

To: File

Through: Jeff Edwards, Compliance Supervisor, Waste Compliance Section *JE 8-3-19*

From: Jason Holsten, Program Specialist II, Waste Compliance Section *JH*

Date: August 20, 2019

RE: Complaint Investigation
AltEn, LLC
1344 County Road 10
Mead, NE 68041

NDEE ID: 84069

Mark Pomajzl, NDEE, received a telephone call from Jody Weible, on July 26, 2019, concerning AltEn. Ms. Weible alleged AltEn was spreading wet cake on fields located west of Wahoo. She told Mr. Pomajzl she would send him pictures at a later date. On July 29, Ms. Weible sent Mr. Pomajzl an email with two photographs (Attachment I). In her email, Ms. Weible said that material can be seen in the middle of a corn field while driving west on Hwy 92 and on the south side between the first road south after the intersection of Hwy 92/77 and the second road. She said you can smell it before you see it.

I coordinated with Jason Windhorst, NDEE, to conduct a complaint investigation on July 31. Joining us that day were Hillary Stoll and Mr. Pomajzl. Mr. Pomajzl planned on also conducting an Industrial Stormwater Inspection.

Prior to visiting AltEn, we drove by three separate locations to confirm where presumably wet cake was being stored. These three areas were identified earlier in the year after it was learned the farmer(s) could not spread all of the wet cake before planting. These locations were:

- 1) The location given by Ms. Weible, which is south of Hwy 92 and in between County Roads 18 & 19 (Photograph 1).
- 2) North of East 1st St., on the east side of Wahoo and just west of the cemetery (Photograph 2).
- 3) Northeast of the intersection of Hwy 92 and Hwy 77, located just west of Mead (Photograph 3).

Mr. Windhorst collected GPS coordinates at the three locations.

We arrived at AltEn at approximately 12:00 p.m. and met with Ken Peterson, Production Manager. We discussed the complaint received by the department. Mr. Peterson said there has not been any land application of wet cake. He accompanied us on a visual inspection of the facility. Messrs. Tingelhoff and Egr eventually joined us during our visual inspection. Mr. Peterson confirmed the ethanol plant was running although at low production. Treated seed corn was still being used in the ethanol process.

Numerous super sacks of industrial and/or food grade starch were located west of the office building. It is believed most of these sacks have been in place for approximately 2 years. Mr. Peterson said because they have gotten wet and have hardened, they could not be used in the ethanol process. He said they have talked about getting rid of it or possibly using the starch in a new process although he was not at liberty to discuss. He said a 3rd party also took some but that has ended. It was learned later that BigOx located in S. Sioux City was the 3rd party.

Numerous sacks of starch were observed split open and some of the starch had spilled and accumulated on the ground (Photographs 4-7). Other super sacks of starch were located at other locations, within the facility footprint, and were in similar condition. It was also learned that starch was being mixed in with the wet cake prior to the wet cake being delivered to the wet cake storage areas. Mr. Peterson confirmed this was happening after we questioned the white material on the ground near the wet cake load out area (Photograph 8). He was unaware how much or how often it was being done.

Mr. Tingelhoff confirmed starch was being mixed in with the wet cake. He said the starch has nutrient value and that is why it was being mixed in. He said mixing the starch with wet cake had only recently started this year and only after they stopped land applying the wet cake, approximately March 2019. I told him it appeared to me that the starch was a waste. I said he would need to provide the department something that shows it has nutrient value if making that claim, i.e. a lab and/or nutrient analysis. He said he could provide me some information. He emailed me a link to an article concerning using cornstarch as an amendment for marginal soils (Attachment II). I learned from Mr. Tingelhoff that the other processes for the use of starch that Mr. Peterson was not at liberty to discuss were incineration and land application.

Facility representatives said the Biochar system was currently inoperable. Mr. Peterson said the gentleman who designed the Biochar system picked up some of the super sacks of Biochar that had previously been stored at the site. He did not know what the gentlemen was doing with it. Mr. Tingelhoff confirmed that a Tom Coltech (sp?) took 3 semi-loads of Biochar. He said there was an agreement in place for Tom to receive a certain amount of Biochar although he could not remember that amount.

I asked facility representatives for an estimate of how much wet cake was currently being stored on site. Mr. Egr emailed me on August 1 and estimated a total of 26,000 tons of wet cake was being stored at the site (Attachment III). This included areas east and north of the warehouse (hoop buildings) as well as west of the compost pad (Photographs 9-12).

