

December 24, 2024

PAGE COUNTY LANDFILL & RECYCLING CENTER
ATTN BRIAN WARD
2032 N AVE
CLARINDA IA 51632

SUBJECT: City of Coin WWTF Industrial Treatment Agreement – 1
Routine Inspection of Industrial Pretreatment Facility
NPDES # 7335001-IC1, Staff Action # 180239

Dear Mr. Ward:

On December 19, 2024, Brianna Martens, Environmental Specialist, and I conducted a routine wastewater inspection at the Page County Landfill facility in Clarinda, Iowa. Your cooperation and assistance during the inspection is appreciated.

Please review the enclosed report, including requirements and recommendations, regarding this facility. If you have any questions or comments, please contact me by telephone at (712) 340-3076 or by email at kristi.burg@dnr.iowa.gov.

Sincerely,



Kristi Burg
Environmental Specialist Senior
Field Services and Compliance Bureau

KB/kb: Clarinda121924.ww.PageCountyLandfill.Clarinda SIU.inspection.burg.docx

Enc: Inspection Report

cc: Tom Foutch, City of Shenandoah (via email)
Todd Whipple, HLW Engineer (via email at twhipple@hlwengineering.com)
Page County Landfill electronic wastewater file within Coin Wastewater File

**IOWA DEPARTMENT OF NATURAL RESOURCES
INDUSTRIAL USER INSPECTION**

FACILITY NPDES # 7335001-IC1

Page 1 of 7

FACILITY	NAME Page County Sanitary Landfill	OWNER Page County Sanitary Landfill			
	ADDRESS 2032 N Avenue	CITY Clarinda	STATE IA	ZIP 51632	PHONE 712-542-4215

PERSON INTERVIEWED	NAME Brian Ward	TITLE Landfill Manager
	NAME	TITLE
	NAME	TITLE

INSPECTION DATES	THIS INSPECTION 12/19/2024	LAST INSPECTION NA
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TREATMENT PROCESS	☒ Physical/Chemical ☐ Biological	OPERATION & MAINTENANCE ☐ Sat ☒ Marg* ☐ Unsat*
	PROCESS WASTE SOURCES/DESCRIPTION Landfill leachate from each cell is captured in a new constructed holding pond. Leachate is trucked and hauled to the City of Coin's collection system, the City of Shenandoah's wastewater lagoons, or the City of Clarinda's wastewater collection system.	
	PRODUCTION: Landfill leachate	

COMPLIANCE SUMMARY

PERMITS	LOCAL PERMITS ADEQUATE ☒ Yes ☐ No	DATE ISSUED 9/22/2021	TREATMENT AGREEMENTS ADEQUATE ☒ Yes ☐ No
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EFFLUENT	SELF MONITORING RESULTS ☒ Sat ☐ Marg* ☐ Unsat* ☐ None	SAMPLES THIS INSPECTION ☐ Sat ☐ Marg* ☐ Unsat* ☒ None
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SELF	MONITORING CONDUCTED BY ☒ Industry ☐ POTW ☒ Other ☐ None	OPERATION REPORTS ☒ Sat ☐ Marg* ☐ Unsat* ☐ N/A	TESTING ADEQUACY ☒ Sat ☐ Marg* ☐ Unsat* ☐ N/A
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COMPLIANCE SCHEDULE	COMPLIANCE WITH SCHEDULE ☐ Sat ☐ Marg* ☐ Unsat* ☒ N/A	NEXT ITEM DUE	DATE DUE
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AUTHENTICATION	INSPECTOR'S SIGNATURE 	DATE 12/24/24	REVIEWER'S SIGNATURE 	DATE 12/24/24
	Kristi Burg, Environmental Specialist Senior		Alison Manz, Environmental Specialist Senior	

