



CCR Landfill 2020 Annual Inspection Report North Omaha Ash Landfill



Omaha Public Power District
North Omaha Station

Omaha, Nebraska
January 15, 2021

**OPPD North Omaha Station
NOS Ash Disposal Area
CCR Landfill 2020 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 Landfill 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."

Print Name: Joseph R. Shields

Signature: 

Date: January 15, 2021

License #: E-8034

My license renewal date is December 31, 2022.



1 Introduction

Omaha Public Power District (OPPD), North Omaha Generating Station (NOS) currently has one (1) active coal combustion residue (CCR) landfill. On April 17, 2015, the U.S. Environmental Protection Agency (EPA) published the final rule for the 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 or any lateral expansion of a CCR landfill must have the landfill inspected on a periodic basis by a qualified professional engineer 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 NOS Ash Landfill.

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. NOS Ash Landfill 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 any unresolved 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 3, 2020, OPPD personnel performed a site inspection of the NOS Ash Landfill, including:

- Joseph R. Shields PE, Environmental Operations
- Mark Hansen, Environmental Affairs Administrator
- Kyle Uhing, Environmental Specialist

The weather during the site visit was sunny with temperatures approximately 45 degrees Fahrenheit. The site was free of snow cover.

3.1 Extent of Inspection

The inspection included a driving and walking review of the NOS Ash Landfill. 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, grades and drainage channels that are not a component of the CCR landfill.

The field visit included inspection of the following:

- Perimeter channel conditions
- Sideslope 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,

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 had been repaired, regraded, and seeded in 2020. Vegetation was mature and generally covered the disturbed areas. Minor erosion noted on the north end of the east channel will be monitored.
- During the inspection it was noted that recent landfilling had occurred on a ramp oriented north-south and located west of the ash storage building.
- The existing ash storage building was repaired in 2019 and is not being used.

4 Changes in Geometry

The CCR rule requires identification of site geometry changes since the last annual inspection. Phase 3, where CCR is currently being placed, is the only location where geometry changes have occurred.

5 Approximate CCR Volume

Total ash disposal is estimated by adding the amount of CCR deposited in 2020 to the amount in the landfill from the previous annual inspection report, which was 869,098 cubic yards. The estimated quantities of CCR deposited in 2020 at the time of the inspection is 8,700 cubic yards. Therefore, the estimated total volume of CCR at the time of inspection is 877,800 cubic yards.

6 Appearance of Structural Weakness

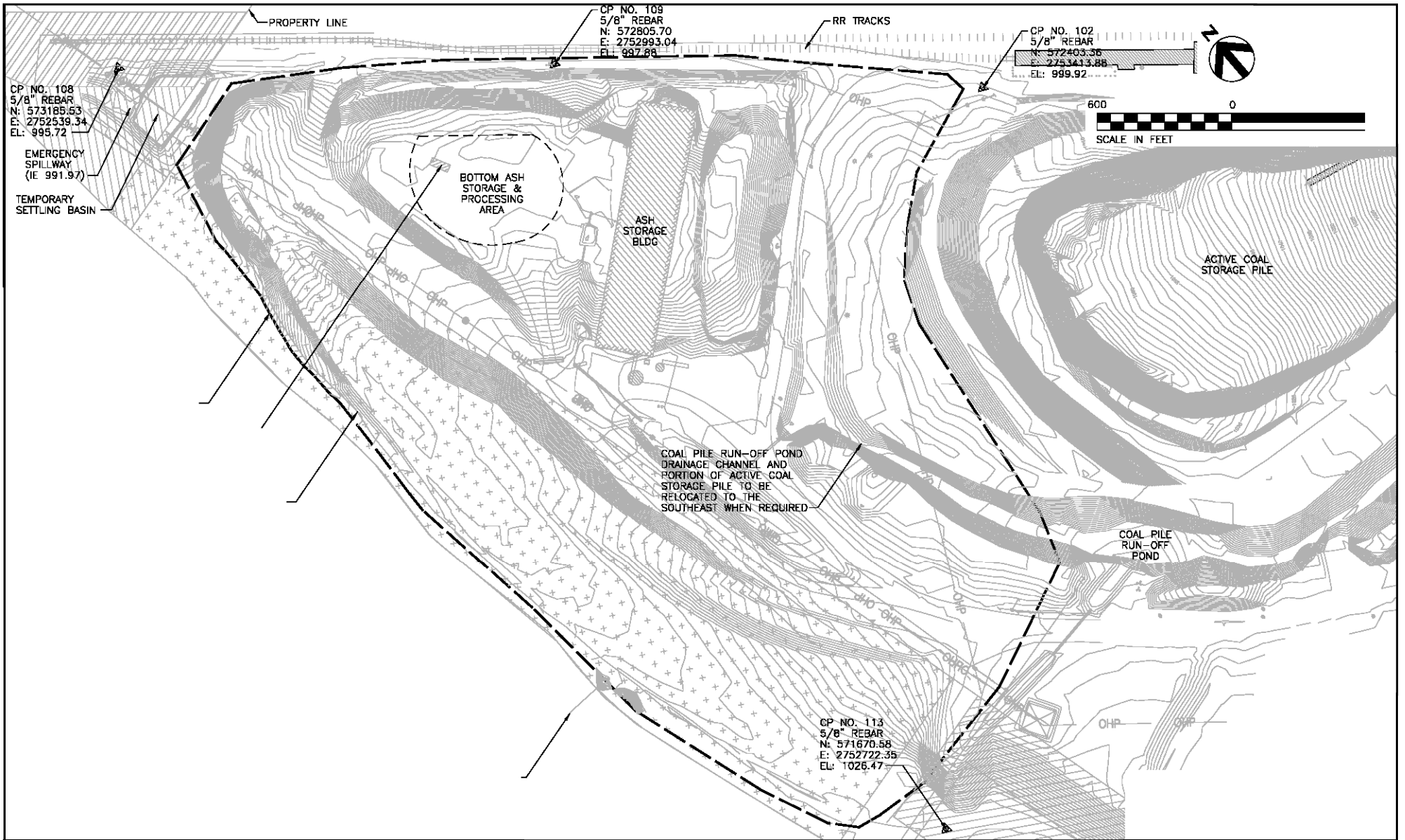
In 2020, OPPD inspected the inside of the structure and noted damage to the roof truss system. The ash storage building not used due to structural deficiencies and OPPD is evaluating plans to remove the building.

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.

Appendix A
Facility Site Map



OPPD
 NORTH OMAHA STATION
 NOS ASH DISPOSAL AREA
 INSPECTION MAP

DATE
 OCTOBER 2015

FIGURE