RCRA Inspection Report

1) Inspector and Author of Report

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U.S. Environmental Protection Agency, Region 4
Enforcement and Compliance Assurance Division
Chemical Safety and Land Enforcement Branch
RCRA Enforcement Section
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2) Facility Information

CERF Shelby LLC
7103 Old Millington Rd
Millington, TN 38053

EPA ID#: TNR000041806
NAICS #: 221210 – Natural Gas Distribution

3) Responsible Officials

Emily Zambuto
Sr. Director of Environmental Compliance
ezambuto@archaea.energy

4) Inspection Participants

Nevin Edwards, Archaea Energy
Nathan Allen, Archaea Energy
Jason Simpson, TDEC
Brett Harris, TDEC

Jason Simpson, TDEC
Cliff Caudle, TDEC
Kayla Acosta, US EPA
Daryl Himes, US EPA

5) Date of Inspection

August 23, 2023, at 9:00 AM

6) Applicable Regulations[1]

Resource Conservation and Recovery Act (RCRA) Sections 3002 (42 U.S. Code – Annotated U.S.C.A. 6925 and 6927), and 40 Code of Federal Regulation (C.F.R.) Parts 260 - 270, 273, 278, & 279; Tennessee Hazardous Waste Management Act of 1977, Tennessee Code Annotated (Tenn. Code Ann.) § 68-212-101 *et seq.*, and Chapter 0400-12-01 of the Rules and Regulations of the State of Tennessee (Tenn. Comp. R. & Regs.)

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.01(2)(a) [40 C.F.R. § 260.10], a large quantity generator of hazardous waste (LQG) is a generator who generates greater than or equal to 1,000 kilograms (2,200 pounds) of non-acute hazardous waste in a calendar month.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(f)1. [40 C.F.R. § 262.15(a)], a generator may accumulate as much as 55 gallons of non-acute hazardous waste in containers at or near any point of generation where wastes initially accumulate, which is under the control of the operator

1 As the State's authorized hazardous waste program operates in lieu of the federal RCRA program, the citations of those authorized provisions will be to the authorized State program. However, for ease of reference, the federal citations will follow in brackets.

of the process generating the waste, without a permit or without having interim status, as required by Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(f)1. [Section 3005 of RCRA, 42 U.S.C. § 6925], and without complying with Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(g)2. or 0400-12-01-.03(1)(h)1. [40 C.F.R. § 262.16(b) or § 262.17(a)], except as required in Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(f)1.(vii and viii) [40 C.F.R. § 262.15(a)(7) and (8)], provided that the generator complies with the satellite accumulation area conditions listed in Ten Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(f)1. [40 C.F.R. § 262.15(a)] (hereinafter referred to as the "SAA Permit Exemption").

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h) [40 C.F.R. § 262.17], an LQG may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, as required by Section 68-212-108 of the THWMA, Tenn. Code Ann. § 68-212-108 [Section 3005 of RCRA, 42 U.S.C. § 6925], provided that the generator complies with the conditions listed in Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h) [40 C.F.R. § 262.17] (hereinafter referred to as the "LQG Permit Exemption").

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.12(1)(i) [40 C.F.R. § 273.9], a small quantity handler of universal waste (SQHUW) is a universal waste handler who does not accumulate 5,000 kilograms or more of universal waste (batteries, pesticides, mercury-containing equipment, lamps, or aerosol cans, calculated collectively) at any time.

7) Purpose of Inspection

The purpose of this inspection was to conduct an unannounced compliance evaluation inspection to determine CERF Shelby LLC's (known hereinafter as "CERF Shelby" or "the facility") compliance with the applicable requirements of RCRA and the corresponding Tennessee regulations. This was an EPA lead inspection.

8) Facility Description

CERF Shelby is a subsidiary of Archaea Energy. According to their website, Archaea Energy is a renewable natural gas producer that develops, constructs, and operates renewable natural gas facilities to capture waste emissions and convert them into low carbon fuel. Archaea Energy operates over 25 facilities within the Unites States including CERF Shelby in Millington, TN.