Treated seed was observed scattered along the ground around the grain bin that provided seed to the ethanol process (Photograph 13). Mr. Peterson said there were some wear sections along the conveyor that allowed seed to drop out and that this was to be fixed during the

upcoming scheduled plant shutdown scheduled for the week of August 12. In the meantime, he said they will take care of the spilled seed corn and clean it up. Mr. Tingelhoff confirmed this would happen during our exit briefing.

We also drove by the compost pad while on site. There were approximately 4 small windrows of wet cake (Photograph 14). These piles were observed during a previous site inspection. I reminded Mr. Tingelhoff that the material needed to be removed from the compost pad and the pad kept clear until the necessary repairs had been made.

Mr. Tingelhoff showed me a Facebook post from July 20. He said Ms. Weible made the post and encouraged people to contact the department to file complaints. He believed this was the reason we received the complaint.

We had an exit briefing with Messrs. Tingelhoff and Peterson at approximately 4:00 p.m. The following items were discussed:

- 1) I requested the facility provide information on their plan for the sacks of starch to include de-clumping and addressing those sacks that were split open with some of the contents being spilled. I also requested they provide information on how much starch has been mixed in with the wet cake up to this point. I reminded Mr. Tingelhoff to provide documentation that supported his claim of the starch having nutrient value. I discussed that a new nutrient analysis will be necessary since the starch has been added to the wet cake.
- 2) I explained to Mr. Tingelhoff that the wet cake currently on the compost pad had to be removed and the pad left empty until the necessary repairs had been made.
- 3) I explained that the facility needed to clean up the spilled treated seed corn located around the grain bin, daily.
- 4) I reminded Mr. Tingelhoff of the letter the department sent concerning management of the wet cake after the issuance of the Stop-Use and Stop-Sale order from the Dept. of Ag. Specifically, I reminded him of the department's position that since the wet cake can no longer be land applied, it is a solid waste requiring disposal at a permitted municipal solid waste facility. I requested him to submit a plan to the department if the facility was not going to dispose the wet cake at a landfill. I expressed my concerns of the facility increasing the amount of wet cake being stored with no place to go with it.

The allegation of AltEn land applying wet cake could not substantiated during this complaint investigation. We departed the site at approximately 4:40 p.m.

Weather conditions the day of the investigation were; Overcast, SE wind 15-20 mph with gusts 20-25 mph. Temperature was in the low to mid 70's with a 70-75% Rh (Weather data provided by the NWS Forecast Office located in Omaha/Valley, NE.

Attachment I – Email Thread including Ms. Weible's 7/29/19 Email to Mark Pomajzl
(4 pages)

Attachment II – 8/5/19 Email from Scott Tingelhoff to Jason Holsten Re: Starch Article
(5 pages)

Attachment III – 8/1/19 Email from Dean Eger to Jason Holsten w/ Wet Cake Totals (1 page)

Attachment IV – Photographs (7 pages)

ATTACHMENT I

Email Thread including Ms. Weible's 7/29/19 Email to Mark Pomajzl

Holsten, Jason

From: Edwards, Jeffery
Sent: Wednesday, July 31, 2019 9:20 AM
To: Holsten, Jason
Subject: RE: Pictures

Nothing from Ag.

Jeffery L. Edwards, C.L.S.S.Y.B
Waste Compliance Section Supervisor
Land Management Division

Primary Emergency Support Function (10) Coordinator

Nebraska Department of Environment and Energy
P.O. Box 98922
Lincoln, Nebraska 68509-8922

OFFICE (402) 471-8309
CELL (402) 405-2117
jeffery.edwards@nebraska.gov
<http://dee.ne.gov>

From: Holsten, Jason <jason.holsten@nebraska.gov>
Sent: Wednesday, July 31, 2019 7:31 AM
To: Edwards, Jeffery <jeffery.edwards@nebraska.gov>
Subject: RE: Pictures

Jeff,
Did you hear anything from Ag about them taking the lead on this? I am planning on going up there today with Jason and/or Mark and investigating. We will for sure check on some of the locations where I've seen/heard of piles. We can also contact the facility to inquire about them land applying any material.

