



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

Air Branch

Air Branch Inspection Report
Unannounced Full Compliance Evaluation
Cedar Rapids/Linn County SWA Site #2
1954 County Home Road
Marion, Iowa 52302
FRS# 110002349860

Inspection Date(s):

April 9 & 10, 2024

AVERY
BOWERS

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Avery Bowers, Inspector, ECAD, Air Branch

Authorized for Release by:

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CONTENTS

INSPECTION OVERVIEW	3
INSPECTION OBJECTIVE	3
FACILITY CONTACT INFORMATION	3
FACILITY OVERVIEW	3
FACILITY OPERATIONS SUMMARY	4
FIELD ACTIVITIES SUMMARY	5
INSPECTION OBSERVATIONS AND POTENTIAL FINDINGS	7

TABLES

Table 1. PROJECT TEAM MEMBERS	Error! Bookmark not defined.
Table 2. FACILITY CONTACT INFORMATION	3
Table 3. APPLICABLE REGULATIONS AND STANDARDS	4

FIGURES

Figure 1. Landfill Site Map.	5
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APPENDICES

- A - Cedar Rapids-Linn County SWA photo log (32 pages)
- B - Records Requested via email (2 pages)
- C - Confidential Business Information (1 page)

**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 located in **Table 3** below. The inspection was part of the U.S. Environmental Protection Agency's (EPA) Climate Change National Enforcement Compliance Initiative. This report documents EPA's activities on site.

Table 1 lists the inspection team members.

Table 1. PROJECT TEAM MEMBERS		
Team Member	Organization	Project Role
Avery Bowers	EPA Region 7, ECAD, Air Branch	Lead Inspector
Jonathan Boyd	EPA Region 7, ECAD, Air Branch	Field team member
Andrea Hankemeier, Air Quality Scientist	Linn County Public Health, Compliance and Enforcement	Field team member
Jia Timmerman, Air Quality Scientist	Linn County Public Health, Compliance and Enforcement	Field team member

FACILITY CONTACT INFORMATION

Table 2 lists the primary facility contacts in order of contact during the inspection.

Table 2. FACILITY CONTACT INFORMATION		
Name, Title	Phone No.	Email Address
Garrett Prestegard, P.E. Environmental Engineer	(319) 377-5290 x116	gprestegard@solidwasteagency.org
Jason Evans, Cedar Rapids Linn County SWA operator	Not available	Not available

FACILITY OVERVIEW

Cedar Rapids/Linn County Solid Waste Agency began accepting waste in 1972 at its first site located at 2250 A Street in Cedar Rapids, Iowa. The facility located on 1954 County Home Road in Marion, Iowa, was identified as site #2 when Cedar Rapids and Linn County combined to make one single solid waste agency in 2018. The facility has a Standard Industrial Classification (SIC) code 4953, categorized as Refuse Systems, and a North American Industry Classification System (NAICS) code 562212, categorized as Solid Waste Landfill. The facility collects waste from Linn County residents and businesses. The facility operates Monday-Friday from 7 a.m. until 4 p.m., Saturday from 7 a.m. until noon, and is closed on Sundays.

The last onsite compliance monitoring activity at the facility was on March 5, 2024, and consisted of a FCE inspection conducted by the Linn County Public Health-Air Quality Branch. Linn County also completed a Title V certification review on February 14, 2023, and February 9, 2024.

According to Environment and Compliance History Online, there has been no formal or informal enforcement at this facility for the past five years.

According to the Cedar Rapids/Linn County Title V operating permit, which Ms. Hankemeier stated was written by Linn County Public Health and issued by Linn County on behalf of Iowa Department of Natural Resources (IDNR) on July 15, 2022, the facility is subject to the following regulations and standards subject to review during this inspection (**Table 3**):

Table 3. APPLICABLE PERMIT CONDITIONS, REGULATIONS AND STANDARDS	
Code of Federal Regulation	Standard Name
40 CFR Part 60	Subpart A, General Provisions
40 CFR Part 60	Subpart XXX, Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014
40 CFR Part 60	Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
40 CFR Part 61 ¹	Subpart M, National Emission Standard for Asbestos
40 CFR Part 63	Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

FACILITY OPERATIONS SUMMARY

Bluestem Solid Waste Agency, also known as Cedar Rapids/Linn County Solid Waste Agency Site #1 (CRLCSWA Site #1) located 2250 A Street, originally started accepting waste in 1972. The facility began declining its waste acceptance at CRLCSWA Site #1, and in 2001, CRLCSWA Site #2 (located at 1954 County Home Road) began constructing its 13-acre cell. Site #1 submitted its closure reports in 2006. Due to a massive flood, the site re-opened in 2008 to accept excess flood waste, and Site #2 began constructing Phase 1 of its landfill. Site #1 was officially closed in 2012 once residual effects of the flood waste declined. According to the facility's design capacity report (DCR) submitted September 17, 2021, Site #2 constructed Phase 2 in 2010, Phase 3 in 2013, and has an ongoing construction of Phase 5A since 2021. CRLCSWA Site #2 has a voluntary gas collection and control system (GCCS). As of the date of the inspection, the facility has installed 37 voluntary gas collection wells throughout the phases. According to the

