

CCR Landfill 2023 Annual Inspection Report

North Omaha Station Ash Disposal Area



**Omaha Public Power District
North Omaha Station**

Omaha, Nebraska
January 12, 2024

**OPPD North Omaha Station
Ash Disposal Area
CCR Landfill 2023 Annual Inspection Report**

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**OPPD North Omaha Station
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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: 1/12/2024

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 bank 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 landfiling is occurring in the Phase 3 area, though during the inspection, landfiling operations were not occurring.

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

On December 12, 2023, OPPD personnel performed a site inspection of the North Omaha Ash Disposal Area, including:

- Joseph R. Shields PE, Environmental Operations Senior Engineer
- Megan Seymour, PE, Environmental Affairs Program Administrator
- Mike Hern, Chemist

The weather during the site visit was overcast with temperatures around 40 degrees Fahrenheit. The site was free of snow cover.

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:

- Established side slopes and vegetation on the west, north, and east looked good and no issues were identified. Channels were clear and no areas of erosion were noted.

- Closure of the landfill began in the fall of 2023 and is anticipated to be completed in mid-2024. Activities in 2023 included regrading in preparation for capping of the landfill.

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. Final reshaping and capping of the landfill will occur in 2024.

5 Approximate CCR Volume

Total ash disposal is calculated by adding the amount of CCR deposited in 2023 to the amount landfilled through November 2022, which was estimated to be 911,900 cubic yards. The estimated quantity of ash generated from the plant and not sold between December 2022 through November 2023 is about 10,000 cubic yards. Therefore, the estimated total volume of CCR at the time of inspection was approximately 921,900 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



OPPD
NORTH OMAHA STATION
NORTH OMAHA ASH LANDFILL

INSPECTION MAP

DATE
DECEMBER 2023
FIGURE
1