From: Edwards, Jeffery <jeffery.edwards@nebraska.gov>
Sent: Tuesday, July 30, 2019 9:16 AM
To: Zimmerman, Tammy <tammy.zimmerman@nebraska.gov>
Cc: Breinig, Amelia <Amelia.Breinig@nebraska.gov>; Haldeman, David <david.haldeman@nebraska.gov>; Valentine, Kara <kara.valentine@nebraska.gov>; Holsten, Jason <jason.holsten@nebraska.gov>
Subject: FW: Pictures

NDEE received a couple of pictures alleging that AltEn may be stockpiling materials for land application off of their site.

NDEE has not contacted AltEn related to the allegation but will be investigating the allegation unless you would like to take the lead. Pictures from Ms. Weible are at the bottom of this email with directions to the site where material was said to be stockpiled.

At this time we told her that we cannot distinguish what the material is as the Water Staff person wasn't sure he could see anything in the photos.

Jeffery L. Edwards, C.L.S.S.Y.B
Waste Compliance Section Supervisor
Land Management Division

Primary Emergency Support Function (10) Coordinator

Nebraska Department of Environment and Energy
P.O. Box 98922
Lincoln, Nebraska 68509-8922

OFFICE (402) 471-8309
CELL (402) 405-2117
jeffery.edwards@nebraska.gov
<http://dee.ne.gov>

From: Pomajzl, Mark <mark.pomajzl@nebraska.gov>
Sent: Monday, July 29, 2019 4:29 PM
To: Edwards, Jeffery <jeffery.edwards@nebraska.gov>
Subject: FW: Pictures

This is what she sent me, I told her that picture doesn't show anything.

Thank you.

Mark Pomajzl
Program Specialist
Wastewater NPDES Compliance Unit

Nebraska Department of Environment and Energy
1200 N St, Suite 400
P.O. Box 98922
Lincoln, Nebraska 68509-8922

