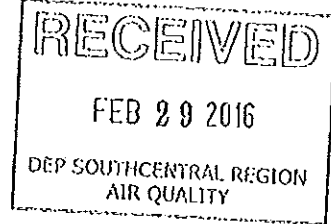




PERDUE AGRIBUSINESS LLC
PERDUE AGRIBUSINESS ENVIRONMENTAL
P.O. Box 460 • Lawiston NC 27849-0460 • Office: 252-348-4326

February 24, 2016



CERTIFIED MAIL# 7015 0640 0002 5297 3247

Mr. Tom Hanlon, P.E., Permitting Section Chief
PA Department of Environmental Protection
Southcentral Regional Office
909 Elmerton Avenue
Harrisburg, PA 17110-8200

Re: Technical Deficiency Letter Response Follow-up
Perdue AgriBusiness LLC
Plan Approval Application No. 36-05158A

Mr. Hanlon,

I am forwarding this correspondence per our phone conversation and the Department's request on February 8th 2016 regarding the need for follow up information to several of our responses in the technical deficiency letter. The items in which we are directing this response to include:

- The originator of the document
- Clarification and further supporting information to response #26 (meal fugitives)
- Clarification and further supporting information to response #27 (oil fugitives)
- Clarification to determine the correct parameters in regard to response #37, for Source ID 204, 205A, and 205B.

Opening Paragraph: In the opening of the response letter it states that Perdue Grain and Oilseed LLC (Perdue) retained ERM to re-examine certain aspects of the LAER evaluation. We wish to clarify this as it is the same entity for legal purposes. On Monday, March 30th 2015, Perdue AgSolutions LLC and Perdue Grain & Oilseed LLC began doing business as Perdue AgriBusiness LLC. This completes a planned transition that began the previous year. The corporation Federal ID# remains 20-5172625. Perdue AgriBusiness LLC, the permit applicant retained ERM for their services.

#26: In arriving at the 6.2 tons alluded to in response to #26, Perdue collected three (3) sample sets at points downstream of the dryer/cooler (DC) consisting of two samples each for a total of six (6) samples. The two points for each respective set sampled were: downstream of the dryer/cooler (DC) and downstream of grinding/sifting operations en route to storage. The meal samples were collected, sealed in containers, and submitted to an outside lab for analysis. The amount of hexane released as fugitive emissions was the calculated difference between the first

and second sample points analyzed. The average difference was 13 PPM, which represents the assumed fugitive loss. The permit limit of soybean production is 638,750 tons processed (draft permit) on a rolling twelve month average. The calculation is as follows:

$$638,750 \text{ tons processed} \times 75\% \text{ meal produced} \times 13 \text{ PPM Hexane} / 1,000,000 \text{ PPM} = 6.2 \text{ tons Hexane}$$

In light of the comment referring to fugitive emissions from the meal handling operations; we deem that these operations would consist of: incoming conveyance, grinding, sifting, and discharge conveyance. Therefore, the 6.2 tons/year of hexane divided by the four main operations equate to approximately 1.55 tons hexane/operation/year, as alluded to in part of our response to comment #26.

#27: In concluding that site fugitive hexane emissions from oil are expected to be at or near zero as alluded to in response to #27, Perdue collected three samples of oil exiting the oil stripper prior to storage. The oil samples were collected, sealed in containers, and submitted to an outside lab for analysis. The average results from these tests indicated the hexane concentration in the oil leaving the stripper to be less than 10 PPM, which is the detection limit for hexane in soybean oil. The results indicated that there was only a trace amount of hexane remaining in the oil going to storage that could be potentially emitted at the site; providing the conclusion that site emissions are expected to be at or near zero. Extremely low concentrations of hexane in oil are inherently "bound" and would remain in the oil until it is further processed (refined).

#37: You asked us to further explain why the air flow input parameters for stacks S204 (Final Vent), S205A (Dryer), and S205B (Cooler) in some cases differ slightly between the initial permit application/air dispersion modeling and Perdue's January 25, 2016 response to the Department's August 2015, Technical Deficiency Letter (TDL).

