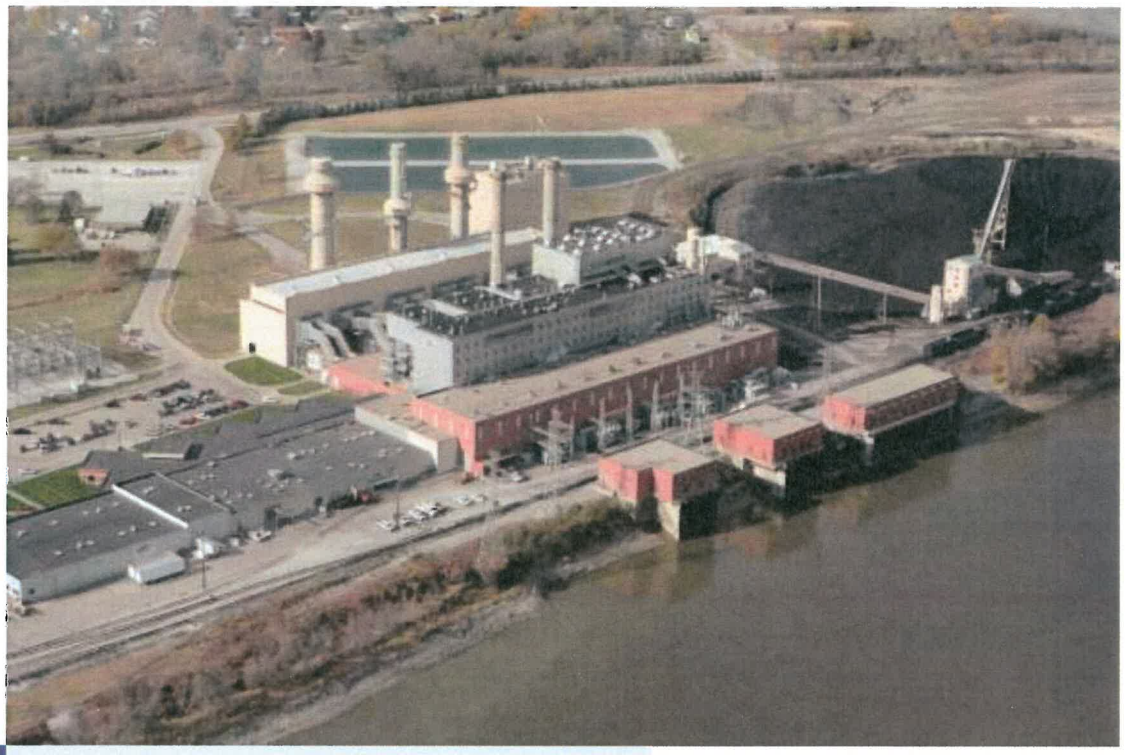

CCR Landfill 2019 Annual Inspection Report

North Omaha Ash Landfill

Omaha Public Power District
North Omaha Station

Omaha, Nebraska
January 17, 2019

OPPD North Omaha Station
North Omaha Ash Landfill
CCR Landfill 2019 Annual Inspection Report

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Professional Engineer Certification

"I hereby certify that operations and maintenance of 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: John A. Wichman

Signature:

Date: January 17, 2020

License #: E-10495

My license renewal date is December 31, 2020.

1 Introduction

On April 17, 2015 the U.S. Environmental Protection Agency (EPA) published the final rule for the regulation and management of coal combustion residuals (CCR) under Subtitle D of the Resource Conservation and Recovery Act (RCRA). The CCR rule defines a set of requirements for the disposal and handling of CCR within CCR units (defined as either landfills or surface impoundments). The Omaha Public Power District (OPPD), North Omaha Generating Station (Station) currently has one (1) active CCR landfill. Section 40 CFR 257.84(b) 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.

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 Station, must notify the Nebraska Department of Environmental Quality (NDEQ) Director within 30 days of placing the CCR 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

OPPD has a fossil fuel-fired generating plant at the Station in Omaha, Nebraska. The Station is located east of Pershing Drive and Craig Street, approximately 3.5 miles northwest of the Eppley Airfield, along the west shore of the Missouri River at river mile 625.2. The active CCR landfill, known as the North Omaha Ash Landfill, is permitted under the current NDEQ Title 132 regulations for fossil fuel combustion ash disposal areas (NDEQ Permit No. NE0054739, Facility ID 59763). The active, unlined CCR landfill is located on the north-northwest portion of the

Station 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 landfill were reviewed before, during and after the site inspection, including:

- The CCR Landfill weekly inspection records (per Section 257.84(a)) from January 1, 2019 through December 31, 2019
- CCR fugitive dust control plan
- NDEQ Title 132 Permit

Review of the above documents did not uncover any unresolved issues that indicated operation, safety or structural concerns of the North Omaha Ash Landfill.

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

A site inspection of the North Omaha Ash Landfill was performed on December 4, 2019 by OPPD Professional Engineer, John Wichman, who was accompanied by OPPD Environmental Affairs Administrator, Mark Hansen.

The weather during the site visit was partly sunny with temperatures ranging from 40 to 45 degrees Fahrenheit with a slight breeze. The site was free of snow cover.

3.1 Extent of Inspection

The inspection included an extensive site walk of the entire North Omaha Ash Landfill. As the CCR rule requires only 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 components of the CCR landfill.

The field visit included inspection of the following:

- Perimeter drainage including channels and culverts
- Side Slope Conditions to identify erosion
- Stability of CCR fill area
- Erosion within CCR disposal area
- Ash Storage building east end wall temporary repair

3.2 Inspection Findings

The following are the findings of the site inspection:

- Ditches and culverts around the perimeter appeared to be free flowing with no current blockages. Maintenance grading of the southern and eastern perimeter storm water ditch and roadway will be required post 2019-2020 winter season.