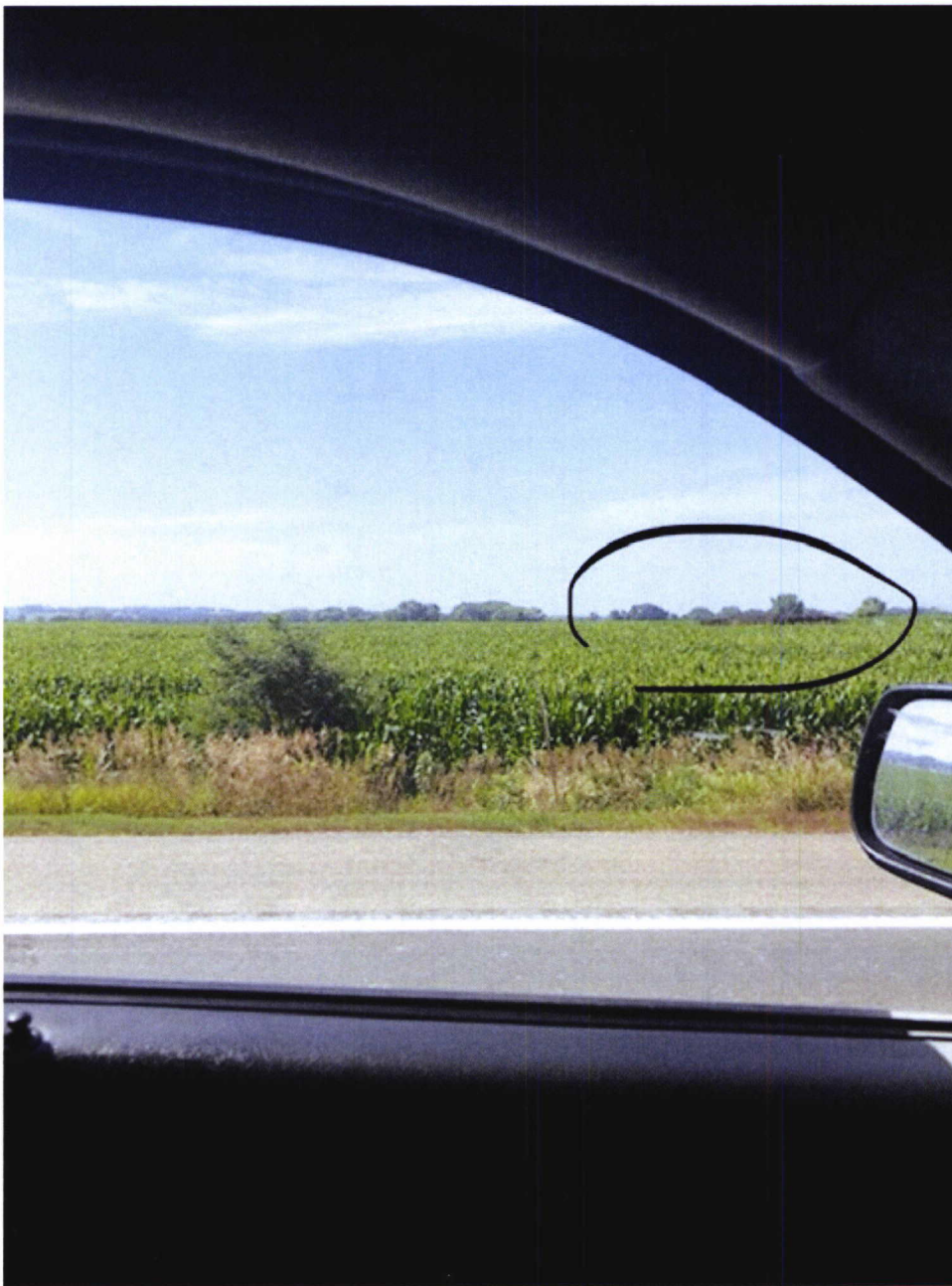
DIRECT: 402-471-2936 FAX: 402-471-2909

<http://deq.ne.gov>

From: Jody <jody_weible@yahoo.com>
Sent: Monday, July 29, 2019 8:27 AM
To: Pomajzl, Mark <mark.pomajzl@nebraska.gov>
Subject: Pictures

Can barely see it, can only see it going west on 92, on the south side appears in the middle of the corn field. Between the first road south after the 92/77 intersection and the second road! You will smell it before you see it





Love j

ATTACHMENT II

**8/5/19 Email from Scott Tingelhoff to Jason Holsten
Re: Starch Article**

Holsten, Jason

From: Scott Tingelhoff <stingelhoff@mrgkc.com>
Sent: Monday, August 05, 2019 9:27 AM
To: Holsten, Jason
Subject: FW: Cornstarch Amendment for Marginal Soils

Jason,

Here is the article I discussed with you.

https://projects.sare.org/sare_project/fnc96-133/

Scott

Scott Tingelhoff
General Manager
AltEn, LLC
1344 County Road 10
Mead, NE 68041
Office: (402) 624-2000, ext. 1008
Direct: (402) 624-0900
Fax: (402) 624-2027

Grants and Education to Advance Innovations in Sustainable Agriculture

Project Overview

FNC96-133

Project Type: Farmer/Rancher

Funds awarded in 1996: \$1,297.00

Projected End Date: 12/31/1997

Region: North Central

State: Nebraska

Project Coordinator:

Richard Johnson

Cornstarch Amendment for Marginal Soils

[View the project final report](#)

Annual Reports

- [1996 annual report](#)

Commodities

- **Agronomic:** corn

Practices

- **Animal Production:** manure management
- **Crop Production:** no-till, organic fertilizers, application rate management
- **Education and Training:** extension, farmer to farmer
- **Pest Management:** physical control
- **Soil Management:** organic matter

Summary:

PROJECT BACKGROUND

I operate a 550 acre corn/soybean farm. I no till except for a one time cultivation every other year on the corn only. I use reduced rates of herbicide and try to select herbicides that are friendly to soil life. I have used manure from local poultry houses to build soil organic matter and quality.

I have not used insecticides for at least two years. Before that I used them sparingly.

PROJECT DESCRIPTION AND RESULTS

I wanted to see if granulated starch would increase fertilizer efficiency. I expected a stimulated root growth and added moisture holding capacity to increase yields. I thought this would prevent phosphorus from being tied up because of a high pH in my soils.

I also hoped the use of starch would increase the market demand for corn and raise the price I get for the corn I grow.

Process:

I mixed 20 lbs. per acre of granulated starch with starter fertilizer and banded it two inches below and two inches beside the corn row as recommended by Dr. Walker. I hoped that added starch would feed the microbes, absorb moisture, and stimulate microbial activity. I banded the starch and fertilizer mixture to create a beneficial environment for the microbes in the seed zone of the soil. The logic here is to get a response from small amount of granulated starch.

