1.61E-07
108-88-3	Toluene	3.40E-03	3.33E-06	2.50E-05	1.10E-04	2.50E-05	1.10E-04
7440-38-2	Arsenic	2.00E-04	1.96E-07	1.47E-06	6.44E-06	1.47E-06	6.44E-06
7440-41-7	Beryllium	1.20E-05	1.18E-08	8.82E-08	3.86E-07	8.82E-08	3.86E-07
7440-43-9	Cadmium	1.10E-03	1.08E-06	8.09E-06	3.54E-05	8.09E-06	3.54E-05
7440-47-3	Chromium	1.40E-03	1.37E-06	1.03E-05	4.51E-05	1.03E-05	4.51E-05
7440-48-4	Cobalt	8.40E-05	8.24E-08	6.18E-07	2.71E-06	6.18E-07	2.71E-06
7439-96-5	Manganese	3.80E-04	3.73E-07	2.79E-06	1.22E-05	2.79E-06	1.22E-05
7439-97-6	Mercury	2.60E-04	2.55E-07	1.91E-06	8.37E-06	1.91E-06	8.37E-06
7440-02-0	Nickel	2.10E-03	2.06E-06	1.54E-05	6.76E-05	1.54E-05	6.76E-05
7782-49-2	Selenium	2.40E-05	2.35E-08	1.76E-07	7.73E-07	1.76E-07	7.73E-07
			VOC HAPs Subtotal	0.014	0.061	0.014	0.061
			Metal HAPs Subtotal	0.0001	0.0002	0.0001	0.0002
			Total HAPs	0.01	0.06	0.01	0.06

References:
1. AP42 Table 1.4-3 and Table 1.4-4

ATTACHMENT O

MONITORING/RECORDKEEPING/REPORTING/TESTING PLANS

ATTACHMENT O

MONITORING/RECORDKEEPING/REPORTING/TESTING PLANS

Pilgrim's requests monitoring, recordkeeping, reporting and testing as stated in the existing permit.

ATTACHMENT P

PUBLIC NOTICE

LEGAL ADVERTISEMENT

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 Class II Administrative Update of Permit R13-1293F at the Moorefield Rendering Plant located on Potomac Avenue in Moorefield, Hardy County, West Virginia. The latitude and longitude coordinates are: 39.059945 and -78.974597.

The applicant estimates the potential change to discharge the following Regulated Air Pollutants will be: PM, PM10, PM2.5 of 12.24 tons per year (tpy), CO of 2.14 tpy, NO_x of 0.97 tpy, SO_2 of -3.23 tpy, VOC of 0.15 tpy, and total hazardous air pollutants (natural gas combustion byproducts) of 0.06 typ. There is no change in emissions of VOC and H2S.

Start of operation under the new permit limit is planned to begin on or about the 15th day of December or upon issuance of permit. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, 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 (PLEASE INSERT DATE) day of November 2017.

By: Pilgrim's Pride Corporation of West Virginia, Inc.
Dave Townsend
Vice President
214 South Main Street
Moorefield, West Virginia 26836

APPENDIX

STACK TEST DATA
SUMMARY OF PM_{10}, VOC, AND H2S EMISSIONS
FROM SCRUBBER STACKS 6E AND 7E

TABLE 2

SUMMARY OF PM_{10}, VOC, and H_2S EMISSIONS

PILGRIMS
SCRUBBER STACK 6E

RUN I.D.	**6E-M201A-R1**		**6E-M201A-R2**	**6E-M201A-R3**		AVERAGE
DATE	09/12/17		09/12/17	09/13/17		
TIME STARTED	12:32		16:07	7:10		
TIME ENDED	13:44		17:16	8:21		
SAMPLING PARAMETERS						
Metered Volume (dcf)	24.379		24.014	22.991		23.795
Corrected Volume (dscf)	23.003		22.277	21.913		22.398
Total Test Time (min)	60.7		60.0	59.5		60.1
% Isokinetics	98.9		97.9	97.6		98.1
D50	10.86		10.89	10.89		10.88
GAS PARAMETERS						
Gas Temperature (deg F)	75		80	74		76
Oxygen (%)	20.85		20.88	20.79		20.84
Carbon Dioxide (%)	0.14		0.13	0.18		0.15
Moisture (%)	3.08		4.21	4.59		3.96
GAS FLOWRATE						
Velocity (ft/sec)	48.56		49.13	48.68		48.79
Actual Volume (acfm)	61084		61802	61239		61375
Standard Volume (dscfm)	56837		56269	55932		56346
PM_{10} EMISSIONS						
Concentration (gr/dscf)	0.0032	<	0.0007	0.0035	<	0.0025
Concentration (gr/dscf @ 7%O2)	0.8951	<	0.4814	0.4449	<	0.6071
Concentration (mg/dscm)	7.37	<	1.59	8.06	<	5.67
Concentration (mg/dscm @ 7%O2)	2048.58	<	1101.75	1018.21	<	1389.51
Mass Rate (lb/hr)	1.57	<	0.33	1.69	<	1.20