STACK PARAMETERS

Stack ID	Permit Application	Modeling	TDL Response
204 (Final Vent)	<500 ACFM / 90°	200 ACFM / 90°	124 ACFM / 75°
205A (Dryer)	23,540 ACFM / 140°	23,540 ACFM / 140°	26,202 ACFM / 145°
205B (Cooler)	23,540 ACFM / 110°	23,540 ACFM / 110°	23,482 ACFM / 130°

The air flow characteristics from these stacks vary depending on operating conditions. The stack exhaust values provided in Perdue's January 25, 2016 response for S204, S205A and S205B, respectively, are the values provided to obtain equipment vendor quotes for emissions control equipment on these exhausts, given the variable operating potential. These values are more conservative (i.e., allowing for higher emission potential) in estimating particulate emissions, while the values contained in the original application and those used in the dispersion modeling are more conservative in estimating hexane emissions. All of the values provided in the permit application, modeling and TDL response fall within the range of what could reasonably be expected on a day-to-day basis. The values are not materially different and represent potential

operating conditions for this equipment. The lower exhaust temperatures and flow rates for Stacks 205A and 205B provided in the application and used in the modeling are more conservative in estimating VOC dispersion, as the lower numbers would result in less buoyancy, less dispersion and therefore higher ground level VOC concentrations. While the slightly higher exhaust temperatures and flow rates used in the original modeling for Stack 204 (Final Vent) are less conservative than the more recent values provided by Desmet (and used by Perdue for obtaining quotes from equipment vendors), the difference in values would produce only about a 0.3% change in ground-level VOC concentrations due to the insignificant quantity of VOCs associated with this stack. Therefore, the difference in air flow input parameters for stacks S204 (Final Vent), S205A (Dryer), and S205B (Cooler) between the initial permit application, the air dispersion modeling and Perdue's January 25, 2016 response do not result in a material difference in modeled VOC impacts.

In closing, Perdue Agribusiness appreciates the opportunity to respond to the questions noted above and if you should require anything further please do not hesitate to contact me.

Sincerely,



Wayne Black, Director
Perdue Agribusiness

Cc: Mr. Greg Rowe, VP Perdue AgriBusiness
Mr. Peter Fontaine, ESQ.
Mr. Dave Jordan, PE.

From: Black, Wayne [<mailto:Wayne.Black@perdue.com>]
Sent: Friday, March 04, 2016 4:15 PM
To: Wetzel, Brian
Cc: 'Fontaine, Peter'; Hudson, Wayne; Rowe, Greg
Subject: Meal and Oil Analyses (COA)

Mr. Wetzel,

Please find attached the COAs for the samples analyzed regarding responses #26 and #27 contained in the 'Technical Deficiency Letter'.

The preface for the meal calculation is depicted in the table below.

Sample Set	DC EXIT	Meal Conveyance to Storage	Difference (Loss)
1	157	155	2
2	276	230	46
3	76	86	-10
Avg.	169.6	157	12.6

If you should have any questions or require anything further please do not hesitate to contact me.

Wayne Black, REM, CCA, REPA
Director, Environmental
Office # : 252-348-4326
Cell # : 252-209-1540
wayne.black@perdue.com



AgriBusiness

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LABORATORIES, LLC

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Perdue AgriBusiness, LLC
ATTN:Bo Jones
P.O. Box 1537
Sallsbury, MD, 21802

Reporting Date: 08/12/2015

Certificate of Analysis

Barrow-Agee Laboratory Number: 1132092
Sample Of: DC DISCHARGE
Sample Identification: NO ID

Sample Received: 08/10/2015
Sample Analyzed: 08/10/2015

Ship Date:

Assay Name:	Expected:	Result:
Hexane		157 ppm

Approved,


Technical Director

ANALYTICAL CHEMISTS SINCE 1917

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Perdue AgriBusiness, LLC
ATTN:Bo Jones
P.O. Box 1537
Salisbury, MD, 21802

Reporting Date: 08/12/2015

Certificate of Analysis

Barrow-Agee Laboratory Number: 1132091
Sample Of: MEAL CONVEYANCE TO STORAGE
Sample Identification: NO ID

