CCR Landfill 2022 Annual Inspection Report
North Omaha Station Ash Disposal Area

Omaha Public Power District
North Omaha Station

Omaha, Nebraska
January 13, 2023

OPPD North Omaha Station
Ash Disposal Area
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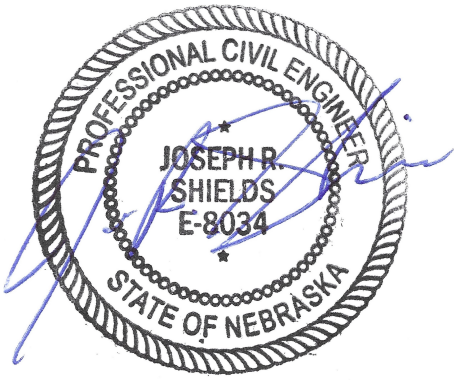
Professional Engineer Certification

"I hereby certify that the CCR landfill known as the North Omaha Ash Disposal Area at the North Omaha Generating Station, owned and operated by the Omaha Public Power District, was inspected and this report prepared in accordance with the Coal Combustion Residual Rule 40 CFR 257.84(b). I am a duly licensed Professional Engineer under the laws of the State of Nebraska."



Name: Joseph R. Shields. PE

Registration State: Nebraska

Registration Number: E-8034

Date: 1/13/2023

My license renewal date is December 31, 2024.

1 Introduction

Omaha Public Power District (OPPD), North Omaha Generating Station (NOS) currently operates an active coal combustion residue (CCR) landfill, referred to as the North Omaha Ash Disposal Area. On April 17, 2015, the U.S. Environmental Protection Agency published the final rule for regulation and management of CCR under Subtitle D of the Resource Conservation and Recovery Act (CCR Rule). Requirements for the disposal and handling of CCR within units (either landfills or surface impoundments) are defined in 40 Code of Federal Regulations (CFR) Section 257.

Section 257.84(b) of the regulations specifies that an owner or operator of a CCR landfill have a qualified professional engineer inspect the landfill annually to ensure that the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering standards. This annual inspection report meets this requirement for the North Omaha Ash Disposal Area.

1.1 Purpose

The CCR rule requires the initial inspection report for existing CCR landfills be completed and filed in the operating record on an annual basis. The completion date of the last inspection report (i.e., placed in the facility operating record) establishes the deadline to complete the next inspection. Subsequent inspections and reports are to be completed on an annual basis. The requirements of the annual inspection include:

- A review of available information regarding the status and condition of the CCR unit - 257.84 (B)(1)(i),
- A visual inspection of the CCR unit to identify signs of distress or malfunction - 257.84 (B)(1)(ii),
- An inspection report that includes the following:
  - Changes in geometry since the last inspection - 257.84 (B)(2)(i)
  - Approximate volume of CCR in unit at time of inspection - 257.84 (B)(2)(ii)
  - Appearance of actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit - 257.84 (B)(2)(iii)
  - Any other changes which may have affected the stability or operation of the CCR unit since the last inspection - 257.84 (B)(2)(iv)

OPPD, as owner and operator of the NOS, will notify the Nebraska Department of Environment and Energy (NDEE) Director within 30 days of placing this Landfill Annual Inspection Report in the operating record and posting to the CCR web site (40 CFR §257.106 and §257.107).

1.2 Facility Background

The NOS is located in Omaha, Nebraska, along the west shore of the Missouri River. North Omaha Ash Disposal Area is permitted under NDEE Title 132 regulations for fossil

fuel combustion ash disposal (NDEE Permit No. NE0054739, Facility ID 59763). The active, unlined CCR landfill is located on the north-northwest portion of the NOS property and encompasses approximately 18 acres. A facility site map is included in Appendix A.

