



CCR Landfill 2015 Annual Inspection Report

NC1 Ash Disposal Area



Omaha Public Power District
Nebraska City Station

Nebraska City, Nebraska
January 19, 2016

**OPPD Nebraska City Station
NC1 Ash Disposal Area
CCR Landfill 2015 Annual Inspection Report**

Table of Contents

Professional Engineer Certification..... 1

1 Introduction 2

 1.1 Purpose 2

 1.2 Facility Background 2

2 Review of Available Information (40 CFR 257.84(B)(1)(i)) 3

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

 3.1 Extent of Inspection 3

 3.2 Inspection Findings 3

4 Changes in Geometry 4

5 Approximate CCR Volume 4

6 Appearance of Structural Weakness 4

7 Changes Affecting Stability or Operation 4

Appendices

Appendix A: Facility Site Map

**OPPD Nebraska City Station
NC1 Ash Disposal Area
CCR Landfill 2015 Annual Inspection Report**

Professional Engineer Certification

"I hereby certify that the CCR landfill known as the NC1 Ash Disposal Area at the Nebraska City 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: Garrett M. Williams

Signature: _____

Date: January 19, 2016

License #: E-15124

My license renewal date is December 31, 2016.



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), Nebraska City Generating Station (Station) currently has two (2) active CCR landfills; NC1 Ash Disposal Area and NC2 Ash Disposal Area. 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. This annual inspection report covers the NC1 Ash Disposal Area.

1.1 Purpose

The CCR rule requires the initial inspection report for existing CCR landfills must be completed and placed in the operating record no later than January 19, 2016. 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 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

OPPD has a two-unit (Nebraska City (NC) Unit 1 and NC Unit 2) fossil fuel-fired generating plant at the Station located 5.5 miles southeast of Nebraska City, Nebraska, along the west shore of the Missouri River. This Station has two (2) existing CCR landfills that are permitted under the current NDEQ Title 132 regulations for fossil fuel combustion ash disposal area; the NC1 Ash Disposal Area and NC2 Ash Disposal Area that are active after the CCR rule effective date of

October 19, 2015. This initial annual inspection report covers the NC1 Ash Disposal Area (NDEQ Permit No. NE0054712, Facility ID 58343). The NC1 Ash Disposal Area is an unlined CCR landfill of approximately 52 acres that has historically received CCR for disposal. 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)) from October 19, 2015 through December 29, 2015
- NDEQ Title 132 permit application
- Recent topographic survey for the permit renewal application
- Documentation regarding recent NC1 Ash Disposal Area, Phase 1 Sideslope Closure

Review of the above documents did not uncover any unresolved issues that indicated operational, safety or structural concerns of the CCR landfill.

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

On December 14, 2015, a site inspection of the NC1 Ash Disposal Area was performed by an independent Professional Engineer, Garrett Williams of HDR, who was accompanied by Brad Sojka, OPPD Environmental Specialist. This site inspection was performed in advance of the CCR rule submittal deadline to ensure that the inspection was completed prior to snow cover. . Office review of available information was conducted by Garrett Williams.

The weather during the site visit was overcast and mildly windy with temperatures ranging from 36 to 40 degrees Fahrenheit. Rain events prior to the annual inspection made for wet conditions during the inspection. The site was free of snow cover.

3.1 Extent of Inspection

The inspection included an extensive site walk of the NC1 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, 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 erosion
- Stability of CCR fill areas

3.2 Inspection Findings

The following are the findings of the site inspection:

- Standing water was present in perimeter channel from the previous weekend rain event. Water was contained and controlled per the current NDEQ permit. No further action is required at this time.
- In areas of recent closure construction where topsoil was not fully stabilized with vegetation, the slopes were showing signs of minor erosion. This is expected due to the slope grades and lack of vegetation growth. Rill erosion in these areas posed no apparent operational or structural concerns and are planned to be corrected when weather permits.
- Some small areas of uncompacted ash were observed on the landfill plateau. Work was ongoing at the time of this inspection to compact all loose ash. No further action is required at this time.
- Separate bottom ash stockpile was present within the footprint and located within the perimeter of the CCR landfill. Bottom ash was being segregated and stored for beneficial reuse. This stockpile posed no apparent operational or structural concerns. No further action is required at this time.

4 Changes in Geometry

The CCR rule requires that the site geometry changes be identified since the last annual inspection. Since this is the first annual inspection, the geometry changes will be addressed in the next inspection report.

The current elevation of CCR that has not received final cover ranges from 940 to 950. This will be the initial basis for future inspection reports.