I planted 12 replications of 12 rows each (36 inches between rows) selected randomly. All harvest information was taken from the center of these strips to avoid border differences.

People:

- Dr. John Walker, Ricks College
- Victoria Mundy, Extension Educator
- Charles Shapiro, Agronomist
- Gerald Bidy, Industrial Ag Products Lab
- Martin Kleinschmit, Center for Rural Affairs
- Roquette America Inc.

Results:

I am a little disappointed in the results. After two growing seasons, I could not show any conclusive evidence of a crop yield increase. I did notice what seemed to be an increase in root hairs, as predicted, but it was impossible to actually measure the root hair increases.

The starch blended well, was easy to work with, but did not work well in a grain drill delivery system. It did work well in a dry fertilizer application.

I have not given up on the starch idea. It has many properties that could affect soil life and plant growth and can affect changes in molecules in the soil. I am questioning if the starch I used had the right polymers to react in the soil as intended. I think it is possible the electrical properties of starch could affect nutrient abilities of soils too.

Learned:

I learned that crop response is closely tied to organic matter levels and I had a lot more organic variability than previously expected. My yield monitor shows this more than anything.

I learned marginal soil doesn't seem to develop structure or respond to salt based fertilizers very well.

OUTREACH

My outreach was discussing my project on a one-on-one basis at conferences seminars with agri. Consultants, agronomists, fertilizer dealers, gardeners, and other farmers and on the internet.

I will make copies of my report and share them with Roquette America Inc., Dr. Walker, NE corn board, Extension, and at no till conferences.

My outreach was not more extensive because I am uncertain of my results. I felt I could not truthfully say it did or did not work. I can only say what I found out, which was just more questions and no real answers. I need something to tell before I want to really push new ideas.

Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture or SARE.



1122 Patapsco Building | University of Maryland | College Park, MD 20742-6715

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ATTACHMENT III

8/1/19 Email from Dean Eger to Jason Holsten w/ Wet Cake Totals

Holsten, Jason

From: Dean Egr <DEgr@mrgkc.com>
Sent: Thursday, August 01, 2019 10:06 AM
To: Holsten, Jason
Subject: RE: ALTEN CAKE

Jason, yes. That included the number I sent you yesterday. Dean

From: Holsten, Jason [mailto:jason.holsten@nebraska.gov]
Sent: Thursday, August 1, 2019 9:01 AM
To: Dean Egr <DEgr@mrgkc.com>
Subject: RE: ALTEN CAKE

Thanks Dean. I'm here bright and early! Just so I'm clear, the total amount of cake at the site currently, all areas, is @ 26,000 tons? Enjoy your weekend.

Jason

From: Dean Egr <DEgr@mrgkc.com>
Sent: Thursday, August 01, 2019 8:39 AM
To: Holsten, Jason <jason.holsten@nebraska.gov>
Subject: RE: ALTEN CAKE

Good morning Jason, I didn't think you state guys started working that early Lol. Here is the numbers stored in each area, that you wanted. West of compost pad. 6,000 ton or 6,666 yards. East of warehouse 5,000 tons or 5,550 yards. North of warehouse 15,000 tons or 16,650 yards, this number includes to date. Have a great day. Dean

From: Holsten, Jason [mailto:jason.holsten@nebraska.gov]
Sent: Thursday, August 1, 2019 6:39 AM
To: Dean Egr <DEgr@mrgkc.com>
Subject: RE: ALTEN CAKE

Thanks Dean. I checked our files and did not see any information regarding how much wet cake was being stored previously. Please provide an estimate on the total amount of cake being stored in the conditioning area as well as the area west of the compost pad. Can you provide your estimate in both tons and cubic yard amounts? Also, by conditioning area are you referencing the area east and north of those 2 hoop buildings?