2 Review of Available Information (40 CFR 257.84(B)(1)(i))

Documents pertaining to the operation and structural integrity of the CCR landfill were reviewed before, during and after the site inspection, including:

- North Omaha Ash Disposal Area weekly inspection records
- NDEE Title 132 Permit No. NE0054739

Review of the above documents did not uncover issues that indicated operational, safety or structural concerns with the NOS Ash Landfill. Currently, Phase 1 and 2 areas, which are side slopes, have been capped and landfilling is occurring in the Phase 3 area, though during the inspection, landfilling operations were not occurring.

3 Visual Site Inspection (40 CFR 257.84(B)(1)(ii))

On December 14, 2022, OPPD personnel performed a site inspection of the North Omaha Ash Disposal Area, including:

- Joseph R. Shields PE, Environmental Operations Senior Engineer
- Mark Hansen, Environmental Affairs Program Administrator
- Ryan Layman, Environmental Affairs Program Administrator
- Bryan Lorence, Manager, Environmental Operations

The weather during the site visit was overcast with temperatures in the low to mid 30s (degrees Fahrenheit). The site was free of snow cover and about ½ inch of rain had fallen in the region the previous day.

3.1 Extent of Inspection

The inspection included a driving and walking review of the North Omaha Ash Disposal Area. As the CCR rule only requires the inspection of the existing active CCR landfill itself, this report does not address the condition of the groundwater monitoring system, access roads beyond the landfill perimeter, or other NOS facilities that are not part of the CCR landfill.

The field visit included inspection of the following:

- Perimeter channel conditions
- Side slope conditions
- Active/Open landfill face

3.2 Inspection Findings

The following are the findings of the site inspection:

- Side slopes and vegetation on Phase 1 (west slope) and Phase 2 (north and east slopes) looked good and no issues were identified. Refer to Figure 1 for approximate phase locations.
- There are areas of minor erosion on the southeast slope of the Phase 3 area, south of where ash is currently being landfilled. Rill erosion in these areas posed no apparent operational or structural concerns; OPPD plans continued monitoring of these areas.
- Removal of the ash storage building was completed early in 2022. Following removal, the depression left in the footprint of the building was graded allowing runoff to flow west.
- Landfilling in 2022 occurred west of the ash storage building in the Phase 3 area. In addition, ash-like material stored in piles west and south of the coal pile runoff pond was placed in the footprint of the former ash storage building late in the year. The ash-like material was sampled and characterized prior to landfilling. Regulatory approval for placing this material in the landfill was sought and granted. Temporary cover was added on the east side to prevent storm water in contact with ash from discharging to the east.
- The City of Omaha replaced a storm sewer pipe in 2022 that discharged runoff from Pershing Drive into a drainage channel near the southwest edge of the landfill. The new drainage pipe discharges on the west side of Pershing Drive, reducing run-on to NOS.

4 Changes in Geometry

The CCR rule requires identification of site geometry changes since the last annual inspection. Landfilling occurred in Phase 3 area, west of the ash building, resulting in minimal changes to geometry. Following completion of the ash building demolition, the affected area was filled graded to drain west.

5 Approximate CCR Volume

Total ash disposal is calculated by adding the amount of CCR deposited in 2022 to the amount landfilled through November 2021, which was estimated to be 883,300 cubic yards. The estimated quantity of ash generated from the plant and not sold between December 2021 through November 2022 is about 15,900 cubic yards. In addition, approximately 12,700 cubic yards of ash-like materials stored in piles west and south of the coal pile runoff pond were excavated and placed in the ash landfill in 2022. Therefore, the estimated total volume of CCR at the time of inspection was approximately 911,900 cubic yards.

