

HAZARD POTENTIAL CLASSIFICATION ASSESSMENT - Amended

WEC Temporary Ash Disposal Area

Public Power Generation Agency and
City of Hastings Utilities

Hastings, Nebraska

December 30, 2025



Hazard Potential Classification Assessment

40 CFR §257.73(a)(2)

WEC Temporary Ash Disposal Area

Table of Contents

1. Introduction and Purpose	1
2. Facility Description	1
2.1. Site Location	2
2.2. Site Description.....	2
3. Hazard Potential Classification	2
4. Certification.....	4
5. References	5

List of Tables

Table 1. WEC Temporary Ash Disposal Area Summary.....	3
Table 2. Leachate Retention Pond & Surge Pond Summary	4

List of Figures

Figure 1	Site Vicinity Map
Figure 2	WEC CCR Facilities Site Map

1. Introduction and Purpose

On April 17, 2015 the U.S. Environmental Protection Agency (EPA) issued the final rule for the regulation and management of coal combustion residuals (CCR) under Subtitle D of the Resource Conservation and Recovery Act (RCRA) [40 CFR Part 257, Subpart D]. The rule – effective on October 19, 2015 – and as amended, applies to the WEC Ash Disposal Area which is currently considered an existing CCR surface impoundment.

CCR Rule 40 CFR §257.73(a)(2) requires that owners or operators document the hazard potential classification of each CCR unit as either a high hazard potential CCR surface impoundment, a significant hazard potential CCR surface impoundment, or a low hazard potential CCR surface impoundment. The owner or operator must also document the basis for each hazard potential classification. This Hazard Potential Classification Assessment Report presented herein addresses the specific requirements of 40 CFR §257.73(a)(2).

2. Facility Description

The Whelan Energy Center located near Hastings, Nebraska, has two coal fired electric generating units. WEC Units 1 and 2 have current net capacity ratings of 76 megawatts and 220 megawatts, respectively. Figure 1 provides the location of WEC relative to City of Hastings, Nebraska. The City of Hastings Utilities Department, Hastings, Nebraska (Hastings) is the owner and operator of WEC Unit 1 (WEC1) and the operating agent of WEC Unit 2 (WEC2) for Public Power Generation Agency (PPGA). The WEC Temporary Ash Disposal Area, located at WEC, is permitted under the Nebraska Department of Water, Energy and Environment (DWEE) [formerly the Nebraska Department of Environment and Energy (NDEE) and formerly the Nebraska Department of Environmental Quality (NDEQ)] Title 132 – Integrated Solid Waste Management Regulations. Original Title 132 permitting efforts began in 1999 pursuant to then NDEQ requirements. The federal CCR rule – effective on October 19, 2015 – and as subsequently amended, applies to the WEC Ash Disposal Area.

The WEC Temporary Ash Disposal Area is currently categorized as an existing CCR surface impoundment of approximately 23.2 acres in size that has historically received CCR for disposal/storage and is permitted with the State of Nebraska (Permit No. NE0204129, Facility ID 58048). With the constructed WEC2 liner (approved June 18, 2024), the permitted WEC Temporary Ash Disposal Area has both a lined CCR landfill area and a historical unlined area of the CCR surface impoundment. The CCR landfill consists of an approximate 4-acre cell with composite liner, and a 1.5-acre lined leachate pond, plus surrounding berms. The remaining area of existing CCR surface impoundment is approximately 17.2 acres.

The WEC Temporary Ash Disposal Area historically received CCR in sluiced and dry form for storage prior to removal for beneficial uses. Fossil fuel ash sluicing and disposal at this site began in 1981, the same year that WEC1 began commercial operation. The disposal area was constructed as an ash pond to provide storage for ash, sluice water, and other process waters with option to recycle water back to the WEC. Due to ash pond size and evaporation, recycling water back to the plant did not occur. Over time, other process waters such as cooling tower blowdown were redirected away from the WEC Temporary Ash Disposal Area. With start-up of WEC2 commercial operations on May 1, 2011, scrubber ash was sluiced to the East Area and fly ash was periodically sluiced to the West Area. Sluicing of scrubber ash ended in 2013 after a pug mill was installed to load trucks with moistened scrubber ash for hauling and placement within the East Area of the WEC Temporary Ash Disposal Area. Since retrofit liner construction was completed in 2023 and approved by DWEE, CCR generation of scrubber ash, bottom ash, and if needed fly ash, is hauled to the landfill cell for temporary stockpiling and storage prior to removal for beneficial use off-site. Since August 2024, bottom ash is

hauled to the new concrete lined bottom ash bunker for stockpiling prior to removal for beneficial use. Figure 2 shows the locations of the plant, supporting facilities, WEC Temporary Ash Disposal Area, bottom ash bunker, and groundwater monitoring wells.