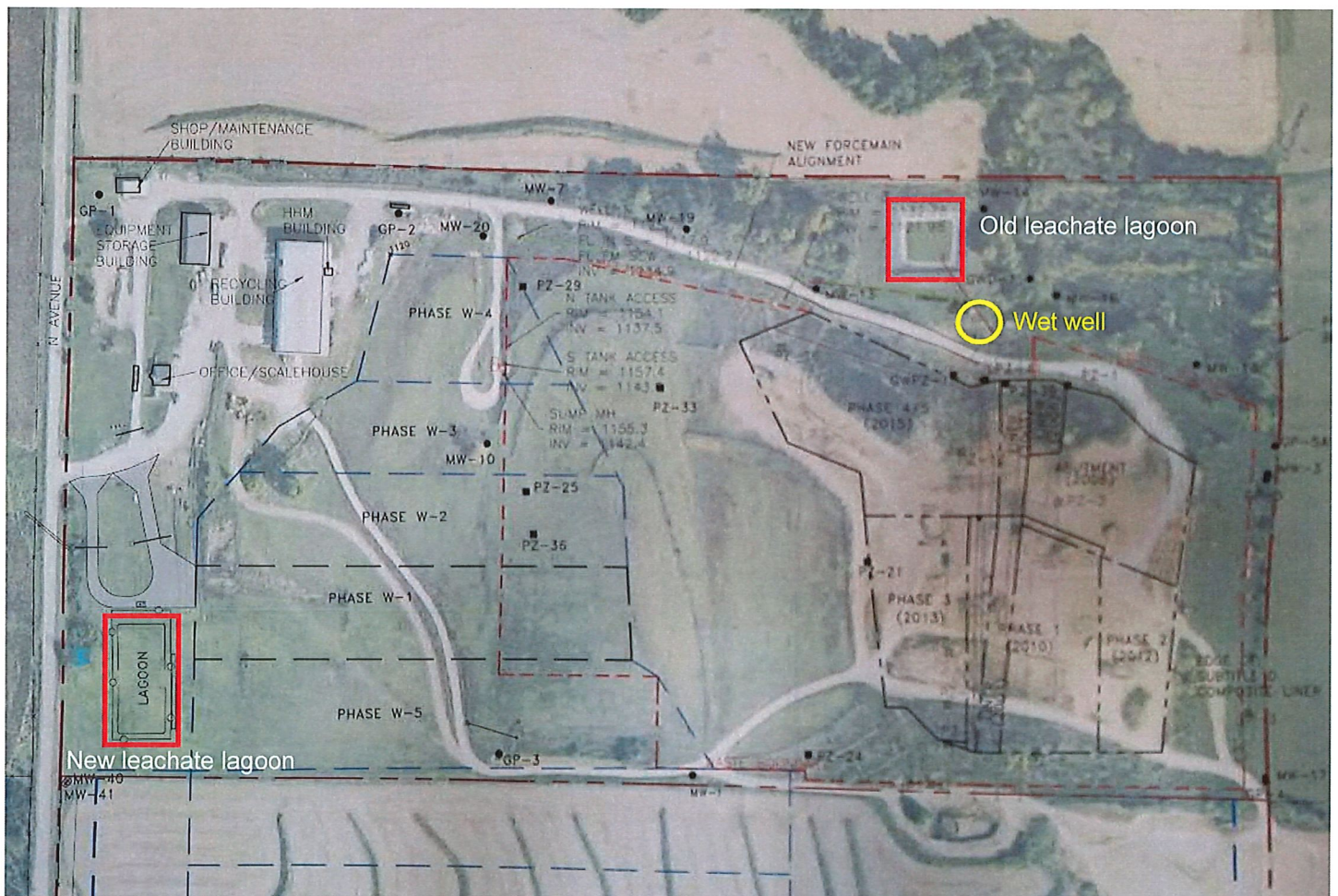
* Explain in comments section.

DISTRIBUTION: FIELD OFFICE: CENTRAL OFFICE: INSPECTED FACILITY

GENERAL INFORMATION

The Page County Landfill previously maintained a 10,000 and a 20,000 gallon storage tank to hold leachate. These tanks were removed in September 2024 when a new leachate lagoon project was completed. Leachate from older landfill cells flows via gravity to a pump station where it is pumped to the top of the hill prior to flowing via gravity to the newly constructed leachate pond. The current landfill cell that is being used flows via gravity to the leachate pond. According to Mr. Ward, new double wall piping was installed from the landfill cells to the wet well and from the wet well to the new leachate lagoon. When volumes require drawdown, leachate is pumped to a semi-tanker and hauled by landfill staff for final disposal to a wastewater treatment facility. Trucked leachate is dumped into the collection system via a manhole in town. The Page County Landfill has signed treatment agreements with the City of Shenandoah wastewater treatment facility (WWTF), the Clarinda WWTF, and the Coin WWTF. The approved limits established in each treatment agreement are based upon the treatment facility's design capacity. Clarinda and Shenandoah's leachate will be addressed in a separate report.

The photo below is an aerial photo of the landfill provided by Mr. Ward.