Jason

From: Dean Egr <DEgr@mrgkc.com>
Sent: Wednesday, July 31, 2019 1:04 PM
To: Holsten, Jason <jason.holsten@nebraska.gov>
Subject: ALTEN CAKE

Jason, here is the total number of tons from March 1 to July 31 2019 that was hauled to conditioning area. 10,845 tons.
Dean

ATTACHMENT IV
Photographs



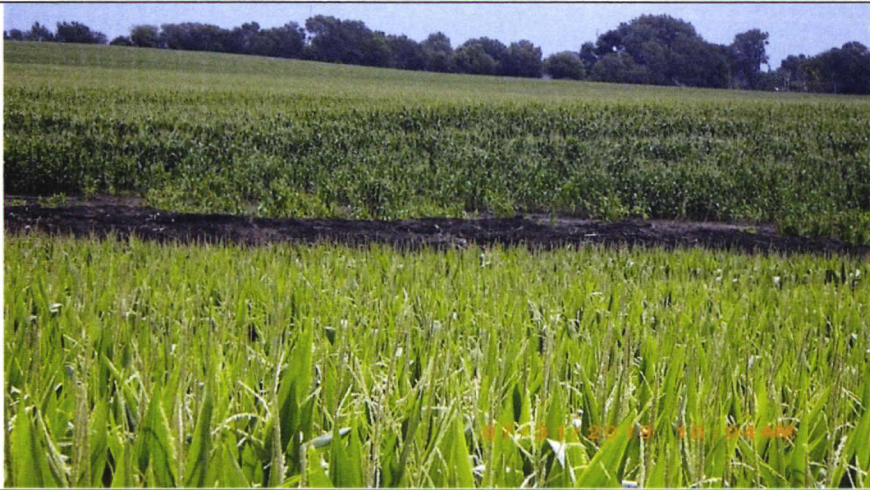
Photograph 1
Date: July 31, 2019
Photographer: Mark Pomajzl
Camera: RICOH WG-50
IIS# 84069, IWM Permit # NE0204447
Subject: AltEn, LLC Complaint Investigation

Looking south, photograph showing wet cake in a field located south of Hwy 92, between County Roads 18 & 19. This is presumably the location of the complaint received by Ms. Weible.



Photograph 2
Date: July 31, 2019
Photographer: Mark Pomajzl
Camera: RICOH WG-50
IIS# 84069, IWM Permit # NE0204447
Subject: AltEn, LLC Complaint Investigation

Looking west, photograph showing wet cake in a field located on the north side of East 1st St., east of Wahoo and just west of the cemetery.



Photograph 3
Date: July 31, 2019
Photographer: Mark Pomajzl
Camera: RICOH WG-50
IIS# 84069, IWM Permit # NE0204447
Subject: AltEn, LLC Complaint Investigation

Looking east, photograph showing wet cake in a field located northeast of the intersection of Hwy 92 and Hwy 77, west of Mead.



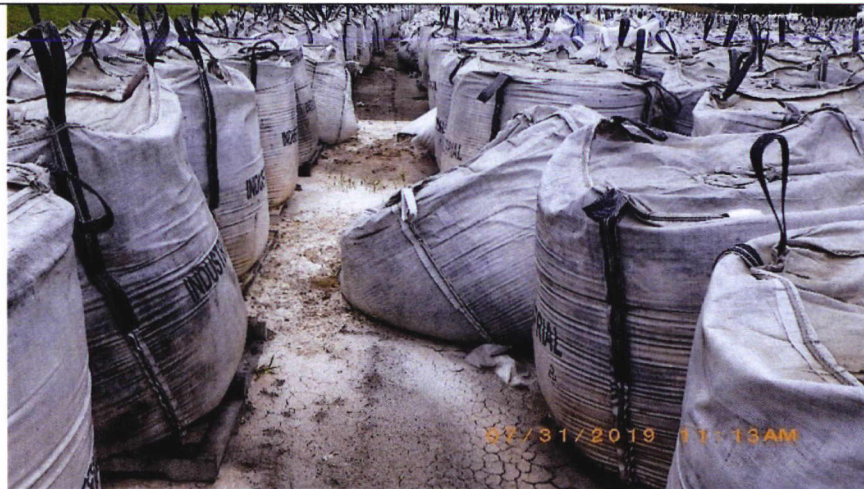
Photograph 4
Date: July 31, 2019
Photographer: Mark Pomajzl
Camera: RICOH WG-50
IIS# 84069, IWM Permit # NE0204447
Subject: AltEn, LLC Complaint Investigation

Photograph showing damaged sacks of starch and starch spilled on the ground. These bags were located south of the NR System building.



