



United States Environmental Protection Agency
Region 7
Enforcement and Compliance Assurance Division

Air Branch

Air Branch Inspection Report
Unannounced Full Compliance Evaluation
GreenAmerica Biofuels Ord, LLC
48267 Val-E Road
Ord, NE 68862
110029535242

Inspection Date:
August 13, 2024

HUNTER
STROM

Digitally signed by HUNTER
STROM
Date: 2024.11.15 11:07:56
-06'00'

Hunter Strom, Inspector, ECAD, Air Branch

Authorized for Release by:

LANCE
AVEY

Digitally signed by
LANCE AVEY
Date: 2024.11.15
11:58:22 -06'00'

Lance Avey, Acting Air Branch Manager, ECAD

11201 Renner Boulevard
Lenexa, Kansas 66219

CONTENTS

INSPECTION OVERVIEW	3
INSPECTION OBJECTIVE	3
FACILITY CONTACT INFORMATION	3
FACILITY OVERVIEW	3
FACILITY OPERATIONS SUMMARY	4
FIELD ACTIVITIES SUMMARY	4
Measurement or Sampling Activities.....	6
INSPECTION OBSERVATIONS	6

TABLES

Table 1. APPLICABLE REGULATIONS AND STANDARDS	Error! Bookmark not defined.
Table 2. INSEPCTION TEAM MEMBERS.....	3
Table 3. FACILITY CONTACT INFORMATION	3
Table 4. FIELD MEASUREMENTS ACTIVITIES.....	6

APPENDICES

- A - United States Environmental Protection Agency Receipt for Documents and Samples (1 Page)
- B - E-mail Correspondence for Documents (1 page)
- C - United States Environmental Protection Agency Confidentiality Notice (1 page)
- D - Field Photographs (27 pages)

**This Contents page shows all the sections contained in this report
and provides a clear indication of the end of this report.**

INSPECTION OVERVIEW

INSPECTION OBJECTIVE

The objective of the full compliance evaluation (FCE) inspection was to determine compliance of the facility with the Clean Air Act (CAA), specifically those requirements listed in **Table 1**.

Table 1. APPLICABLE PERMIT CONDITIONS, REGULATIONS AND STANDARDS	
Code of Federal Regulation	Standard Name
40 CFR Part 60	Subpart A, General Provisions; Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units; Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984; Subpart VVa, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Materials Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006, and on or Before April 25, 2023; Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
40 CFR Part 63	Subpart A, General Provisions; Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Table 2 lists the inspection team members.

Table 2. PROJECT TEAM MEMBERS		
Team Member	Organization	Project Role
Hunter Strom	EPA Region 7, ECAD, Air Branch	Lead inspector
Sean Bergin	EPA Region 7, ECAD, Air Branch	Field team member

FACILITY CONTACT INFORMATION

Table 3 lists the primary facility contacts alphabetically.

Table 3. FACILITY CONTACT INFORMATION		
Name, Title	Phone No.	Email Address
Brian Collingham, EHS Manager	308.496.4823	Brian.Collingham@pilottravelcenters.com
Les Glinsmann, Plant Manager	308.496.4873	Les.Glinsmann@pilottravelcenters.com

FACILITY OVERVIEW

The corn processing facility consists of a dry grind milling plant. The dry grind milling operation was constructed in 2005 and utilizes the dry milling process to produce fuel-grade ethanol from whole-grain corn. GreenAmerica Biofuels Ord, LLC (GreenAmerica), also produces distiller's grain which they sell to farmers as animal feed. The facility employs 45 people and operates 24 hours a day, seven days a week to produce an annual throughput of approximately 64-65,000,000 gallons of ethanol.

Nebraska Department of Environment and Energy (NDEE) conducted a FCE inspection at the facility on November 3, 2022, and reported no violations or concerns at the time of inspection.

The EPA's Enforcement and Compliance History Online (ECHO) website reports that no formal enforcement actions have occurred at this facility in the last five years.