5 Approximate CCR Volume

Total ash deposited within the NC1 Ash Disposal Area was estimated by comparing an October 2015 survey to the final permit grades and subtracting that volume from the projected total permit volume. Ash generation/disposal estimates for October 2015 through December 2015 (of approximately 53,000 CY) were added to the estimate. The total CCR volume in place at the time of inspection is estimated to be 2,296,000 cubic yards.

6 Appearance of Structural Weakness

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

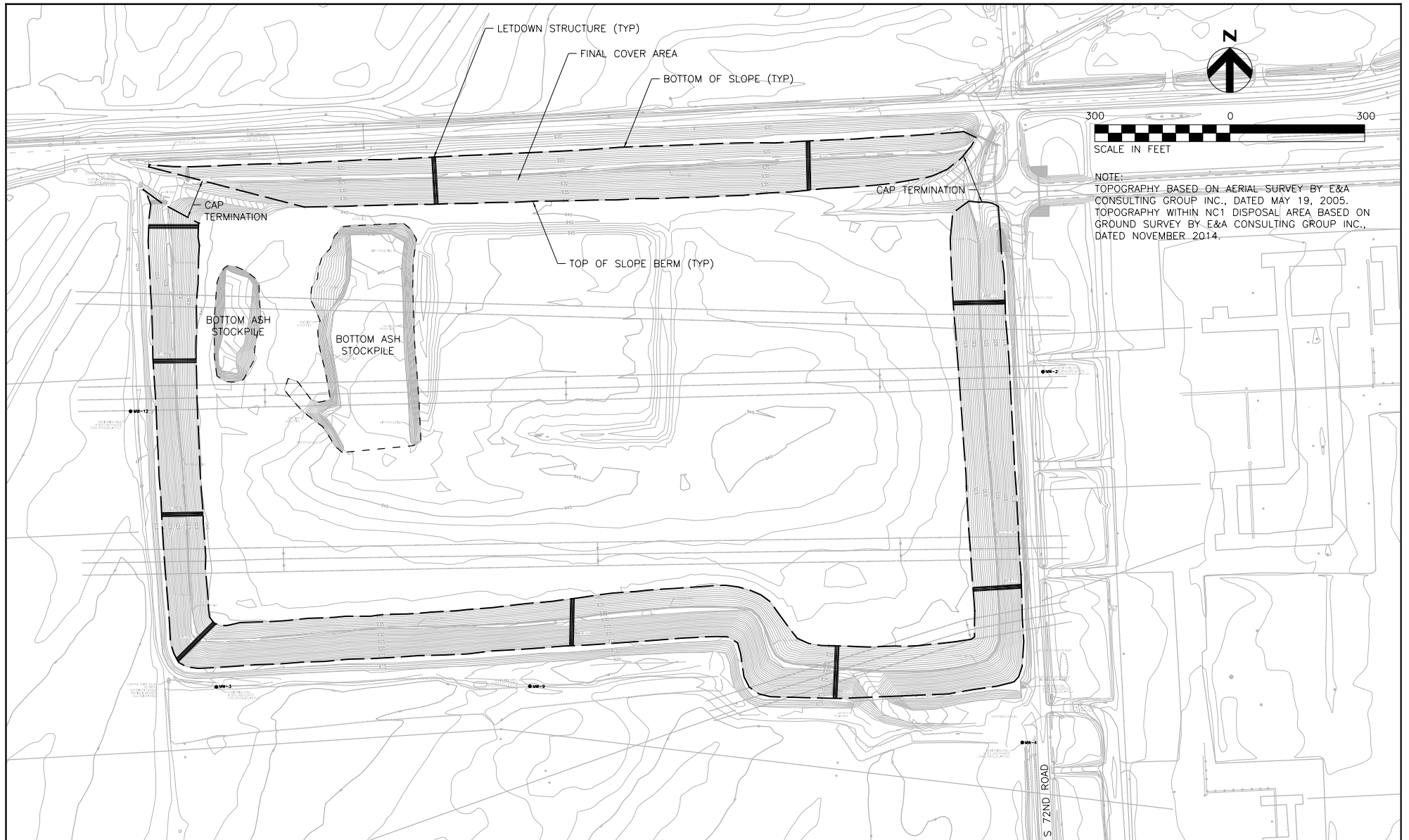
7 Changes Affecting Stability or Operation

The CCR rule requires that changes that affect stability or operation of the CCR landfill be identified since the last annual inspection. Since this is the first annual inspection, changes will be described in the next annual inspection report.



**Appendix A
Facility Site Map**





**OPPD
NEBRASKA CITY STATION
NC1 ASH DISPOSAL AREA**

INSPECTION MAP

DATE
OCTOBER 2015

FIGURE

1