2.1. Site Location

The legal description of the Whelan Energy Center site is as follows: “The North Half of Section 14, Township 7 North, Range 9 West in Adams County, Nebraska, containing 320 acres more or less.” The Site is approximately 2 miles east of Hastings, Nebraska, on Highway 6.

The site includes the WEC generating station, electric substation, WEC Temporary Ash Disposal Area, bottom ash bunker, farming operations, and a train car repair facility. The current disposal area footprint of the permitted WEC Temporary Ash Disposal Area is approximately 23.2 acres located along the west property boundary.

2.2. Site Description

The regional and site-specific topography are generally flat. On the WEC site, moderately sloping elevations vary up to about 15 feet. The unlined portion of the WEC Temporary Ash Disposal Area has a base elevation within in-situ lean clay material of Peoria loess with permeability of approximately 10^{-4} to 10^{-8} cm/sec (HDR 2006). Three sides of the WEC Temporary Ash Disposal Area are cut slopes to the CCR. The only embankment that extends above the natural ground is the south embankment.

The south embankment has a top perimeter road design elevation of 1898 feet above mean sea level (1927 NGVD), sloping at approximate 4H:1V, horizontal to vertical, to natural ground elevation of 1890 feet. Immediately south and bordering the south embankment is the Leachate Retention Pond and Surge Pond as shown on Figure 2.

3. Hazard Potential Classification

The EPA defines the hazard potential classifications as follows:

- High hazard potential CCR surface impoundment means a diked surface impoundment where failure or mis-operation will probably cause loss of human life.
- Significant hazard potential CCR surface impoundment means a diked surface impoundment where failure or mis-operation results in no probable loss of human life, but can cause economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns.
- Low hazard potential CCR surface impoundment means a diked surface impoundment where failure or mis-operation results in no probable loss of life and low economic and/or environmental losses. Losses are principally limited to the surface impoundment’s owner’s property.

The WEC Temporary Ash Disposal Area has only one side that is an embankment above adjacent natural ground – the south embankment. The south embankment borders the Leachate Retention Pond and site’s Surge Pond. The Leachate Retention Pond was constructed in 2007 to comply with state requirements to remove liquids (leachate) from the WEC Temporary Ash Disposal Area to maintain no more than one-foot depth of leachate on the base. Ash sluice was directed to flow southward for settlement of ash sediment while the free liquids generally flow along the surface to the south embankment. Free liquids were pumped to the risers area or directly into the Leachate Retention Pond with a portable pump, float and piping. As a result, accumulation of liquids in the WEC Temporary Ash Disposal Area was limited by DWEE, the Title 132 permit, and operations. Furthermore, the East Area of the WEC Temporary Ash Disposal Area had historically received moisture-conditioned scrubber ash from dump trucks since 2013 and operated like a CCR landfill. The

recent retrofit to composite lined CCR landfill cell and leachate pond further keeps new CCR generation and stormwater run-off from the south embankment. WEC1 recently terminated sluicing of fly ash in early November 2025. Thus, addition of liquids and impounded liquids in the WEC Temporary Ash Disposal Area have been significantly reduced. A summary of the WEC Temporary Ash Disposal Area storage volumes is presented in Table 1.

Table 1. WEC Temporary Ash Disposal Area Summary

CCR Surface Impoundment / CCR Landfill	Bottom of Pond Elevation (feet MSL)	Top of Embankment Elevation (feet MSL)	Scenario	Water Surface Elevation (feet MSL)	Storage Volume (acre-feet)
WEC Temporary Ash Disposal Area – West Area	1888	1898	Risers Design	1889.2	14
			Normal	1892 Top of Water	45
			Maximum Storage	1895 Top of Water	79
WEC Temporary Ash Disposal Area – East Area	1888	1898	Risers Design	1889.2	8
			Normal	1888	0
			Maximum Storage	NA	NA
WEC Temporary Ash Disposal Area – CCR Landfill	Top of Cell 1890	1893-1898	NA	NA	NA
WEC Temporary Ash Disposal Area – CCR Landfill Leachate Pond	1874	1893 1898 - East	Normal	1882	5
			Maximum Storage	1890	14
Note: 1) Elevations are referenced to National Geodetic Vertical Datum of 1927 (NGVD27). 2) East Area of WEC Temporary Ash Disposal Area stores historic dry scrubber ash and non-spec scrubber ash/pond ash excavated from retrofit area construction. 3) East Area (unlined) is now approximately 6.5 acres which includes the back slopes of the perimeter berms around the CCR landfill and leachate pond contributing to the East Area drainage. 4) West Area is approximately 11.3 acres to the disposal area boundary limits at top of embankment elevation. 5) Retrofit of portion of the East Area included approximate 4-acre cell with composite liner and 1.5-acre lined leachate pond.					