According to GreenAmerica's Title V operating permit issued by NDEE on August 1, 2023, the facility is subject to the regulations and standards subject to review during this inspection as noted in **Table 1**.

FACILITY OPERATIONS SUMMARY

The process of producing ethanol consists of the following generalized steps. First, corn arrives at the facility, and at GreenAmerica, most corn deliveries are completed via truck. Next, dry milling grinds the corn into a powder, and the powder is conveyed to the next process. Baghouses capture emissions from grain receiving and milling operations. Water is added to the powder to create a slurry which is heated to break down starch molecules. The regenerative thermal oxidizer (RTO) controls emissions from slurry, liquefaction, and drying operations. The starch molecules are converted into glucose, and at this point, yeast is added to the slurry and initiates an energy transfer that produces ethanol as a byproduct. The process of adding yeast is a step called fermentation, and the scrubber controls these emissions. In the distillation process, the ethanol/water mixture is boiled to separate the two and then condensed to capture only the ethanol. Finally, the ethanol is kept in storage tanks until loadout occurs. A vapor combustion unit and a flare control emissions for ethanol loadout performed via truck, and GreenAmerica uses submerged loading to control emissions when loadout is performed via rail. The facility also uses a baghouse to control loadout emissions.

FIELD ACTIVITIES SUMMARY

Mr. Bergin and I arrived at the facility on August 13, 2024, at 7:50 a.m. and completed a drive by surveillance inspection. We did not observe visible emissions or unusual activity at the time of the surveillance inspection. I made entry at the front office at 8:04 a.m. and introduced myself and Mr. Bergin, presented my credentials, and provided my business card to Mr. Glinsmann and Mr. Collingham. At this point, we were informed that Mr. Glinsmann was leaving but would be back for the closing conference. Mr. Collingham asked us to follow him to his office to continue the meeting. In his office, I conducted an opening conference during which I explained that the purpose of the visit was to conduct an inspection to determine compliance with the CAA, specifically, to determine compliance with the regulations and standards listed in **Table 1**. I explained that after asking for some general business information, I would observe work practices, process units, emission units, control equipment, and also

review associated records demonstrating compliance with the operating permit and regulations. I explained to Mr. Collingham that the facility would have an opportunity to make a claim of business confidentiality at the end of the inspection and provided him with a Confidential Business Information (CBI) form. He asked me if we could revisit the CBI explanation during the closing conference with Mr. Glinsmann present, and I agreed.

I requested a site map of the facility which Mr. Collingham provided. We left the office at 9:01 a.m. for a facility tour guided by Mr. Collingham who also gave us a facility safety briefing. During the tour, we wore steel toed boots, hard hats, safety glasses, and hearing protection as requested by Mr. Collingham. While touring the facility, Mr. Bergin used the FLIR GF320 Optical Gas Imaging camera to take images of the ethanol loadout area, fermentation operation, and storage tanks.

We broke for lunch at 11:20 a.m. and returned to the inspection at 12:30 p.m.

Upon our return, the inspection team reconvened in Mr. Collingham's office to discuss records. I asked how and where the records that GreenAmerica is required to maintain are kept. Mr. Collingham explained that the facility maintains physical copies of daily observation records onsite for three years, and they maintain digital copies of the records indefinitely. All other records required to be kept by the permit are maintained digitally, and Mr. Collingham informed me that he is in the process of digitizing as many required records as possible. I obtained copies of the records as indicated on the Receipt for Documents (**Appendix A**).

After discussing records, the inspection team and Mr. Collingham returned to the front office of the facility to conduct a closing conference. On the walk back to the front, Mr. Collingham showed me where spare baghouse filters are kept onsite while Mr. Bergin took images of the thermal oxidizer with the FLIR camera.

I conducted a closing conference with Mr. Collingham and Mr. Glinsmann. I provided the facility with copies of the Receipt for Documents (**Appendix A**) and CBI forms (**Appendix C**). I did not provide the facility with a Notice of Potential Findings due to the decision Mr. Bergin and I made before the closing conference there was nothing to alert the facility at that time. I informed Mr. Collingham and Mr. Glinsmann the lack of potential findings at the time of inspection does not prohibit the EPA from making other compliance determinations as the case develops. We departed the facility at approximately 2:50 p.m.