CERF Shelby operates alongside the North Shelby Landfill (a Class I municipal landfill owned by Republic Services) to extract landfill gas and convert it to clean natural gas that is then sold to Memphis Light, Gas, & Water. The facility operates 24/7 with on-call coverage on nights and weekends. The facility currently has three employees. There is controlled access via a security gate when entering the North Shelby Landfill and CERF Shelby facility.

The facility is registered as a LQG of hazardous waste. The facility first notified of its regulated waste activities on June 8, 2016, and most recently notified on March 1, 2023. The primary waste generated at the facility comes from the compression and cooling of landfill gas through the natural gas skid system. A liquid condensate generated in the skid system is processed through an oil water seperator before the water phase is collected in a holding tank. The water phase is then pumped into one of two 15,000-gallon double-walled hazardous waste above ground storage tanks (ASTs). The water phase of the waste condensate has previously been tested by the facility and found to contain aresenic at level above the toxicity characteristic levels

for arsenic (EPA waste code: D004) and is therefore managed as hazardous waste. Occasionally, rainwater accumulated in the containment pit of the oil water seperator is pumped into the hazardous waste tanks also. The facility also generates hazardous waste when they perform an oil water seperator cleanout which generates the following waste codes (D001—ignitable waste, D004—arsenic waste, D009—mercury waste, D010—selenium waste, and F003—solvent waste). The facility also generates used oil, used oil filters, and used oily water. The facility uses LED lighting.

9) Previous Inspection History

Between 2018 and 2023, TDEC has conducted one RCRA CEI. The RCRA CEI was conducted on September 30, 2020, at the subject facility and no violations were found during that inspection.

10) Opening Conference

On August 23, 2023, EPA inspectors Kayla Acosta and Daryl Himes, accompanied by TDEC inspectors Jason Simpson, Brett Harris, Lucas McKinney, and Cliff Caudle, arrived at CERF Shelby at approximately 9:00 AM. Nevin Edwards, Air Permitting Manager, immediately received the inspectors. Nevin Edwards, and the inspectors were joined by Nathan Allen, Lead Operations Technician for the opening conference. The inspectors introduced themselves, showed their credentials, and explained the purpose of the visit.

The inspectors described the anticipated use of equipment (digital camera) during the inspection and provided a request for records. The EPA inspector explained that the Small Business Regulatory Enforcement Fairness Act's classification of a "small business" is generally set by the Small Business Administration using the business' SIC/NAICS code and annual receipts or number of employees. A copy of the EPA's information sheet for small businesses can be found at https://www.epa.gov/sites/production/files/2017-06/documents/smallbusinessinfo.pdf. The EPA inspector also discussed the company's ability, pursuant to 40 C.F.R. § 2.203, to assert a business confidentiality claim for information submitted to EPA. The company did not assert a business confidentiality claim.

Nathan Allen and Nevin Edwards provided an overview of the facility's history and current operations during the opening conference. On July 21, 2023, the facility experienced a discharge of hazardous waste from one of the hazardous waste tanks (Condensate Tank #2) due to an accidental overflow while an employee was pumping rainwater into the tank. The spill was reported to TDEC and Clean Harbors who assisted with the cleanup. An Incident Response Site Visit was conducted by TDEC on July 24, 2023. At that time, it was determined that the overflow of condensate water, managed by the facility as hazardous waste, was due to worker oversight. CERF personnel stated that the ASTs had no high-level alarm at the time of the overflow, but that a high-level alarm had been installed on both ASTs since the incident.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.05(10)(e) [40 C.F.R. § 265.194(b)(2)], the owner or operator must use appropriate controls and practices to prevent spills and overflows from tank or secondary containment systems. These include at a minimum:

Overfill prevention controls (e.g., level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank).