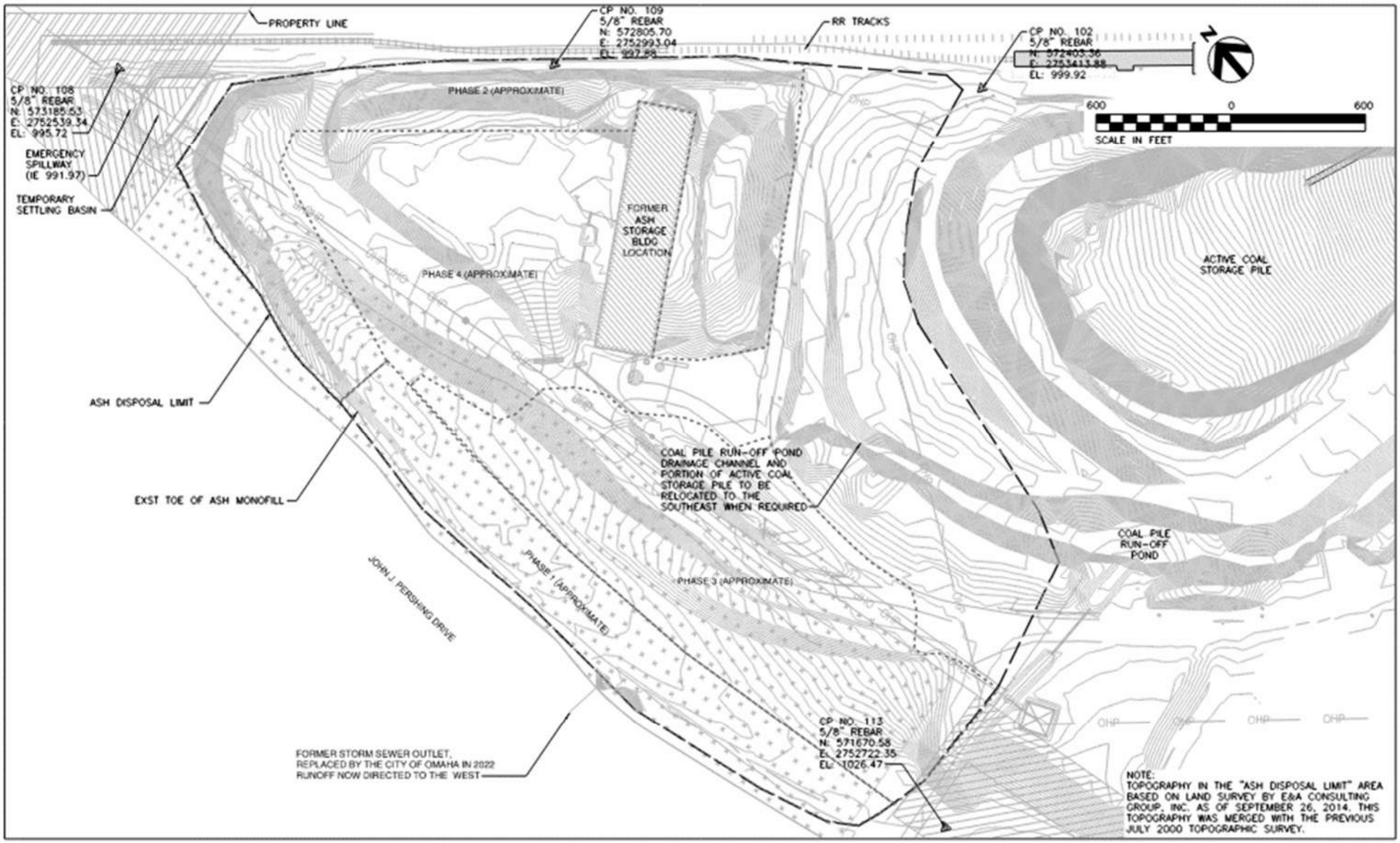
6 Appearance of Structural Weakness

Based on the visual inspection, no apparent or potential structural weaknesses were observed.

7 Changes Affecting Stability or Operation

The CCR rule requires that changes that affect stability or operation of the CCR landfill be identified since the last annual inspection. There are no changes that affect stability or operation at the time of the inspection.

Appendix A
Facility Site Map



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NORTH OMAHA ASH LANDFILL

INSPECTION MAP

DATE

DECEMBER 2022

FIGURE

1

Filename:	2022 NOS Landfill Annual Inspection Report
Directory:	C:\Users\x20403\Documents
Template:	C:\Users\x20403\AppData\Roaming\Microsoft\Templates\Normal.dotm
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Keywords:	
Comments:	
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