¹ Incorporated via 567 IAC 23.1(3) "a" on page 24 of facility's Title V 2022 permit

Figure 1. Landfill site map

FIELD ACTIVITIES SUMMARY

On April 9, 2024, Mr. Boyd and I met Ms. Timmerman and Ms. Hankemeier at a designated spot at 8:30 a.m. We discussed the inspection procedures and left 8:43 a.m. We arrived at the facility at 9:02 a.m. and did not complete a drive by surveillance inspection. We made entry at the front office at 9:13 a.m. I introduced myself and the members of the inspection team, presented my credentials, and provided my business card to Mr. Prestegard. 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 3**. I explained that I would use the Forward Looking Infrared (FLIR) camera to observe the flare, and observe work practices, process units, emission units, and control equipment. Then I would ask some general business information

and review associated records demonstrating compliance with the permit and regulations. I explained to Mr. Prestegard that the facility would have an opportunity to make a claim of business confidentiality at the end of the inspection and would provide him with a Confidential Business Information (CBI) form during the closing conference.

We were given a facility tour by Mr. Prestegard. Before heading outside, Mr. Prestegard asked us to wear our safety hats and high visibility jackets for safety. When we went outside, the flame was present on the flare. I used the FLIR camera to look at the flare; however, I did not save any videos on the FLIR camera.

Mr. Boyd, Ms. Timmerman, Ms. Hankemeier, and I walked the landfill with Mr. Prestegard. I took photos along the way (**Appendix A**) while Mr. Boyd wrote the descriptions on the photo log. I reviewed the condition of the flare and collection wells. I also asked about the engine that was removed for maintenance and repair, and the operating status of the equipment. I began the records review at 11:13 a.m. At 1 p.m., we took a break for lunch. We returned at 1:45 p.m., and I continued my records review. I concluded the records review at 3:30 p.m. Ms. Timmerman and Ms. Hankemeier left the facility at 3:30 p.m. I conducted a brief closing conference with Mr. Prestegard and Mr. Boyd present. I did not issue a Notice of Preliminary Finding (NOPF) because I stated that I may be back the next day to collect more data. During the closing conference, we discussed the discrepancies that occurred with the expired calibration gases in the most recent stack test. We also discussed the official dates of when the facility became applicable to the regulations under Subpart XXX and the lack of notification it gave the EPA when it occurred. Mr. Boyd and I left the facility at 3:45 p.m. That evening, I sent an email confirming to Mr. Prestegard the records I requested while on-site. **Appendix B** contains the email and lists the records I requested. Mr. Prestegard provided the documents via email the following day. Mr. Boyd and I left the facility at 3:45 p.m.

On April 10, 2024, Mr. Boyd and I arrived at the facility at 12:56 p.m. to collect more data and see the parts washer. Ms. Timmerman and Ms. Hankemeier arrived at 1:05 p.m. Ms. Hankemeier had to leave the site at 1:08 p.m. due to a fire and large plumes of smoke present across the street (**Appendix A**, IMG_100.JPG & IMG_101.JPG). Mr. Prestegard greeted us at 1:11 p.m. I took a photo of the parts washer and asked for the chemicals used in the parts washer by requesting the Safety Data Sheet (SDS). I then asked for the fuel usage record for the engine to be sent to me via email. Mr. Prestegard sent the SDS sheet and fuel usage record that afternoon. After reviewing the Tier 2 NMOC emission tests from 2018 and 2023, I concluded the inspection. I did not leave a NOPF. I reiterated to Mr. Prestegard that the calibration gases used on the stack test in 2022 had exceeded the expiration date. I stated that after the official approval for the modification to permit #4318 92-9984 on February 17, 2022, the facility should have conducted a Tier 2 NMOC emission rate test within 90 days, but the facility had not. I also

discussed that it was my understanding that the facility was required to submit a notification to the EPA that Subpart XXX became applicable to the facility on February 17, 2022. Mr. Prestegard did not make a CBI claim (**Appendix C**). Ms. Hankemeier returned around 2 p.m. We left the facility at 2:13 p.m.

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

INVESTIGATION OBSERVATIONS AND POTENTIAL FINDINGS

Ambient weather, site conditions, and activities were documented in field records. All photographs are attached as **Appendix A**. 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.