- All exterior slopes of the closed areas were observed and appeared stable at the time of this inspection. Vegetation disturbance was noted adjacent to new groundwater monitoring well 13D installation. This area will require maintenance grading post 2019-2020 winter season.
- The interior slopes appeared stable with slight rill erosion. OPPD should continue to monitor these slopes during weekly inspections.
- CCR material was being stockpiled in small stockpiles within the northern area of the ash landfill which will be spread and compacted.
- Ash Storage building temporary repairs to east end wall were reviewed and found stable. Cleanup of residual ash and temporary repairs appeared to be effective.

4 Changes in Geometry

The CCR rule requires that the site geometry changes be identified since the last annual inspection.

- CCR is being placed in the north and central area of the landfill in Phase 3.

5 Approximate CCR Volume

The approximate volume of CCR material within the active CCR landfill was estimated by adding the year to date amount of CCR material to the previous estimated quantity at the end of 2018, which was 842,000 cubic yards. The total tonnage of CCR material disposed in the CCR landfill, January through December 2019, was estimated at 27,098 cubic yards. Therefore, the estimated total volume of CCR in the active CCR landfill is approximately 869,098 cubic yards.

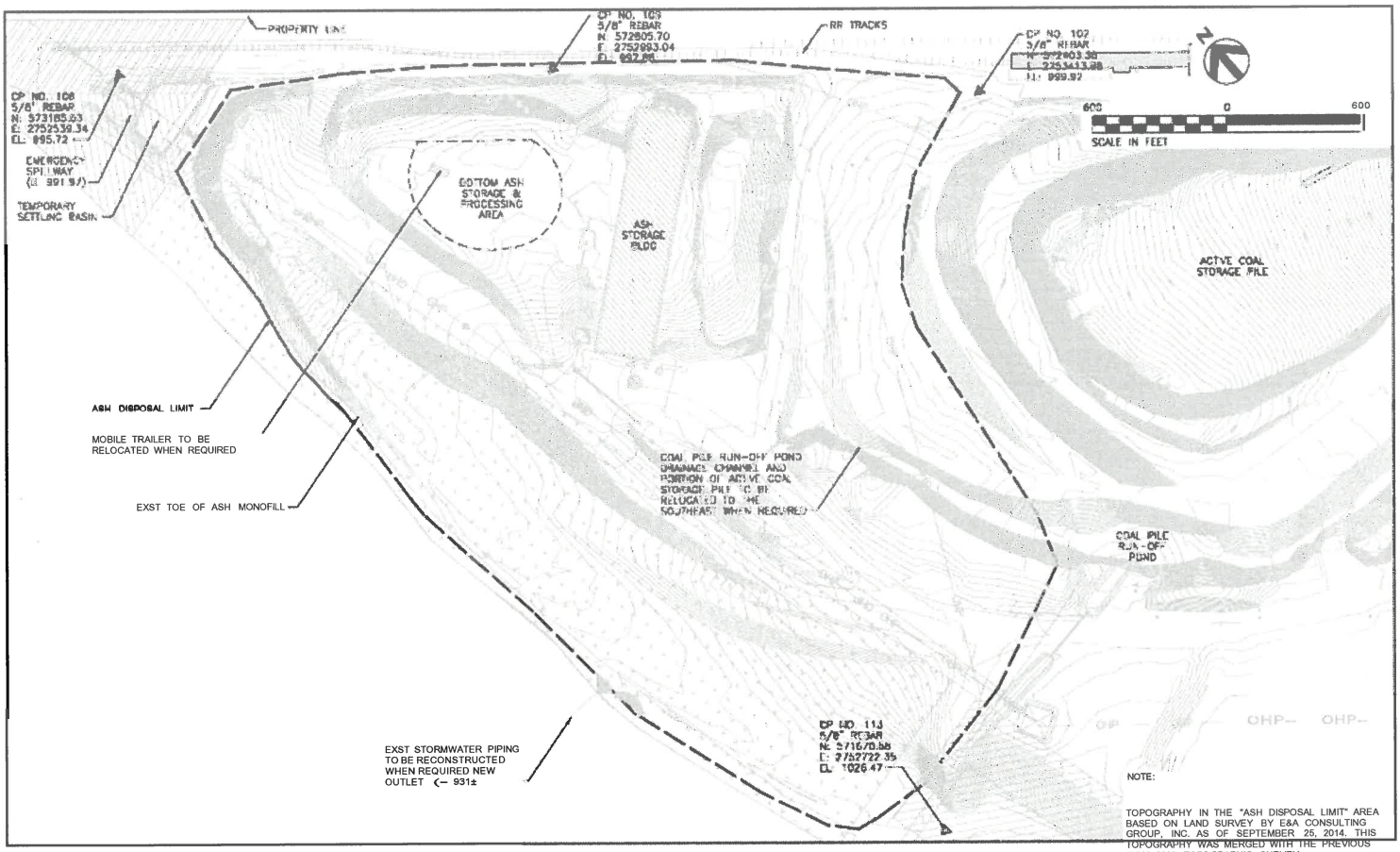
6 Appearance of Structural Weakness

Based on the visual inspection findings reported above in Section 3, no apparent or potential structural weaknesses were observed. It is recommended that the OPPD continue to monitor the interior slopes which were relatively steep and did show evidence of erosion rills.

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 since the last inspection.

Appendix A
Facility Site Map



OPPD
NORTH OMAHA STATION
NORTH OMAHA ASH LANDFILL

INSPECTION MAP

DATE

OCTOBER 2015

FIGURE

1