Observations and potential findings from the facility tour, records review, and sampling/measurement activities are noted in the **Investigation Observations** section below.

Measurement or Sampling Activities

Mr. Bergin conducted leak detection activities with a FLIR camera during the onsite inspection. He used the FLIR to observe tank vents of storage tanks subject to 40 CFR Part 60, Subpart Kb, the thermal oxidizer, loadout flare, and fermentation operation. **Table 4** summarizes field measurement and field sampling activities.

All environmental measurement activities were performed in accordance with the EPA Region 7 quality system. Mr. Bergin followed manufacturer and EPA processes for instrument calibration.

Table 4 summarizes field measurement activities.

Table 4. FIELD MEASUREMENT ACTIVITIES			
Location Identifier	Date(s) and Time	Method and/or Procedure ¹ , and Equipment	Measurer Name
Tank farm, loadout area, and fermentation.	8.13.2024 9:01 am- 10:40 am	Region 7 Procedure: <i>FLIR ThermoCam™ GasFindIR, GF320, and Similar Infrared Cameras</i> Equipment: Teledyne, GF320, Serial No. 44402263	Sean Bergin
¹ The current version of each procedure, at the time of the investigation, was followed.			

INVESTIGATION OBSERVATIONS

Ambient weather, site conditions, and field activities were documented in the field records. All photographs are attached as **Appendix D**. Mr. Bergin and I made the following observations during the inspection. I discussed all observations with facility representatives during the closeout meeting unless otherwise noted in the observation description.

These observations are not final compliance determinations. The EPA Region 7 Air Branch case review team will make the final compliance determinations based on its review of this report and other technical, regulatory, and facility information.

A copy of the site map with some of my notes on it can be found in the inspection folder.

Earlier this calendar year, GreenAmerica conducted a 28-day trial to determine the efficiency of a new yeast type in their ethanol production. The yeast was a Lallemand Biofuels & Distilled Spirits yeast called Fermacore Propel.

Mr. Collingham stated whenever the conveyors are running, the dry dust collectors are also in operation. During the facility tour, the plant was completely operational, and I verified the dust collectors were operating as well. Requirements state that pressure gauges must remain under five, and at the time of inspection, all baghouses were operating at less than a five-pressure

differential. Spare baghouse filters are kept in the maintenance building onsite. During the facility tour, I saw the spare boxes of filters and opened one to verify whether it had replacements inside. Mr. Collingham stated that filters are replaced annually or as needed, but mostly annually during the facility's spring shutdown.

Mr. Collingham informed me that the majority of product loadout at GreenAmerica is completed via railcar in a loadout process using submerged loading, but the facility has the capability to perform loadout via truck if needed. Monthly records of ethanol produced and shipped, along with total natural gas usage, are organized by calendar year in excel spreadsheets. I confirmed these records by viewing the information for June and July 2024. The flare onsite is rarely used because it is specifically for ethanol loadout into trucks. However, the facility still maintains daily records for flare usage which are kept electronically. Mr. Collingham showed me the records for July 2024. I observed piping labeled for ethanol vapor routed the flare. Mr. Bergin took FLIR imagery and did not see emissions at the time we were there while rail loadout was occurring.

Emissions from fermentation operations are captured by a scrubber. The scrubber is cooled with well water with a chemical additive called inhibit. The facility has a real-time monitor for scrubber parameters including liquid flow rate, chemical flow rate, pressure differential, and liquid temperature. Fermenter relief valves are checked each time fermenters are filled which is equivalent to approximately a 16-hour cycle, according to Mr. Collingham.

