



west virginia department of environmental protection

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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.:	R13-1293F
Plant ID No.:	031-00004
Applicant:	Pilgrim's Pride Corporation
Facility Name:	Moorefield Rendering Plant
Location:	Moorefield, WV
NAICS Code:	311613
Application Type:	Administrative Update
Received Date:	August 29, 2016
Engineer Assigned:	Jonathan Carney
Fee Amount:	\$300.00
Date Received:	August 30, 2016
Complete Date:	September 13, 2016
Due Date:	October 12, 2016
Applicant Ad Date:	August 31, 2016
Newspaper:	The Moorefield Examiner
UTM's:	Easting: 675.24 Northing: 4,325.38 Zone: 17
Description:	Replace existing scrubbers and remove Condition 3(a) from the permit.

DESCRIPTION OF PROCESS

Pilgrim's Pride Corporation (PPC) owns and operates a rendering plant located in Moorefield, West Virginia. The plant is equipped with three (3) Cleaver Brooks, 800 horsepower boilers that are currently permitted to combust both natural gas and No. 2 fuel oil (Permit R13-1293C) and animal fat. Through this administrative amendment permit application, PPC seeks approval to replace four (4) existing scrubbers: 26,000 cfm Dual Venturi, 26,000 cfm Packed Tower, and two (2) 65,000 cfm Packed Tower scrubbers with a 25,000 cfm Venturi, a 25,000 cfm Packed Tower, and two (2) 85,000 cfm Packed Tower scrubbers and remove condition 3(a) in the permit. Condition 3(a) requires the offal cooker non-condensable gases following steam condensing, non-condensable gases from all feather cookers, off gases from all offal pressor choke ends,

and blood coagulation hopper off gases to be combusted as boiler combustion air. It is proposed that these gases be sent through the scrubbers continuously.

SITE INSPECTION

A site inspection was performed by Joseph A. Kreger on August 13, 2015. At that time the facility was found to be operating the Moorefield facility in compliance.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

The facility is proposing to vent 4S – Room Air of Raw Material Receiving and 6S-Room Air Rendering Process through 6E after it passes through 6C – 85,000 cfm packed bed scrubber. The applicant provides a scrubber control efficiency of 95% removal of VOC and H₂S.

Proposed Emissions From 6E

Emission Type	Control Efficiency	Uncontrolled ²		Controlled ¹	
		lb/hr	tpy	lb/hr	tpy
PM ₁₀	0	0.5	2.2	0.5	2.2
VOC	95	20	87.6	1	4.38
H ₂ S	95	40	175.2	2	7.88

5S – Room Air of Waste Water and 7S – Room Air of Feather Process after passing through 7C and 8S – Process Gas of Rendering Process, 9S – Air Cooled Condensers (2), and 10S – Ring Drier after passing through 9C/8C/7C will be vented through 7E.

Proposed Emissions From 7E

Emission Type	Control Efficiency	Uncontrolled ²		Controlled ¹	
		lb/hr	tpy	lb/hr	tpy
PM ₁₀	99	4.7	20.7	0.5	0.2
VOC	95	20	87.6	1	4.38
H ₂ S	95	40	175.2	2	7.88

There is no proposed change in emission limits.

REGULATORY APPLICABILITY

45CSR4 To Prevent and Control the discharge of air pollutants into the open air which causes or contributes to an objectionable odor or odors.

- 45CSR 4 applies to the source due to the controls being changed to chemically treat emissions to control odors.
- 45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation
- 45CSR13 applies to this source due to the changes associated with this administrative update. Changes to control equipment and operating parameters are proposed.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

There is no proposed change in non-criteria regulated pollutants from this facility. No toxicological analysis performed.

AIR QUALITY IMPACT ANALYSIS

Air dispersion modeling was not performed because this modification does not represent a significant increase of emissions of any regulated pollutant.

MONITORING OF OPERATIONS

Each odor control chemical scrubber and each final exhaust stack, except boilers, is required to be equipped with a sniffer tube for ground level sniffing to be used for odor detection.

CHANGES TO PERMIT R13-1293E

R13-1293E has been updated to the new permit format that includes the boilerplate General Conditions and Facility Wide Requirements. Under the Source-Specific Requirements Condition 3 (a) has been replaced by Condition 4.1.2. 4.1.2 does not require the combusting of high intensity odors in the boilers. Instead high intensity and medium intensity odors are required to be controlled by chemical scrubbing in series. Condition 4.1.6 was updated to show the capacity of 85,000 cfm for scrubber 6E (replacing 4E) and 7E (replacing 5E). The design capacity of the ring dryer was changed from 54 gal/hr No. 2 fuel oil to 7.5 MMBtu/hr. They are equivalent based on No. 2 fuel oil having an energy content of 139,600 Btu/gal.

There is no odor control of outloading of finished product so this requirement was removed from the requirements and it was clarified that only the feather meal silo is

ducted back into the building. The compliance inspector confirmed that the finished product did not present an odor problem.

Additional stack testing is required since the method of destruction of emissions has changed and the new scrubbers are not identical to the ones they are replacing.

RECOMMENDATION TO DIRECTOR

The information provided in the permit application indicates PPC's use of scrubbers to control particulate matter and odors meet applicable regulations when operated according to the permit application. Therefore, impact on the surrounding area should be minimized and it is recommended that the Moorefield location should be granted a 45CSR13 Administrative Amendment to the permit for their rendering facility.



Jonathan Carney
Permit Writer



DATE