Aerial of the current Page County Landfill

INDUSTRY-CONDUCTED MONITORING REPORTED TO SHENANDOAH WASTEWATER TREATMENT FACILITY

This facility's monitoring requirements are included in the Coin WWTF's NPDES permit and can be found on page 9. The following table outlines the parameters and frequency required to be analyzed and/or recorded per the treatment agreement between Coin WWTF and the Page County Landfill. Effluent limits can be found on page 7. A copy of this permit can be found at <https://programs.iowadnr.gov/wwpie/Home/PublicSearch>.

PAGE COUNTY SANITARY LANDFILL ASSOCIATION				
Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
001	AMMONIA NITROGEN (N)	1 EVERY 3 MONTHS	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	BIOCHEMICAL OXYGEN DEMAND (BOD5)	1 EVERY 3 MONTHS	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	FLOW	1 EVERY BATCH	ESTIMATED	PRIOR TO DISCHARGE TO CITY SEWER
001	PH	1 EVERY BATCH	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	SANITARY LANDFILL LEACHATE	1 EVERY 12 MONTHS	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	TOTAL SUSPENDED SOLIDS	1 EVERY 3 MONTHS	GRAB	PRIOR TO DISCHARGE TO CITY SEWER

Annual monitoring requirements can be found on page 10 of the permit as follows.

ADDITIONAL MONITORING REQUIREMENTS

PAGE COUNTY SANITARY LANDFILL ASSOCIATION

The permittee shall analyze a representative sample of the landfill leachate discharge from Page County Sanitary Landfill Association at least annually for each of the pollutants listed below. In addition, the permittee shall monitor the volume of waste discharged and BOD5, TSS, pH, and Ammonia Nitrogen at the frequencies specified on page 9 of this permit.

Pollutant

Biochemical Oxygen Demand (BOD5)

Total Suspended Solids

Ammonia Nitrogen (NH3-N)

Oil and Grease (O&G)

pH

Chloride (as Cl)

Sulfate (as SO4)

Arsenic, Total (as As)

Chromium, Total (as Cr)

Copper, Total (as Cu)

Iron, Total (as Fe)

Lead, Total (as Pb)

Nickel, Total (as Ni)

Selenium, Total (as Se)

Zinc, Total (as Zn)

Benzoic Acid

Chlorobenzene

Ethylbenzene

p-Cresol

Phenol

Toluene

EFFLUENT LIMITATIONS

Discharge monitoring reports (DMRs) submitted by Coin WWTF on behalf of the Page County Sanitary Landfill for the January 2023 to September 2024 were reviewed and data for leachate flows were compared with the limitations in the Treatment Agreement (TA). The violations are detailed in the following table.

Effluent Limit Violations 1/1/2023 - 9/30/2024

COIN CITY OF STP - 7335001

Coin		AVERAGE -		DAILY MAXIMUM -		Parameter
EPA #:IA0062332		Limit	DMR	Limit	DMR	Monthly Total
PAGE COUNTY SANITARY						
Outfall: 001						
10/2023	NH3-N	10	10.90872			
	PH			9	9.1	
11/2023	PH			9	9.1	
12/2023	NH3-N	10	10.20816			
1/2024	NH3-N	10	10.30824			
2/2024	NH3-N	10	13.91112			
3/2024	NH3-N	10	11.85948			

Total: 7

Total Violations: 7

These violations of the TA are also violations of 567 Iowa Administrative Code (IAC) 62.1(6).

Mr. Ward believes many of these violations will not be an issue with the new leachate lagoon. He believes the holding tanks were the root cause – lack of daylight and air.

LAGOON & COLLECTION SYSTEM

The Page County Landfill leachate lagoon is secured within the confines of the landfill property and includes a fence and locked gate. A single lagoon receives leachate from all landfill cells. According to Mr. Ward, the cell can hold 770,631 gallons of leachate. The lagoon is synthetically lined and will have an EcoMister Evaporator added in the Spring 2025 that will aid in reducing the leachate that will need to be hauled in the future. During the inspection the lagoon appeared to have enough freeboard. Freeboard is measured from the maximum liquid level to the top elevation of the lagoon berm/wall. Continue to ensure that a minimum of 2 feet of freeboard is maintained in the lagoon to prevent overflow and bypass events.

As we discussed, keeping trees or woody vegetation out of the lagoon area is required. If trees and woody vegetation are allowed to grow, their roots may damage the lagoon's liner and the integrity of the lagoon. Additionally, although the lagoon is synthetically lined, any burrowing animals should be eliminated. The photos below document our observations.