At the time of the Incident Response Site Visit and at the time of this inspection, facility personnel estimated that approximately 1,000-gallons was discharged from the condensate water hazardous waste tank onto the limestone gravel that covers the site. CERF personnel immediately worked to contain the flow, preventing off-site discharge of the condensate water hazardous waste. Clean Harbors was able to recover 900 gallons of the condensate water hazardous waste into four (4) plastic 275-gallon totes. A TCLP analysis was conducted by Clean Harbors on the recovered waste which resulted in a non-hazardous waste determination. According to TDEC personnel, additional soil sampling will be conducted in the areas impacted. According to facility personnel, there was no structural damage to the overflow waste tanks resulting from the overflow of hazardous waste.

The inspection participants also discussed health and safety protocols and required personal protective equipment before Facility representative led the inspectors on a tour of the Facility operations.

11) Inspection Observations

Oil Water Separator and Containment Pit:

Condensate from the skid system (Photo 1) enters an oil water seperator and is then pumped into a holding tank and then pumped into one of the two hazardous waste tanks. The oily water from the oil-water seperator is transferred to a 250-gallon tote. The inspectors observed a 250-gallon plastic tote full of oily water which was not labeled (Photo 2).

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.11(3)(c)(3)(i)[40 C.F.R. § 279.22(c)(1)], containers and aboveground tanks used to store used oil at generator facilities must be labeled or marked clearly with the words "Used Oil."

The facility placed a Used Oil label on the tote and sent a photo via email the same day (Photo 3).

Tank Farm with 90-Day Hazardous Waste Storage Tanks

The tank farm houses two (2) 15,000-gallon double-walled ASTs named Condensate Tank 1 (T-1) and Condensate Tank 2 (T-2) that are used to store D004 hazardous waste condensate from the skid system (Photo 4). The ASTs sit on limestone gravel which covers the majority of the facility. The tanks are double walled with the exterior wall acting as secondary containment for the primary tank itself. However, the tank piping and other ancillary equipment do not have secondary containment. Both ASTs were labeled "Hazardous Waste RNG Condensate" and were marked with an indication of the hazard of the contents (Photo 5). A level gauge on the tank showed the tank levels in feet. T-1 had a reading of 8.2 and T-2 had a reading of 15.0 (Photo 6). According to the facility, 8 feet on the tank level gauge is equivalent to approximately 5,000 gallons of hazardous waste, which gets shipped offsite by tanker at least weekly. The ASTs appeared to be in good condition at the time of the inspection with no visible signs of leaks or corrosion on the tanks or tank piping (Photos 7, 8, 9, and 10). A spill kit was observed near the tank farm.

Maintenance Warehouse:

Next to the maintenance warehouse the inspectors observed a 300-gallon used oil tank labeled "Used Oil" (Photo 11). Inside the maintenance warehouse the inspectors observed one (1) 20-gallon container for draining used oil. The container was not labeled. This was corrected on the same day and a photo sent via email (Photo 12).

12) Records Review

Contingency Plan and Quick Reference Guide (QRG):

The actions that facility personnel should take in response to an emergency are described in the facility's contingency plan. The plan describes actions facility personnel must take in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility. The plan describes arrangements agreed to with the local fire department and other emergency response teams.

The plan lists the names and emergency telephone numbers for persons identified as emergency coordinators. Nathan Allen is listed as the primary emergency coordinator and Joshua Ishee is listed as the alternate.

The plan includes a list of all emergency equipment at the facility. The list includes fire extinguishing systems, spill control equipment, communications and alarm systems, and decontamination equipment. The list appears to be up to date. The plan includes the location and a physical description of each item on the list, and a brief outline of its capabilities.

The plan includes an evacuation plan for personnel. This plan describes signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes.