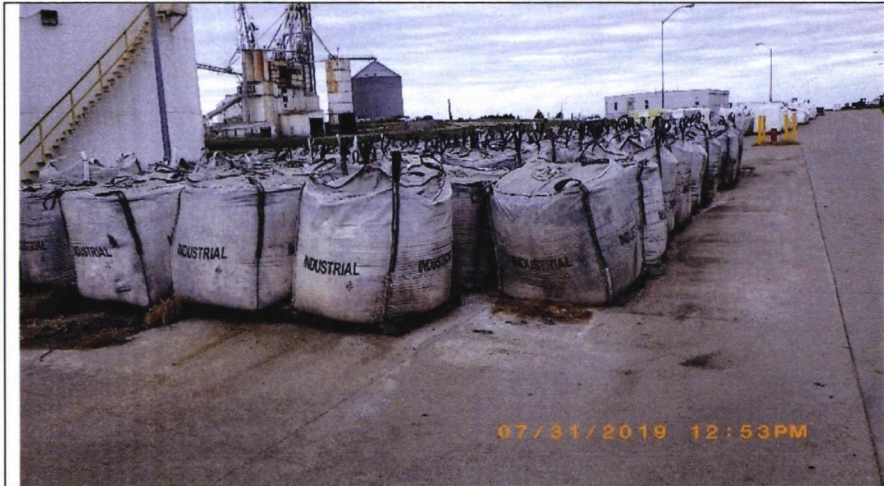
Photograph 5
Date: July 31, 2019
Photographer: Mark Pomajzl
Camera: RICOH WG-50
IIS# 84069, IWM Permit # NE0204447
Subject: AltEn, LLC Complaint Investigation

Another view of the sacks of starch located south of the NR System building and mentioned in photograph 4.



Photograph 6
Date: July 31, 2019
Photographer: Mark Pomajzl
Camera: RICOH WG-50
IIS# 84069, IWM Permit # NE0204447
Subject: AltEn, LLC Complaint Investigation

Photograph showing sacks of starch located west of the office building. Numerous sacks were split open spilling their contents on the ground.





Photograph 7
Date: July 31, 2019
Photographer: Mark Pomajzl
Camera: RICOH WG-50
IIS# 84069, IWM Permit # NE0204447
Subject: AltEn, LLC Complaint Investigation

Looking west, photograph showing more sacks of starch being stored towards the northeast corner of the facility.



Photograph 8
Date: July 31, 2019
Photographer: Mark Pomajzl
Camera: RICOH WG-50
IIS# 84069, IWM Permit # NE0204447
Subject: AltEn, LLC Complaint Investigation

Photograph showing starch on the ground, southwest of the wet cake load out area. Facility representatives said starch was being mixed in with wet cake prior to taking the wet cake to the storage areas.

	<p> Photograph 9 Date: July 31, 2019 Photographer: Mark Pomajzl Camera: RICOH WG-50 IIS# 84069, IWM Permit # NE0204447 Subject: AltEn, LLC Complaint Investigation </p> <p>Looking west, photograph showing wet cake being stored north of the hoop buildings.</p>
	<p> Photograph 10 Date: July 31, 2019 Photographer: Mark Pomajzl Camera: RICOH WG-50 IIS# 84069, IWM Permit # NE0204447 Subject: AltEn, LLC Complaint Investigation </p> <p>Looking west northwest, photograph showing another view of wet cake being stored north of the hoop buildings.</p>



Photograph 11
Date: July 31, 2019
Photographer: Mark Pomajzl
Camera: RICOH WG-50
IIS# 84069, IWM Permit # NE0204447
Subject: AltEn, LLC Complaint Investigation

Looking south, photograph showing wet cake being stored east and northeast of the hoop buildings.



Photograph 12
Date: July 31, 2019
Photographer: Mark Pomajzl
Camera: RICOH WG-50
IIS# 84069, IWM Permit # NE0204447
Subject: AltEn, LLC Complaint Investigation

Looking southeast, photograph showing another view of the wet cake pile observed in photograph 11.



Photograph 13
Date: July 31, 2019
Photographer: Mark Pomajzl
Camera: RICOH WG-50
IIS# 84069, IWM Permit # NE0204447
Subject: AltEn, LLC Complaint Investigation

Photograph showing treated seed corn scattered along the ground around the grain bin that provided seed to the ethanol process.



Photograph 14
Date: July 31, 2019
Photographer: Mark Pomajzl
Camera: RICOH WG-50
IIS# 84069, IWM Permit # NE0204447
Subject: AltEn, LLC Complaint Investigation

Photograph showing some of the small windrows of wet cake located on the compost pad.