40 CFR 60.18 General control device and work practice requirements

The facility must monitor and maintain the control devices in conformance with the device's designs. CRLCSWA Site #2 uses a flare as a backup device when the treatment plant is down. During the inspection, I asked Mr. Prestegard how the site maintains the flare, and he showed me the repair and maintenance logs. The flare on site does not contain a bypass valve. While on-site, I reviewed the facility's weekly opacity emission logs for the flare. No visible emissions were recorded from January 4, 2022, through December 19, 2023. Mr. Prestegard stated that visible emission observations were conducted daily per 40 CFR § 60.18. No other operating parameters in 60.18 were reviewed during the inspection.

40 CFR 60.760 Applicability, designation of affected source, and delegation of authority.

On February 19, 2021, IDNR Solid Waste Program approved a request from CRLCSWA Site #2 to construct Phase 5 (**solid waste document #99803**). On January 25, 2022, IDNR's Solid Waste Program approved the operation in Phase 5. The construction would add 300,000 cubic yards of airspace which was not considered a vertical or horizontal expansion based on IDNR's Air Program requirements, but the additional airspace would be considered an expansion under federal regulations. On November 3, 2021, CRLCSWA Site #2 submitted a permit modification to Linn County Public Health's Air Program that provided estimates for the 300 cubic yards of

air space created by Phase 5. Linn County's Air Program copied IDNR's Air Program about the permit modification. On February 17, 2022, the permit modification submitted to Linn County Public Health's Air Program was approved by Linn County. The facility's new Title V permit was issued July 15, 2022, which incorporated the Phase 5 air space expansion and the facility's applicability to Subpart XXX.

60.762 Standards for air emissions from municipal solid waste landfills.

CRLCSWA Site #2 is a landfill with a design capacity of 8,854,000 Mg. This exceeds the 2.5 million Mg threshold. As mentioned above, the facility's reported NMOC emission rate is 28.7 Mg/yr, which is less than 50 Mg/year. As such, the facility has no applicability requirements to the NESHAP, Subpart AAAA, *National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills*.

Per 40 CFR 60.762(c), CRLCSWA Site #2 is required to have a Title V operating permit. CRLCSWA Site #2's most recent Title V operating permit was issued on July 15, 2022, by IDNR.

After the landfill commenced construction of Phase 5 in 2021, and received its approval from Linn County Air Program, the facility was required to submit its NMOC emission and an amended design capacity report within 90 days. The facility did submit an amended DCR on September 17, 2021, to satisfy the requirements of Part 62 Subpart OOO, *Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014 and Have Not Been Modified or Reconstructed Since July 17, 2014*. The report contained the expansion that was taking place in Phase 5. The report also contained an NMOC emission rate report. The report stated that the 2021 NMOC emission rate was 26.68 Mg/yr. This did not exceed the 34 Mg/yr threshold established in 40 CFR 60.762(b)(2)(i), and the facility could continue operating its GCCS in a voluntary manner. The facility plans to add five more collection wells to the current 37 it has.

The facility controls the gas collected by routing the collected gas to a treatment system that processes the collected gas for subsequent sale or beneficial use such as fuel for combustion, production of vehicle fuel, production of high-Btu gas for pipeline injection, or use as a raw material in a chemical manufacturing process from within the landfill or through the use of control devices. During the inspection, Mr. Prestegard stated that the gas collected is typically routed to the treatment system to use in engine G3520C. Engine G3520C was off-site for repair because the crank shaft on the engine failed (**Appendix A**, IMG_0098.JPG & IMG_0099.JPG). Since the engine was not available, the facility began operating the flare.

Per 60.762(b)(1)(i), the facility is required to calculate the NMOC emission rate annually unless the reported NMOC rates for the next five consecutive years is less than 34 Mg/yr. Then the

facility may opt to submit an estimate of the NMOC emission rate for the 5-year period in lieu of an annual report per 60.767(b)(1)(ii). While I was on site, I asked Mr. Prestegard to send me the NMOC reports for 2019-2023. Mr. Prestegard submitted the reports via email April 10, 2024.

60.764 Test methods and procedures

If the NMOC emission rate is less than 34 Mg/yr, the facility is required to re-calculate the NMOC mass emission rate annually using Equation 1 or Equation 2 of the section and using the site-specific Tier 2 NMOC concentration per 60.764(a)(3)(iii). Prior to the inspection, I asked Mr. Prestegard for the facility's 2018 Tier 2 report and received it via email on April 5, 2024. While I was on-site, I reviewed the Tier 2 report from October 20, 2023. Mr. Prestegard also provided me a copy of the 2023 Tier 2 report via email on April 10, 2024. The site-specific NMOC concentration must be re-tested every five years per 60.764(a)(3)(iii). The two Tier 2 reports Mr. Prestegard sent satisfy the requirement.