Documentation demonstrating that copies of the contingency plan (and its quick reference guide) was submitted to the local authorities was not available.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(12)(j)(1) [40 C.F.R. § 262.262(a)], A copy of the contingency plan and all revisions to the plan must be maintained at the large quantity generator; and the large quantity generator must submit a copy of the contingency plan and all revisions to all local emergency responders (i.e., police departments, fire departments, hospitals and State and local emergency response teams that may be called upon to provide emergency services). This document may also be submitted to the Local Emergency Planning Committee, as appropriate.

The quick reference guide was submitted via email and includes the types/names of hazardous waste in layman's terms and the associated hazard associated with each hazardous waste present at any one time; the estimated maximum amount of each hazardous waste that may be present at any one time; the identification of any hazardous wastes where exposure would require unique or special treatment by medical or hospital staff; a map of the facility showing where hazardous wastes are generated, accumulated and treated and routes for accessing these wastes; a street map of the facility in relation to surrounding businesses, schools and residential areas; the locations of water supply; the identification of on-site notification systems; and the name of the emergency coordinator(s) and emergency telephone number(s).

Training Records:

The inspectors reviewed facility job descriptions and employee names that were provided for the Operations Technician and Lead Operations Technician. Each description included the requisite skill, education, or other qualifications, and duties of facility personnel assigned to that position.

The facility provided a written description of the type and amount of both introductory and continuing training to be given to each person filling the positions listed above. The inspectors reviewed records of employee hazardous waste training completed in 2021 and 2022. The facility is preparing for the annual training for 2023.

Waste Manifest and Land Disposal Restriction (LDR) Records:

The inspectors reviewed available hazardous waste manifest records and land disposal restriction forms for shipments of hazardous waste sent since 2020. Hazardous waste manifest records show that D004 hazardous waste condensate is routinely shipped to Vickery Environmental, Inc. in Vickery, Ohio and the most recent shipment was made on August 17, 2023. All hazardous waste manifests observed appeared to be free of errors with the designated facility signed copy available for review.

Non-hazardous waste manifests were available for review for the waste generated from the tank overflow. The non-hazardous waste manifests shows that the four totes were sent to Clean Harbors LaPorte, LLC in La Porte, Texas.

Used oil bill of ladings were submitted via email. Used oil is picked up by Safety-Kleen Systems, Inc. The last pick up was on August 2, 2023.

Daily Tank Inspection Records:

The inspectors reviewed the facility's available records of inspections of the hazardous waste central accumulation area (CAA) since September 2020. The inspection log contains information for the tank levels, pressure gauges, and rainfall but does not include observations about leaks and for deterioration of the tanks or annular equipment caused by corrosion or other factors. The records include the date of the inspection and the name of the employee conducting the inspection.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.05(10)(f) [40 C.F.R. § 265.195(b)(1-3)], Except as noted under the paragraph (c) of this section, the owner or operator must inspect at least once each operating day: (1) Overfill/spill control equipment (e.g., waste-feed cutoff systems, bypass systems, and drainage systems) to ensure that it is in good working order; (2) Above ground portions of the tank system, if any, to detect corrosion or releases of waste; and (3) The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

Daily Tank Inspection records were consistently documented in 2023 but were missing for the following days:

2020	2021	2022

Month	Days Missing Inspection	Month	Days Missing Inspection	Month	Days Missing Inspection
Sept.	02, 04, 05, 06, 11, 12, 25, 26, 29	Jan.	01, 02	Jan.	01, 02, 05, 06, 07, 09, 10, 11, 16, 17, 18, 20, 21, 25, 26, 27, 28
Oct.	01, 02, 03, 05, 15, 16, 17, 24, 26, 30	Aug.	15, 17, 18	Feb.	05, 07, 21
Nov.	13, 14, 16, 25, 26, 27, 28	Sept.	03, 04, 14, 17 18, 27	Mar.	10, 11, 13
Dec.	09, 12, 14, 16, 17, 18, 24, 25, 30, 31	Oct.	04, 15, 19, 21, 22, 23, 24, 26, 27, 29 30	May	09, 10, 11, 12, 14, 15, 16, 17
		Nov.	04, 05, 07, 23, 24	Jun.	03, 07, 26, 27, 28
		Dec.	09, 14, 16	Aug.	12, 13
				Oct.	7

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.05(10)(f)(7) [40 C.F.R. § 265.195(g)], the owner or operator must document in the operating record of the facility an inspection of those items in paragraphs (a) and (b) of this section.

