



# CCR Landfill 2017 Annual Inspection Report North Omaha Ash Landfill



Omaha Public Power District  
North Omaha Station

*Omaha, Nebraska*  
January 19, 2018

**OPPD North Omaha Station  
North Omaha Ash Landfill  
CCR Landfill 2017 Annual Inspection Report**

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**OPPD North Omaha Station  
North Omaha Ash Landfill  
CCR Landfill 2017 Annual Inspection Report**

**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."

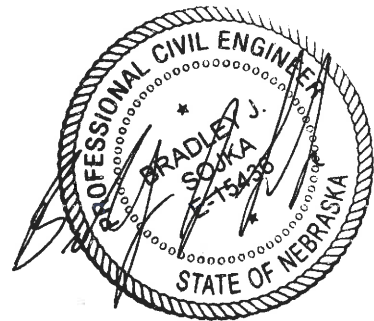
Print Name: Bradley J. Sojka

Signature: *Bradley J. Sojka*

Date: 1/10/18

License #: E-15436

My license renewal date is December 31, 2018.



# 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 to 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 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, 2017 through December 31, 2018
- 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.

OPPD changed ash contractors during 2016. OPPD also performed closure of the phase 1 and phase 2 side slopes as well as installing a new central drainage channel to drain Stormwater to the west process pond.

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

A site inspection of the North Omaha Ash Landfill was performed on December 15, 2017 by Professional Engineer and OPPD Senior Environmental Specialist, Brad Sojka.

The weather during the site visit was partly cloudy 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
- Stability of CCR fill area
- Erosion within CCR disposal area

### **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. New ditches have been created on the south and east sides of the landfill to drain clean stormwater runoff to the north stormwater pond.

- All interior slopes were observed and appeared stable at the time of this inspection. Interior slopes have been regraded since the last inspection and appear to be more stable.
- Phase 1 and Phase 2 side slopes have been covered with 18" of clay, 6" of topsoil, and seeded. Ash is being placed in the Phase 3 area.
- No ash was being placed at the time of inspection. There were small piles of uncompacted ash waiting to be spread and compacted.

## **4 Changes in Geometry**

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

Since the last inspection, 2 phases have been closed. Ash is now being placed in Phase 3 of the landfill which is in the north and central portion of the landfill.

## **5 Approximate CCR Volume**

Approximate volume of CCR material within the active CCR landfill was estimated by computing airspace between a May 2017 survey versus an estimated, pre-disposal base elevation of 994 feet mean sea level. By the end of 2017, the estimated total volume of CCR in the active CCR landfill is approximately 835,000 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.

## **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. A new central drainage ditch was installed to drain stormwater runoff from active portions of the landfill to the west process water pond. The previous configuration drained all stormwater to the coal pile runoff pond. This change ensures OPPD can control the 25-yr, 24-hr rain event volume from the active portion of the landfill.

The side slopes of phase 1 and 2 were regraded and closed per construction drawings in the permit. The side slopes on the east and west side were extended closer to the boundary to achieve the proper 3:1 slope. This is less steep than they were during the previous inspection so the landfill appears to be more stable now.

Appendix A  
Facility Site Map



**SURVEYORS CERTIFICATION**

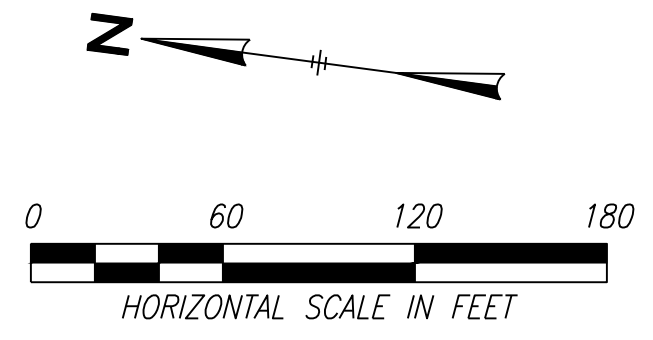
I, CORY L. REINKE, A REGISTERED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF NEBRASKA, CERTIFY THAT THE SURVEY SHOWN ON THIS MAP WAS SURVEYED BY ME OR UNDER MY DIRECT SUPERVISION AND COMPLETED ON OCTOBER 3RD, 2017 AND NOVEMBER 1ST, 2017. ALL OF THE INFORMATION SHOWN ON THIS MAP IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



CORY L. REINKE, L.S. #713  
NOVEMBER 2ND, 2017

**LEGEND**

- CONTROL POINT W/NUMBER
- GUY WIRE
- POWER POLE
- OVERHEAD POWER LINE
- LIGHT POLE
- MONITORING WELL
- GUARD POST
- CULVERT PIPE (C.M.P.) W/SIZE
- CONTOUR W/ELEV. [07/10/2017]
- CONTOUR W/ELEV. [10/3/2017 & 11/1/17]
- APPROX. LIMITS OF GRADING AREA



