

March 26, 2024

Brian L. Rath, P.E.
Environmental Engineer Senior
IDNR – Land Quality Bureau
Wallace State Office Building
502 E. 9th Street
Des Moines, Iowa 50319



**RE: SEMI-ANNUAL INSPECTION – SPRING, 2024
CEDAR RAPIDS WPCF ASH MONOFILL
IDNR PERMIT #57-SDP-07-85P
HLW PN 3422-21A.750**

Dear Mr. Rath:

In accordance with the General Provisions of the SDP Permit dated October 29, 2021, a semi-annual inspection of the Cedar Rapids WPCF Ash Monofill was personally conducted the afternoon of March 21, 2024. Jason Decker, Environmental & Compliance Program Manager with the City of Cedar Rapids, accompanied me on the inspection. Conditions at the time of the inspection were overcast with moderate winds and temperatures in the 40's.

The monofill consists of two approved ash sludge disposal areas: the South Disposal Area and the North Disposal Area. Ash was historically excavated and disposed of during scheduled WPCF incinerator shutdowns; however, with the presence of two lined disposal areas ash disposal is no longer limited to the scheduled incinerator shutdowns which allows staff flexibility in scheduling ash removal operations.

The South Disposal Area was placed into operation on April 23, 2012. The North Disposal Area was approved for ash disposal in Permit Amendment #2 dated November 15, 2016.

As per WPCF staff, since the beginning of 2022 ash disposal has been directed into the disposal areas as follows:

- South Disposal Area from July 30, 2021 to April 4, 2022.
- North Disposal Area from April 4, 2022 to July 19, 2022.
- South Disposal Area from July 19, 2022 to October 10, 2022.
- North Disposal Area from October 10, 2022 to March 8, 2023.
- South Disposal Area from March 8, 2023 to May 12, 2023.
- North Disposal Area from May 12, 2023 to August 14, 2023.
- South Disposal Area from August 14, 2023 to August 16, 2023.
- North Disposal Area from August 16, 2023 to August 23, 2023.
- South Disposal Area from August 23, 2023 to November 15, 2023
- North Disposal Area from November 15, 2023 to present.

HLW Engineering Group, 204 West Broad Street, P.O. Box 314, Story City, Iowa 50248
(515) 733-4144  (515) 733-4146 Fax

Approximately 587 dry tons of ash were removed from the North Disposal Area during the last sludge removal event in October, 2023.

Dewatered ash is hauled to the Lee Crawford Quarry for beneficial use under Beneficial Use Determination (BUD) Authorization No. 57-BUD-23-97. This BUD is effective through January 2, 2027. Adequate capacity remains in the North and South Disposal Areas for current operations.

Status of the Permit

The Sanitary Disposal Project Permit for the Cedar Rapids WPCF Ash Monofill was renewed on October 29, 2021 and expires on October 29, 2024. The site has received the following permit amendments to date:

- Permit Amendment #1, April 20, 2022, authorized that the frequency of groundwater level measurements be reduced from quarterly to semi-annually.

The City of Cedar Rapids is currently planning to permit/construct a new ash disposal area in 2024 to replace the existing South Disposal Area. A Permit Modification request for the new disposal area was submitted to IDNR by HDR on January 24, 2024 (Doc #108917). The following correspondence regarding the Permit Modification request is documented in the email string in Document #109513:

- IDNR requested additional information on February 27, 2024.
- HDR provided additional information on March 8, 2024.
- A Teams meeting was held March 13, 2024 to discuss the permit modification request.
- HDR provided additional information on March 14, 2024.

IDNR has not approved the Permit Modification request to date.

Annual Water Quality Report

The 2023 Annual Water Quality Report (AWQR) was submitted to IDNR on December 21, 2023 (Doc #108495). IDNR comments have not been received to date.

Monitoring Well Maintenance Performance Reevaluation Plan

The most recent Monitoring Well Maintenance Performance Reevaluation Plan (MWMPRP) was included in the 2019 AWQR submitted to IDNR on November 15, 2019 (Doc #96348). The Plan recommended no significant modifications to the Hydrologic Monitoring System Plan or site monitoring wells. As per IDNR Regulations, the MWMPRP is required every 5 years and will be provided in the 2024 AWQR.

Financial Assurance

A request to extend the submission deadline to April 15, 2024 for 2024 Financial Assurance documentation was submitted to IDNR by Mr. Decker via email on March 21, 2024 (Doc #109541). The extension was granted by IDNR in an email dated March 25, 2024 (Doc #109579).

Special Provisions of the SDP Permit

1. The permit holder is authorized to accept sewage sludge incinerator ash slurry from the Cedar Rapids WPCF for storage and dewatering prior to disposal.
2.
 - a) No changes.
 - b) Results from TCLP testing of the ash in accordance with this provision were included in the 2021 SDP Permit Renewal documentation submitted to IDNR on June 7, 2021 (Doc #100630). TCLP test results for the ash are also submitted to IDNR in accordance with the BUD Authorization.
 - c)-j) No changes.
3. No changes.
4. No changes.
5. No changes.
6. No changes.
7. No changes.