P.E Certification for Tank System and Components:

The hazardous waste tanks were certified by Professional Engineer Benjamin E. Hrycik of Encorus Group on 12/07/2020. The tank certification was available for review determining that the tanks and their components are structurally sound, in good condition, and compatible for the waste that is being stored inside the tanks.

Waste Reduction Plan:

The facility did not have an up-to-date waste reduction plan. The waste reduction plan was also not signed.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(6)(b)(1)(i), A hazardous waste reduction plan shall include, at a minimum, the following: (i) A dated and signed written policy articulating management support for the generator's hazardous waste reduction plan.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(6)(c)(1), all generators shall annually review their waste reduction plan and complete a hazardous waste reduction progress report which shall: (i) Analyze and quantify progress made, if any, in hazardous waste reduction, relative to each performance goal established under subparagraph (b) of this paragraph. (ii) Set forth amendments, if needed, to the hazardous waste reduction plan and explain the need for the amendments.

13) Closing Conference

The inspectors conducted the exit meeting with Nathan Allen and Nevin Edwards. During this meeting, the inspectors stated their preliminary conclusions of the inspection. The facility agreed to provide documents that were not available during the inspection via email to the EPA and TDEC inspectors.

14) List of Appendices

Appendix 1 – Photo Log:

15) Signed

KAYLA ACOSTA Digitally signed by KAYLA ACOSTA
Date: 2023.10.20 10:05:18 -04'00'

Kayla Acosta
Physical Scientist

16) Concurrence

ARACELI CHAVEZ Digitally signed by ARACELI CHAVEZ
Date: 2023.10.27 13:16:15 -04'00'

Araceli B. Chavez
RCRA Enforcement Section

Appendix 1 – Photo Log

[#12] Photos taken on: August 23, 2023
Photos taken by: Kayla Acosta
Photos taken with: Canon PowerShot Elph 180
EPA Property Tag: S/N 902063018726

Photo 1: Skid system for turning landfill gas into clean natural gas.

Photo 2: Oily water tote with no label.

Photo 3: Used Oil label placed on oily water tote.

Photo 4: T-1 and T-2 hazardous waste tanks. 15,000-gallon double-walled ASTs.

Photo 5: Hazardous waste labels, content information, and indication of the hazard of the contents posted on the tanks.

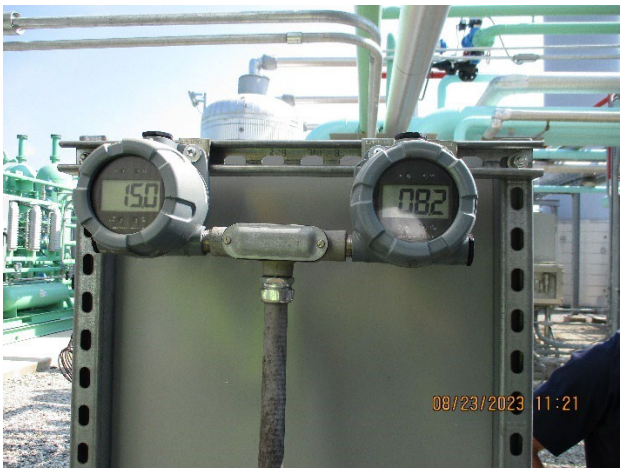

Photo 6: Tank level gauges.

Photo 7: Fill Port 1

Photo 8: Tank Piping

Photo 9: Tank piping

Photo 10: Fill Port 2

Photo 11: Used oil tank outside of Maintenance Warehouse.

Photo 12: 20-gallon used oil container inside Maintenance Warehouse.