**NOTES**

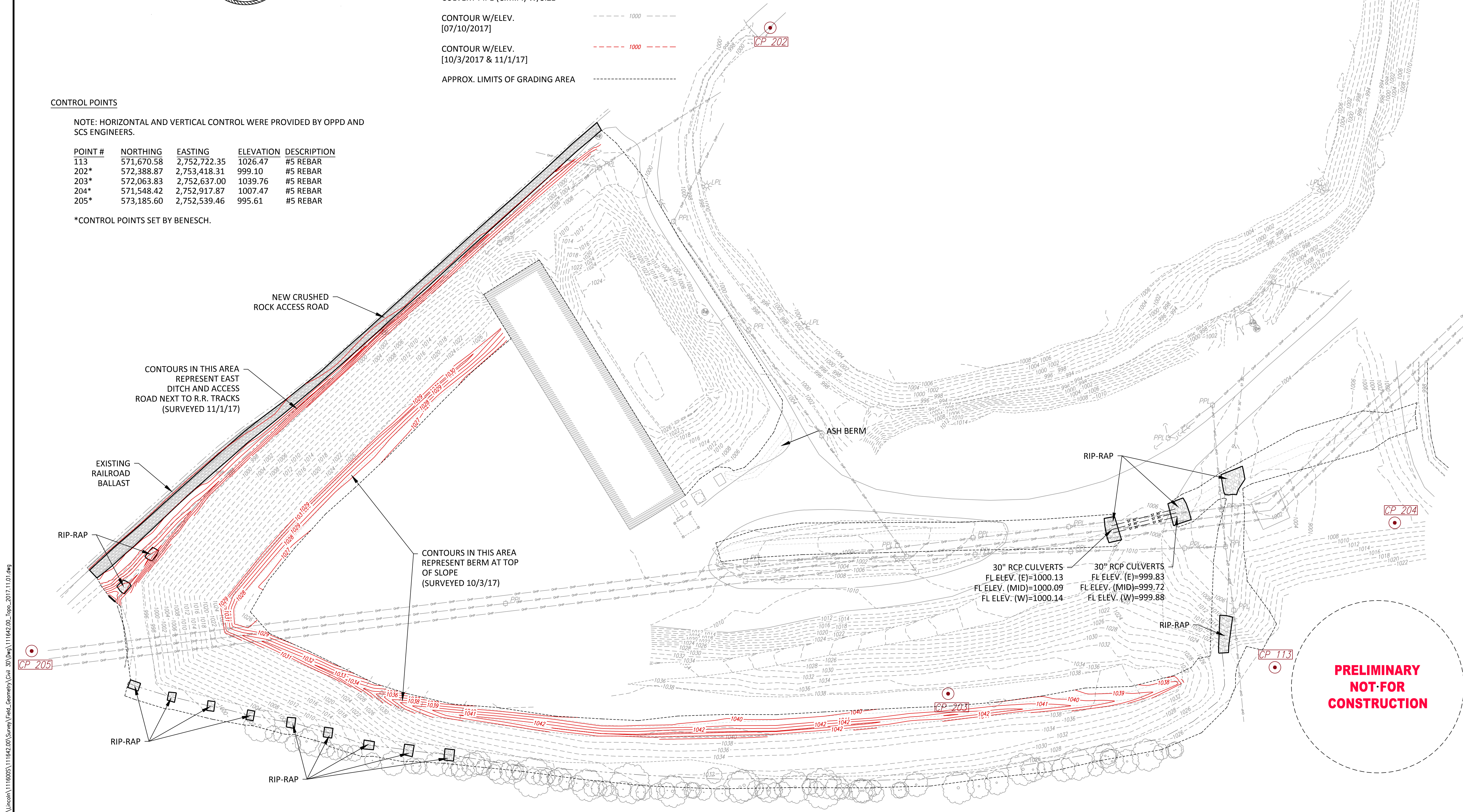
- BACKGROUND FROM ORIGINAL TOPO SHOT ON 7/6/17-7/10/17

**CONTROL POINTS**

NOTE: HORIZONTAL AND VERTICAL CONTROL WERE PROVIDED BY OPPD AND SCS ENGINEERS.

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
113	571,670.58	2,752,722.35	1026.47	#5 REBAR
202*	572,388.87	2,753,418.31	999.10	#5 REBAR
203*	572,063.83	2,752,637.00	1039.76	#5 REBAR
204*	571,548.42	2,752,917.87	1007.47	#5 REBAR
205*	573,185.60	2,752,539.46	995.61	#5 REBAR

\*CONTROL POINTS SET BY BENESCH.



**PRELIMINARY  
NOT-FOR  
CONSTRUCTION**

NO.	REVISIONS	DATE

**EXHIBIT  
AS-BUILT SURVEY  
NOV. 1ST, 2017**

**NORTH OMAHA  
STATION  
OMAHA, NE**



**benesch**  
Alfred Benesch & Company  
825 M Street - Suite 100  
Lincoln, Nebraska 68508  
402-479-2200 Job No. - 111642.00

DESIGNED BY: --- REVIEWED BY: CLR  
DRAWN BY: CLR

PROJECT: 111642.00  
DATE: November 2017

Y:\Lincoln\111642\111642\_00\Survey\Feld\_Geometry\Civil\_3D\DWG\111642\_00\_Top\_2017.11.01.dwg