The RTO burns natural gas to operate. At the time of this inspection, the real-time data for the RTO's control parameters displayed an operating temperature of 1574°F. Mr. Bergin did not see visible emissions or unusual activity when using the FLIR camera on the RTO. The facility has the RTO routed to a continuous emissions monitoring system (CEMS) for NO_x which GreenAmerica has not modified since the last time they were inspected. In recent reports, the facility indicated a greater than five percent downtime for the CEMS. Mr. Collingham informed us this is possibly due to a period of cold weather that caused the analyzer to function improperly. Mr. Collingham stated that the facility's most recent operating permit reflects NO_x emissions limitations accurately, and at the time of this inspection, the real-time data being recorded reflected emissions under the permit limit.

Performance tests are scheduled this calendar year for the RTO and scrubber. Mr. Collingham informed us that they are attempting to obtain operation at a lower temperature to combat as many malfunctions as possible from occurring. GreenAmerica submits malfunction reports including excess emissions to NDEE when a malfunction occurs. Mr. Collingham explained that when the scrubber goes offline, the RTO can continue operating, and there is no bypass for the scrubber.

Routine maintenance observations occur daily and include visual observations, pressure readings, and visible emissions surveys. These findings are all recorded on one data sheet for C-20, C-20B, C-30, C-70, C-90, C-40, C-10, C-50, haul roads, and Inhibit tote. During visible emissions surveys, if there are any visible emissions or if pressure drop is above five, then the equipment is shut down, and a work order is put in for maintenance. Should a piece of equipment need a work order, it is documented on the daily observations sheet. The facility uses Maximo for maintenance tracking. Mr. Bergin reviewed the daily observation data sheets for the calendar year 2024 so far and reported that everything looked properly recorded.

The facility's storage tanks are subject to 40 CFR Part 60, Subpart Kb. Mr. Collingham stated employees at the facility perform monthly observations in addition to annual inspections, and the tanks are drained on five- and ten-year schedules. The storage tanks are equipped with covers that can be closed when not in use. During the records review, I confirmed tank maintenance schedule via inspection reports completed by Team Tank Consultants and PROtect on April 28, 2020, September 20, 2023, and September 21, 2023.

GreenAmerica reports no unsafe or difficult to monitor pumps for 40 CFR Part 60, Subpart VVa. PROtect is the consultant that performs Method 21 monitoring monthly for the facility. GreenAmerica also performs weekly visual inspections on the pumps subject to this regulation. Onsite, I reviewed the visual inspection report dated August 10, 2024. The inspection data sheet instructs whoever is performing the inspection to complete a work order once a leak is detected.

Mr. Collingham confirmed the drift loss guarantee for the cooling tower is kept onsite and proved it by showing to me electronically. I also viewed records indicating the facility is collecting TDS samples monthly.

All haul roads are paved except for the roads in the temporary grain storage area. The facility sweeps haul roads as needed, but at least once a week. Employees performing the road sweeping have instructions to sweep at the presence of any airborne dust. Whenever the facility sweeps haul roads, it is documented. I reviewed the weekly road sweeping records for the week of August 3, 2024.

At the time of the inspection, the non-resettable hour meter on the engine subject to 40 CFR Part 63, Subpart ZZZZ read 445 hours. I also noted a fuel storage tank labeled as NO. 2 diesel fuel oil. Mr. Collingham confirmed annual or as needed replacements happen on the engine for oil and oil filters.

Following the inspection, I contacted Mr. Collingham via email on August 15, 2024. In the email, I requested records including submissions we discussed during the closing conference along

with new requests. These records included the daily observation records from the last four years prior to 2024 (as we reviewed 2024 records thus far onsite), LeakDAS records from the last five years, TVA calibration records from the last five years, weekly LDAR pump inspections from the last five years, weekly road sweeping records from the last five years, and monthly TDS concentrations from the last five years. On August 26, 2024, Mr. Collingham sent me an email stating that GreenAmerica's LDAR provider does not use LeakDAS software, and instead, they use Guideware. Mr. Collingham asked if I would be okay with receiving the last five years of records generated from that software, and I confirmed the alternative is okay. On August 28, 2024, Mr. Collingham informed me the requested records has been delivered. The records Mr. Collingham submitted electronically have not been analyzed at the time of report submission.

End of report.