If the south embankment of the WEC Temporary Ash Disposal Area fails, the liquids from the CCR surface impoundment will discharge into either 1) the Leachate Retention Pond or 2) the Surge Pond. The Leachate Retention Pond and Surge Pond are both on the WEC property. Table 2 provides the normal and maximum water pool elevations of the Leachate Retention Pond, Surge Pond, and new Southwest Area (previously part of Surge Pond). The Leachate Retention Pond currently has low water levels and Surge Pond is dry.

Table 2. Leachate Retention Pond & Surge Pond Summary

Impoundment	Bottom of Pond Elevation (feet MSL)	Top of Embankment Elevation (feet MSL)	Scenario	Water Surface Elevation (feet MSL)	Storage Volume (acre-feet)
Leachate Retention Pond	1880	1894	Normal	1884.30	13
			Maximum Storage	1893	49
Surge Pond	Varies, Average 1890	1894	Normal	1891.8	29
			Maximum Storage	1892.5	40
Southwest Area	Varies, Average 1890	1894	Normal	1890.40	1
			Maximum Storage	1892.5	4
Notes: 1) Elevations are referenced to 1927 NAVD. 2) Leachate Retention Pond is not a CCR surface impoundment. Storage volume based on average number of acres between bottom of pond and water surface elevation. Total area at top of embankment is approximately 5.2 acres. 3) Surge Pond is stormwater drainage area for the WEC site. Surge Pond area for storage has been reduced to approximately 16 acres. A new rail line was completed in 2025 across the southern border which cuts off approximately 2 acres. New culvert through the rail line berm has invert elevation of 1891.8. Water level greater than this elevation is anticipated to equalize across Surge Pond and Southwest Area. 4) Southwest Area, south of new rail line, has approximately 1.5 acres for storage and includes the existing culvert (Outfall 001) near southwest boundary of site with an invert elevation of 1890.4. Barrier prior to culvert has elevation of 1892.5.					

No probable loss of human life, low economic/environmental damage, and no disruption of lifeline facilities are expected during this scenario. Losses from this scenario would be limited to City of Hastings property. Therefore, the WEC Temporary Ash Disposal Area has been determined to continue to have a low hazard potential classification.

4. Certification

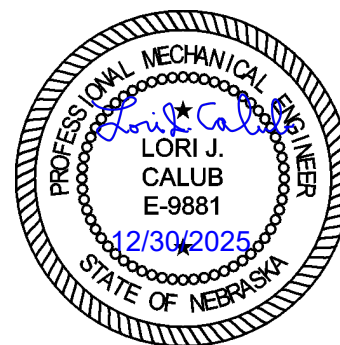
Based on the information currently available, I certify to the best of my knowledge, information and belief that this 5-year review and update of the Hazard Potential Classification Assessment was completed in accordance with the requirements of USEPA 40 CFR §257.73(a)(2) and with professional standards of care for similar work. I am a duly licensed Professional Engineer under the laws of the State of Nebraska.

Print Name: Lori J. Calub

Signature:

Date: December 30, 2025

License #: E-9881



My license renewal date is December 31, 2027.

5. References

- Federal Register, 2015. 40 CFR Parts 257 and 261 Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals from Electric Utilities. Vol. 80, No. 74, Pages 21302 – 21501. April 17, 2015.
- Hastings, 2020 and 2025. Data on process flows, water surface elevations and storage volumes.
- HDR, Inc., 2006. Supplemental Hydrogeologic Characterization for Whelan Energy Center Fossil Fuel Combustion Ash Temporary Ash Disposal Area. Prepared for Hastings Utilities. Original December 2001.
- HDR, Inc., 2020. Initial CCR Hazard Potential Classification Assessment. Whelan Energy Center. Prepared for Public Power Generation Agency and Hastings Utilities. November 30, 2020.
- HDR, Inc., 2021. Title 132 Permit Renewal Application, WEC Temporary Ash Disposal Area. Whelan Energy Center. Prepared for Public Power Generation Agency and Hastings Utilities. August 6, 2021.
- HDR, Inc. 2023. CCR Retrofit Plan. WEC Temporary Ash Disposal Area. Prepared for City of Hastings and Public Power Generation Agency. June 5, 2023.
- HDR, Inc. 2024. Construction Quality Assurance Report for WEC2 Ash Pond Liner Project. Whelan Energy Center. Prepared for Public Power Generation Agency. January 24, 2024.
- NDEE, 2024. NDEE Approval CQA Report for Construction WEC2 Ash Pond Liner Project. June 18, 2024.

This Page Intentionally Left Blank