Photos 1-2: New leachate lagoon cell

According to Mr. Ward, typically the landfill hauls two loads of leachate weekly. Due to an increase in precipitation this year, Mr. Ward is hauling more leachate presently to lower the lagoon depth in preparation for the winter months.



Photos 3-4: Leachate loadout area

Mr. Ward stated the cell depth measuring device was pulled out for the winter, but will be placed in the lagoon again in the spring.



Photo 5: Cell depth measuring device

The Page County Landfill also maintains an old leachate lagoon. Although no leachate flows to this cell any longer, Mr. Ward was advised to maintain this cell in the event it is needed. We did not observe any issues with this lagoon cell. Although the lagoon is no longer used, continue to monitor and inspect it for signs of erosion, animals burrows, and trees. The photo below documents our visual observations.



Photo 6: Old leachate lagoon

As discussed above, leachate from the older cells flows via gravity to a wet well where it is pumped to the top of the hill and then gravity flows to the newly constructed leachate pond. It is recommended that the pumps be calibrated per the manufacturer's recommendation to ensure they continue working properly. Observations of the wet well photos are below.



Photos 7-8: Wet well near old leachate lagoon

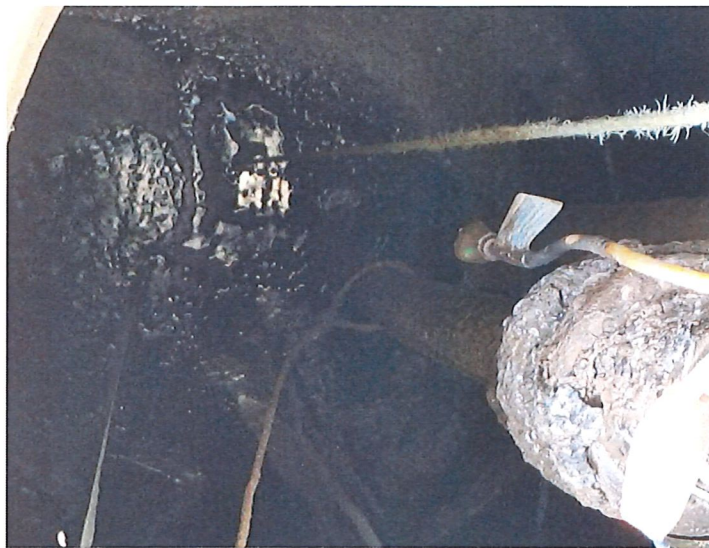


Photo 9: Influent to wet well

Additionally, Mr. Ward stated that he removed the old leachate holding tanks in September 2024.



Photo 10: Old leachate holding tank

Mr. Ward would like to eventually get to a point where leachate does not need to be transported off site for disposal. As part of the upgrade, the Page County Landfill purchased an EcoMister evaporator that will be

installed in the Spring 2025. There are concrete pads located in the northwest and southwest corners of the lagoon to support the EcoMister. The photos below document the EcoMister.



Photos 11-13: EcoMister

BYPASSING

Bypasses are considered health hazards due to the potential for human contact with untreated wastewater and infectious organisms. Additionally, discharges of untreated or partially treated wastewater to waterways degrades water quality and may affect aquatic organisms. **All** bypasses must be reported within 24 hours of onset or discovery. There were no bypasses reported during the review period.

TREATMENT AGREEMENTS

The current treatment agreement was signed on August 26, 2021 and approved by the DNR on September 22, 2021. Responsible officials must make every effort to operate the facility in compliance with the requirements of the treatment agreement which are incorporated into the city's NPDES permit.

SAMPLING & LABORATORY CERTIFICATION

Effluent batch samples are collected by landfill staff and provided to the City of Coin, as required. Annual samples are collected by HLW Engineers on behalf of the Page County Landfill. Mr. Ward collects the pH of each batch of leachate at the time it is pumped. He stated that he purchases a new pH meter twice each year.

Laboratory testing services are provided by Microbac Laboratory, Inc., Newton, Iowa. This laboratory has been granted Iowa Laboratory Certification Number 95 in accordance with 567 IAC 83.

SUMMARY

While violations of the effluent limitations in the Coin treatment agreement were noted during the inspection and must be addressed, the facility appears to be in substantial compliance with the current agreement.

REQUIREMENTS

- Fill burrows as they are encountered around the lagoon.
- Continue inspecting the abandoned lagoon.
- Report all bypasses within 24 hours
- Comply with all monitoring and reporting requirements specified in your NPDES operation permit. [567-63.9]