RENERGY

December 2, 2019

Re: Emerald BioEnergy, LLC
Notice of Violation (NOV)
NPDES
Morrow County
4IN00204

Ms. Betsy L. VanWormer, P.E.
Environmental Specialist III
Ohio EPA Division of Surface Water

Subject: Response to NOV

Ms. VanWormer,
Please see Renergy's response below to the email requesting information to resolve the NOV sent to us on November 8, 2019. We have also attached additional documents as referenced in the responses below.

Emerald 2018 Annual Sludge Report NOV

Violation Description: The 2018 annual sludge report indicates that the actual agronomic rate exceeded the calculated rate for the following authorized sites where biosolids from Emerald were beneficially used in 2018.

Requested Action: Please provide an explanation for why the agronomic rate exceedances occurred and submit a plan detailing the procedures that will be used to ensure that the calculated rates will not be exceeded for future land application events.

Renergy's Response:

Our current regulatory procedures for determining agronomic rates before land application follow all guidelines in accordance to OEPA rules, please inform us if anything has changed. Below is a standard procedure for determining agronomic rates that we then supply to our third party land applicators.

Samples are collected from the storage facilities being used and tested for the total percent solids in our lab prior to land application, 1X per week at each facility during periods of land application, and adjustments are made to the application rates accordingly to ensure that the actual agronomic rates are not exceeded. An Agronomic Rate Summary is provided to our third-party land application contractors prior to land application events that will communicate the maximum allowable application rate based on the estimated total percent solids determined in our lab. See attached for an example of the ARC Summary.

During land application a sample is taken directly from the pump in the field via a valve and then sent on to a third party lab for analysis. Once we receive the data we then complete the ARC's provided by the OEPA and keep on file for submitting the monthly eDMR's and Annual Sludge Report.

After internally investigating 2018 records, we have found that a former employee in charge of ARCs and submitting eDMR's for Renergy likely used incorrect percent solid values when filling out the ARC worksheets and submitting eDMR's and the Annual Sludge Report. We have pulled all lab results from land application in 2018 and discovered that some data was missing, which is likely the reason for the former employee to use percent solid data from tests directly

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from the digester tank rather than the storage ponds or the pump in the field, as is our standard process today. The percent solids of our digestate, when tested directly from the anaerobic digester, is always much higher than when the fertilizer is being land applied. This is due to

environmental factors, such as dilution as a result of precipitation and solids settling in the storage ponds. To our knowledge neither this employee nor any other employee at Renergy was ever given any indication that we were out of compliance despite monthly submittals, weekly conversations with OPEA, and the year-end sludge report.

Sincerely,
Ashleigh Lemon

Ashleigh Lemon

Communications and Sustainability Specialist
Renergy, Inc.

Arc Summary Example:

	Estimated 1st Date of Application	**Field ID**	**Calculated Dry Tons per Acre**	**Estimated Average % Total Solids**	**Estimated Gallons per Acre Target Max**
	11/19/2019	MOQ-11-05	2.15	4.50%	11,458