Sample Received: 08/10/2015
Sample Analyzed: 08/10/2015

Ship Date:

Assay Name:	Expected:	Result:
Hexane		155 ppm

Approved,


Technical Director

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Perdue AgriBusiness, LLC
ATTN:Bo Jones
P.O. Box 1537
Salisbury, MD, 21802

Reporting Date: 08/12/2015

Certificate of Analysis

Barrow-Agee Laboratory Number: 1132101
Sample Of: DC DISCHARGE SAMPLE 15-20 AFTER DT WAS PULLED
Sample Identification: 751AM

Sample Received: 08/10/2015
Sample Analyzed: 08/10/2015

Ship Date:

Assay Name:	Expected:	Result:
Hexane		276 ppm

Approved,


Technical Director

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Perdue AgriBusiness, LLC
ATTN:Bo Jones
P.O. Box 1537
Sallsbury, MD, 21802

Reporting Date: 08/12/2015

Certificate of Analysis

Barrow-Agee Laboratory Number: 1132098
Sample Of: MEAL CONVEYANCE 5-10 MIN AFTER DC DISCHARGE WAS PULLED
Sample Identification: 757AM

Sample Received: 08/10/2015
Sample Analyzed: 08/10/2015

Ship Date:

Assay Name:	Expected:	Result:
Hexane		230 ppm

Approved,


Technical Director

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Perdue AgriBusiness, LLC
ATTN:Bo Jones
P.O. Box 1537
Sallsbury, MD, 21802

Reporting Date: 08/13/2015

Certificate of Analysis

Barrow-Agee Laboratory Number: 1133075
Sample Of: D.C. DISCHARGE SAMPLE
Sample Identification: 15-20 MIN AFTER D.T. WAS PULLED 7:37 AM

Sample Received: 08/11/2015
Sample Analyzed: 08/12/2015

Ship Date:

Assay Name:	Expected:	Result:
Hexane		76 ppm

Approved,


Technical Director

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Perdue AgriBusiness, LLC
ATTN:Bo Jones
P.O. Box 1537
Salisbury, MD, 21802

Reporting Date: 08/13/2015

Certificate of Analysis

Barrow-Agee Laboratory Number: 1133085
Sample Of: MEAL CONVEYANCE
Sample Identification: 5-10 MIN AFTER D.C. DISCHARGE WAS PULLED 7:43 AM

Sample Received: 08/11/2015
Sample Analyzed: 08/12/2015

Shlp Date:

Assay Name:	Expected:	Result:
Hexane		86 ppm

Approved,


Technical Director

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Perdue AgriBusiness, LLC
ATTN:Bo Jones
P.O. Box 1537
Sallsbury, MD, 21802

Reporting Date: 08/13/2015

Certificate of Analysis

Barrow-Agee Laboratory Number: 1133086
Sample Of: FINISHED OIL
Sample Identification: 7:47 AM

Sample Received: 08/11/2015
Sample Analyzed: 08/12/2015

Ship Date:

Assay Name:	Expected:	Result:
Hexane		< 10 ppm

Approved,


Technical Director

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Perdue AgriBusiness, LLC
ATTN:Bo Jones
P.O. Box 1537
Salisbury, MD, 21802

Reporting Date: 08/12/2015

Certificate of Analysis

Barrow-Agee Laboratory Number: 1132088
Sample Of: FINISHED OIL STRIPPER
Sample Identification: NO ID

Sample Received: 08/10/2015
Sample Analyzed: 08/10/2015

Ship Date:

Assay Name:	Expected:	Result:
Hexane		< 10 ppm

Approved,


Technical Director

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ATTN:Bo Jones
P.O. Box 1537
Salisbury, MD, 21802

Reporting Date: 08/12/2015

Certificate of Analysis

Barrow-Agee Laboratory Number: 1132096
Sample Of: FINISH OIL SAMPLE
Sample Identification: 801AM

Sample Received: 08/10/2015
Sample Analyzed: 08/10/2015

Ship Date:

Assay Name:	Expected:	Result:
Hexane	<	10 ppm

Approved,


Technical Director

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