60.767 Reporting requirements

The facility is required to submit an amended DCR within 90 days after an increase in the design capacity of the landfill occurs per 60.767(a)(3). CRLCSWA Site #2 was approved for Phase 5 construction February 19, 2021. During the inspection, I did not ask Mr. Prestegard when the construction commenced. I asked when the air program approved the additional air space from Phase 5 construction, and he stated it was approved February 17, 2022. The facility submitted the DCR on September 17, 2021, again on September 6, 2022, and then Mr. Prestegard provided an email copy to me on April 10, 2024.

The facility is also required to submit an NMOC emission rate report within 90 days after the date of commenced construction, modification, or reconstruction taking place after August 29, 2016. I did not ask the date of commenced construction while on site. The NMOC emission rate report was submitted with the amended DCR on September 17, 2021.

The facility is required to report the amount of leachate circulation annually per 60.767(k). I asked Mr. Prestegard if the facility recirculated its leachate, and he stated that the facility has not recirculated leachate in about ten years.

60.768 Recordkeeping requirements.

The facility is required to keep records for the current amount of solid waste in place, and the year-by-year waste acceptance rate. On April 10, 2024, via email, Mr. Prestegard provided the waste rates from 2011 through February 2024.

63. 6590 What parts of my plant does this subpart cover?

CRLCSWA Site #2 shipped a landfill gas engine off-site for repair in early July 2023. The engine is a spark ignition internal combustion engine with 2,242 horsepower. Title V permit indicates that the engine is subject to 40 CFR Part 63, Subpart ZZZZ and 40 CFR Part 60, Subpart JJJJ.

The facility also has an emergency engine used in cases of power outages (**Appendix A, IMG_0088.JPG & IMG_0089.JPG**), but the engine is not listed as an air emission point on the Title V operating permit. The Title V permit indicates that the emergency generator is not listed because it is not subject to 40 CFR Part 60, Subpart XXX; however, it should be noted that the engine may be subject to 40 CFR Part 60, Subpart JJJJ. I asked Mr. Prestegard for the diesel fuel purchase record for the generator, and he provided it to me via email on April 10, 2024. I asked Mr. Prestegard about the oil and belt changes, and he stated they were doing them as required. The diesel fuel purchased is low sulfur diesel.

60.4230 Am I subject to this subpart?

I did not ask Mr. Prestegard about the manufacture date or the date of when the engine was ordered. I also did not ask if the engine had been reconstructed or modified after June 12, 2006.

Title V permit requirement: EP-002; Monitoring requirements

The facility is required to perform a stack test on the landfill gas engine every year for the total reduced sulfur requirement. The other pollutants are subject to the 40 CFR Part 60, Subpart JJJJ requirement to be tested every 8760 hours of operation or 3 calendar years. While on site, I reviewed the most recent stack test that was conducted on December 13, 2022. While reviewing the report, there was a lapse in time from 3:46 p.m. until 4:12 p.m. I asked Mr. Prestegard to send me the stack tests for 2020 through 2022. I received the stack tests via email on April 10, 2024.

Title V permit requirement: EP-002; Operating Requirements

The facility is required to document the emission factors used to ensure that the formaldehyde emissions are less than 9.38 tons per year. During the inspection, I asked Mr. Prestegard to send me the facility's 12 month rolling basis for engine emissions tracking. On April 10, 2024, Mr. Prestegard sent an excel sheet with the 365-day rolling average. Since the facility's emissions exceeded 7.5 tons in a 12-month period, the facility had to start daily tracking in May 2017. The facility's formaldehyde emissions did not exceed the 9.38 tons requirement.

Potential Finding 1: The facility is required to calculate the NMOC emission rate using the test methods and procedures
Observation Summary: The facility calculated the NMOC rate and may not have used the correct waste acceptance rate.
Citation: 40 CFR Part 60.764(a)(1) and 60.767(b)(1)(ii)
Evidence: NMOC emission rate reports for 2019-2023, the waste acceptance excel spreadsheet, and the 2018 and 2023 Tier 2 NMOC concentration report.
Description of Observation: While reviewing the NMOC emission rate reports, the facility continuously under-reported the waste accepted when inputting the information on LandGem. The waste acceptance spreadsheets stated the total waste accepted for 2019-2023 were 253,588 tons, 262,407 tons, 465,092 tons, 294,449 tons, and 249,476 tons respectively. The NMOC and Tier 2 reported values are lower than the actual waste accepted. The reports state that in 2019-2023 the estimated waste acceptance values were 185,022 tons.

End of report.