Based on observations during the inspection, along with discussions with Mr. Decker, the facility appears to be in general conformance with the SDP Permit.

Additional Comments

IDNR Field Office #1 completed an inspection of the site on June 16, 2022. The report contained no requirements and stated that “This landfill appears to be operated in general compliance with its permit and with departmental rules.”

Leachate lines were cleaned in 2021. As per the 3 year cleaning frequency required by IDNR the lines should be cleaned in 2024 – Mr. Decker and I discussed this requirement.

As reported in past AWQR’s, elevated levels in the leachate head monitoring point in the North Disposal Area have historically been recorded. A valve in the leachate conveyance system was found to be inadvertently closed late in 2022. The valve was opened and a subsequent drop in recorded leachate levels in the North Disposal Area was noted. No measurements in 2023 from

the leachate head monitoring point in the North Disposal Area exceeded 12” (2022-2024 measurements attached). The measurement on February 1, 2024 did exceed 12” (1.1’ recorded). On February 13, 2024 City staff unsuccessfully attempted to pump accumulated water from the measurement point to determine if perched water in the monitoring point was the source of the elevated measurements. The point was measured again on February 14, 2024 and the measurement still exceeded 12” (1.1’). On February 15, 2024 City staff blew compressed air into the tubing in the measurement point to determine if debris in the tubing was the source of the elevated readings and the point measured 0.4’ afterwards. The point has been measured five times after the last elevated reading (February 15, 2024, February 29, 2024, March 1, 2024, March 8, 2024, and March 14, 2024) with each of these readings being less than 12”. Further discussion will be included in the AWQR.

All measurements in the leachate head monitoring point in the South Disposal Area in 2024 to date have been less than 12” (2022-2024 measurements attached).

All measurements in the groundwater head monitoring point in the South Disposal Area in 2024 to date have been less than 12” (2022-2024 measurements attached). Note that groundwater collected by the groundwater diversion system under the South Disposal Area is combined with the leachate from the North and South Disposal Areas and conveyed to the WPCF for treatment and disposal.

Recommendations

1. HLW will include discussion on levels in the leachate head monitoring points in the North and South Disposal Areas and the groundwater head monitoring point in the South Disposal Area in the 2024 AWQR.
2. Clean the leachate lines in 2024.
3. Continue operations in accordance with the SDP Permit.



cc: Jason Decker, Utilities Environmental & Compliance Program Manager, Cedar Rapids WPCF (electronic copy)



Ash Lagoon Underdrain Level Measurements
City of Cedar Rapids Water Pollution Control Facilities

Date	Time	South Ash Lagoon		North Ash Lagoon
		Ground Water	Collection Pipe	Drainage Media
1/24/2022	1:35	1.5'	<1'	3.5'
2/25/2022	10:45	1.5'	<1'	3.5'
3/30/2022	1:25	2.0'	<1'	3.0'
4/26/2022	3:00	1.5'	<1'	4.0'
5/27/2022	8:14	1'	<1'	1.9'
6/27/2022	8:10	1.5'	<1'	3.0'
7/29/2022	8:21	2.0'	<1'	3.2'
8/26/2022	10:04	2.5'	<1'	3.5'
9/26/2022	9:02	1.7'	<1'	2.2'
10/17/2022	8:35	1.5'	<1'	2.0'
11/3/2022	10:00	1.5'	<1'	2.0'
12/1/2022	10:30	0.8'	<1'	1.0'
1/5/2023	15:52	--	--	0.6'
1/6/2023	8:12	0.4'	<1'	--
2/1/2023	11:28	0.3'	<1'	0.6'
3/1/2023	8:18	0.4'	<1'	0.7'
4/3/2023	8:25	0.4'	0.3'	0.7'
5/1/2023	8:47	0.4'	0.3'	0.8'
6/1/2023	9:23	0.4'	0.2'	0.8'
7/3/2023	8:47	0.8'	0.2'	0.9'
8/1/2023	8:25	0.9'	0.1'	1.0'
9/1/2023	9:03	0.8'	0.3'	0.9'
10/2/2023	8:48	0.8'	0.4'	0.9'
11/1/2023	8:59	0.9'	0.4'	1.0'
12/1/2023	10:56	0.9'	0.4'	1.0'
1/2/2024	8:59	0.9'	0.4'	0.8'
2/1/2024	14:40	0.2'	0.3'	1.1'
2/14/2024	10:07	n/a	n/a	1.1'
2/15/2024		n/a	n/a	0.4'
2/29/2024	13:45	n/a	n/a	0.5'
3/1/2024	8:42	0.3'	0.2'	0.5'
3/8/2024	15:05	n/a	n/a	0.5'
3/24/2024	10:40	n/a	n/a	0.5'