



# CCR Landfill 2021 Annual Inspection Report

## North Omaha Ash Disposal Area



Omaha Public Power District  
North Omaha Station

*Omaha, Nebraska*  
January 14, 2022

**OPPD North Omaha Station  
North Omaha Ash Disposal Area  
CCR Landfill 2021 Annual Inspection Report**

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**OPPD North Omaha Station  
North Omaha Ash Disposal Area  
CCR Landfill 2021 Annual Inspection Report**

**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: 1/14/2022

My license renewal date is December 31, 2022.



# 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 must 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 must 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 must be completed and filed 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, must notify the Nebraska Department of Environment and Energy (NDEE) Director within 30 days of placing the CCR 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 the current NDEE Title 132 regulations for fossil fuel combustion ash disposal area (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))**

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

- The CCR Landfill weekly inspection records (per Section 257.84(a))
- NDEE Title 132 permit

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 November 23, 2021, OPPD personnel performed a site inspection of the North Omaha Ash Disposal Area, including:

- Joseph R. Shields PE, Senior Engineer
- Mark Hansen, Environmental Affairs Program Administrator
- Kyle Uhing, Senior Environmental Specialist

The weather during the site visit was sunny with temperatures approximately 60 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:

- Side slopes and vegetation on Phase 1 and Phase 2 looked good and no issues were identified.
- There are areas of minor erosion on the west side of the landfill, in the Phase 3 area, south and west 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.
- Drainage conveyances the south and east toes of Phase 1 slope were inspected. Minor erosion was noted in 2020 at the north end of the east channel was not noted during this inspection. No deficiencies were noted.
- Landfilling in 2021 occurred west of the ash storage building in the Phase 3 area.
- The ash storage building is currently being removed. During the inspection, about half of the building was demolished. Completion is scheduled for the end of January 2022.
- Ash is being stored in the Phase 4 area north of the ash storage building and will be used during regrading following ash building demolition.

#### **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 will be graded to drain.

#### **5 Approximate CCR Volume**

Total ash disposal is calculated by adding the amount of CCR deposited in 2021 to the amount landfilled through 2020, which is estimated to be 877,800 cubic yards. The estimated quantities of CCR deposited in 2021 through November is about 6,500 cubic yards. Therefore, the estimated total volume of CCR at the time of inspection was approximately 883,300 cubic yards.

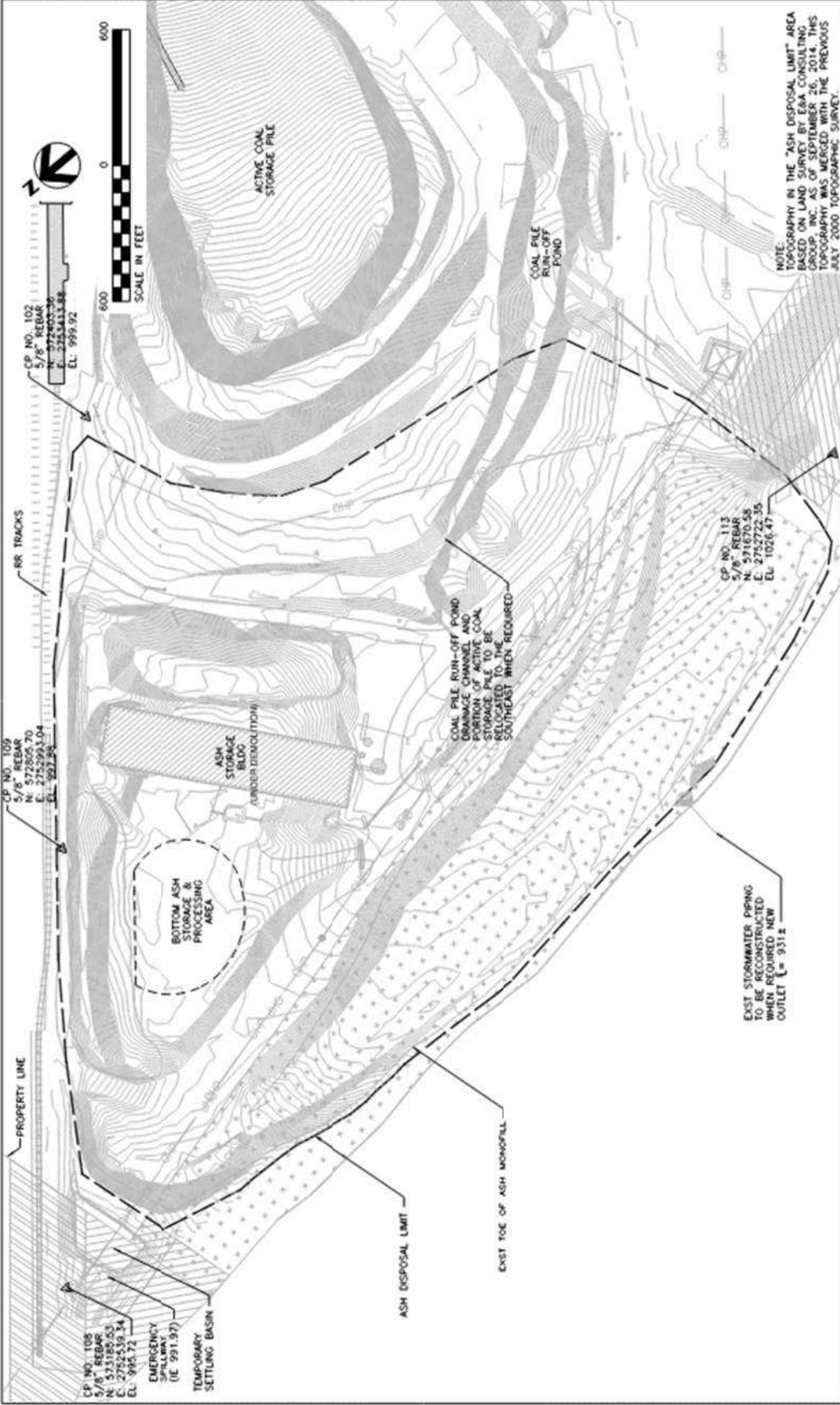
#### **6 Appearance of Structural Weakness**

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. Once the ash building is removed, the area will be regraded to stable slopes. The ash building has not been used in the last year for storage because of structural deficiencies, so no changes in landfill operation has occurred.

**Appendix A**  
**Facility Site Map**



DATE  
DECEMBER 2021

FIGURE  
1

**OPPD  
NORTH OMAHA STATION  
NORTH OMAHA ASH LANDFILL**

INSPECTION MAP