RUN I.D.	**6E-M25A-R1**	**6E-M25A-R2**	**6E-M25A-R3**	AVERAGE
DATE	09/12/17	09/12/17	09/13/17	
TIME STARTED	12:32	16:07	7:10	
TIME ENDED	13:32	17:07	8:10	
VOC EMISSIONS (THC as propane)				
Concentration (ppmwv)	2.49	1.90	2.51	2.30
Concentration (ppmdv)	2.57	1.98	2.63	2.39
Mass Rate (lb/hr)	1.00	0.77	1.01	0.93

RUN I.D.	**6E-M15/16-R1**	**6E-M15/16-R2**	**6E-M15/16-R3**	AVERAGE
DATE	09/12/17	09/12/17	09/13/17	
TIME STARTED	12:32	16:07	7:10	
TIME ENDED	15:33	19:08	10:11	
H2S EMISSIONS				
Concentration (ppmwv)	2.35	1.95	3.13	2.48
Concentration (ppmdv)	2.42	2.04	3.28	2.58
Mass Rate (lb/hr)	0.73	0.61	0.97	0.77

Notes(s):

(<) Indicates that the result was below the detection limit and the detection limit was used to calculate the results. This qualifier has been carried through to the average result.

Applicable Emission Limits:
PM_{10} limit = 0.7 lb/hr
VOC limit = 1.0 lb/hr
H2S limit = 2.0 lb/hr

TABLE 3

SUMMARY OF PM_{10}, VOC, and H_2S EMISSIONS

PILGRIMS
SCRUBBER STACK 7E

RUN I.D.	**7E-M201A-R1**	**7E-M201A-R2**	**7E-M201A-R3**	AVERAGE
DATE	09/13/17	09/13/17	09/13/17	
TIME STARTED	11:10	14:40	18:10	
TIME ENDED	12:19	15:48	19:16	
SAMPLING PARAMETERS				
Metered Volume (dcf)	23.849	22.926	23.204	23.326
Corrected Volume (dscf)	22.314	20.850	21.482	21.549
Total Test Time (min)	60	59.8	60.1	60.0
% Isokinetics	96.4	91.8	92.5	93.5
D50	10.66	10.99	10.99	10.88
GAS PARAMETERS				
Gas Temperature (deg F)	81	81	82	81
Oxygen (%)	20.74	20.70	20.76	20.73
Carbon Dioxide (%)	0.12	0.15	0.11	0.13
Moisture (%)	6.01	7.37	5.74	6.37
GAS FLOWRATE				
Velocity (ft/sec)	51.23	51.12	51.22	51.19
Actual Volume (acfm)	64440	64303	64436	64393
Standard Volume (dscfm)	57236	56316	57336	56963
PM_{10} EMISSIONS				
Concentration (gr/dscf)	0.0008	0.0021	0.0017	0.0015
Concentration (gr/dscf @ 7%O2)	0.0721	0.1440	0.1640	0.1267
Concentration (mg/dscm)	1.90	4.74	3.78	3.47
Concentration (mg/dscm @ 7%O2)	164.99	329.60	375.39	289.99
Mass Rate (lb/hr)	0.41	1.00	0.81	0.74

RUN I.D.	**7E-M25A-R1**	**7E-M25A-R2**	**7E-M25A-R3**	AVERAGE
DATE	09/13/17	09/13/17	09/13/17	
TIME STARTED	11:00	14:40	18:10	
TIME ENDED	12:00	15:40	19:10	
VOC EMISSIONS (THC as propane)				
Concentration (ppmwv)	2.19	1.65	1.10	1.65
Concentration (ppmdv)	2.33	1.78	1.17	1.76
Mass Rate (lb/hr)	0.92	0.69	0.46	0.69

RUN I.D.	**7E-M15/16-R1**	**7E-M15/16-R2**	**7E-M15/16-R3**	AVERAGE
DATE	09/13/17	09/13/17	09/13/17	
TIME STARTED	11:10	14:40	18:10	
TIME ENDED	14:11	17:43	21:11	
H2S EMISSIONS				
Concentration (ppmwv)	1.01 J	4.34	1.09 J	2.15 J
Concentration (ppmdv)	1.07 J	4.69	1.16 J	2.31 J
Mass Rate (lb/hr)	0.33 J	1.40	0.35 J	0.69 J

Notes(s):

(J) Indicates that the result was between the minimum detection limit and the limit of quantification. The laboratory can positively identify the analyte of interest as present, but the value should beconsidered an estimate. This qualifier has been carried through to the average result.

Applicable Emission Limits:
PM_{10} limit = 0.5 lb/hr
VOC limit = 1.0 lb/hr
H2S limit = 2.0 lb/hr