

# Annual CCR Landfill Inspection

Lon D. Wright Power Plant

City of Fremont Department of Utilities  
400 E Military Avenue  
Fremont, Nebraska 68025

**SCS ENGINEERS**

27219425.04 | February 17, 2024

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## PE CERTIFICATION

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| <p>This document was originally sealed on February 17, 2024 by Morgan B. Sykes, a licensed Professional Engineer in the State of Nebraska.</p> | <p>I, Morgan B. Sykes, hereby certify that this Annual CCR Landfill Inspection Report meets the requirements of 40 CFR 257.84(b)(2), was prepared by me or under my direct supervision, and that I am a duly licensed Professional Civil Engineer under the laws of the State of Nebraska.</p> <p>License number E-11764</p> <p>My license renewal date is December 31, 2024.</p> <p>Pages or sheets covered by this seal:<br/>All</p> |
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## 1.0 INTRODUCTION

SCS Engineers (SCS) completed an annual inspection of the City of Fremont Department of Utilities (FDU) Lon D. Wright Power Plant's Coal Combustion Residue (CCR) landfill located east of the power plant in Fremont, Nebraska. The CCR landfill has received CCR both before and after the effective date of the CCR Rule. The annual inspection was completed in accordance with the U.S. Environmental Protection Agency (USEPA) CCR rule, 40 CFR 257 Subpart D, in particular 257.84(b)(1), according to which, an annual inspection by a qualified professional engineer is required for all existing and new CCR landfills, and any lateral expansions of a CCR landfill. The purpose of the annual inspection is to ensure that the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering standards. The inspection must, at a minimum, include:

- A review of available information regarding the status and condition of the CCR unit, including, but not limited to, files available in the operating record (e.g., the results of inspections by a qualified person, and results of previous annual inspections); and
- A visual inspection of the CCR unit to identify signs of distress or malfunction of the CCR unit.

This report has been prepared in accordance with 40 CFR 257.84(b)(2) to document the annual inspection.

## 2.0 SUMMARY OF RESULTS AND RECOMMENDATIONS

SCS identified two deficiencies and zero releases during the annual inspection of the CCR landfill. Fencing on the western perimeter is damaged at the bottom and should be re-secured. The stormwater inlet in the southwestern corner should be cleaned out. Deficiencies and releases must be remedied by the owner or operator as soon as feasible, and the remedy documented.

## 3.0 ANNUAL INSPECTION

Mr. Morgan Sykes of SCS completed an inspection of the CCR landfill on December 20, 2023. Mr. Sykes is a licensed Professional Civil Engineer in Nebraska and holds a Bachelor of Science degree in Civil Engineering. He has over 25 years of experience in the design, construction, and operation of municipal and private infrastructure and waste handling facilities. The scope of the annual inspection is described in **Sections 3.1** and **3.2**. The results of the annual inspection are discussed in **Section 4.0**.

### **3.1 OPERATING RECORD REVIEW**

SCS reviewed the available information in the operating record for the CCR landfill prior to the visual inspection discussed in **Section 3.2**. Information reviewed by SCS included operating record materials and weekly inspection reports provided by FDU and the information posted on City of Fremont's CCR Rule Compliance Data and Information website for the CCR landfill, as of the date of the inspection.

### **3.2 VISUAL INSPECTION**

SCS completed a visual inspection of the CCR landfill to identify signs of distress or malfunction of the CCR unit.

The visual inspection included observations of the following:

- CCR placement areas include active filling areas, final cover areas, and exterior non-CCR berms or slopes.
- Contact water run-off management features including internal contact water drainage features and discharges to the leachate collection pond.
- Non-contact storm water run-on and run-off control features including swales located adjacent to active fill areas.

### **4.0 INSPECTION RESULTS**

The results of the annual inspection, along with a description of any deficiencies or releases identified during the visual inspection, are summarized in the following sections.

#### **4.1 CHANGES IN GEOMETRY**

No apparent changes in geometry were noted that would indicate distress or malfunction of the CCR unit at the facility. All changes in geometry observed during the annual inspection were the result of planned CCR filling activities.

#### **4.2 CCR VOLUMES**

Based on review of facility records, the approximate tonnage of CCR contained in the landfill as of December 31, 2023 is 16,349.02 tons. Assuming CCR has an average unit weight of 1.03 tons per cubic yard, there are approximately 15,872.83 cubic yards of CCR in the landfill.

#### **4.3 APPEARANCE OF STRUCTURAL WEAKNESS**

The inspection included a review of the appearance of actual or potential structural weakness of the CCR unit. The visual inspection included a review of CCR fill areas including the top slopes, internal side slopes, external side slopes, and internal ramps/haul roads for the presence of the following conditions:

- Signs of surface movement or instability:
  - Sloughing, slumping, or sliding.

- Surface cracking.
- Slopes in excess of 3 horizontal to 1 vertical (3H:1V).
- Toe of slope movement.
- Evidence of inadequate compaction of exposed CCR.
- Inappropriate vegetation growth.
- Animal burrows.
- Erosion damage.
- Unusual surface damage caused by vehicle traffic.

#### **4.3.1 Signs of Surface Movement or Instability**

No signs of surface movement or instability were noted during the inspection.

#### **4.3.2 Inappropriate Vegetation Growth**

No inappropriate vegetation growth impacting the CCR unit was noted during the inspection.

#### **4.3.3 Animal Burrows**

No significant animal burrows were noted during the inspection. There were bait stations strategically placed around the CCR landfill and Leachate Pond Berm. Since small rodents are known to be present, FDU should continue to maintain the bait stations in proper working order and monitor for rodent damage during weekly compliance evaluations.

#### **4.3.4 Erosion Damage**

##### **4.3.4.1 Phase I Berms and Phase II Area**

No signs of significant erosion were noted during the inspection.

##### **4.3.4.2 Adjacent Areas**

No signs of significant erosion were noted during the inspection.

#### **4.3.5 Unusual Surface Damage Caused by Vehicle Traffic**

No unusual surface damage caused by vehicle traffic was noted during the inspection.

### **4.4 DISRUPTIVE CONDITIONS**

#### **4.4.1 Existing Disruptive Conditions**

##### **4.4.1.1 Current Inspection**

No existing conditions that were disrupting the operation and safety of the CCR unit were noted during the annual inspection.

##### **4.4.1.2 Previous Inspection**

No existing conditions that were disrupting the operation and safety of the CCR unit were noted during the previous inspection.

## 4.4.2 Potentially Disruptive Conditions

### 4.4.2.1 Current Inspection

No existing conditions that could potentially disrupt the operation and safety of the CCR unit were noted.

### 4.4.2.2 Previous Inspection

The following potentially disruptive conditions were observed during the previous inspection.

- **Damage from rodents** was noted due to the presence of surficial holes and rodent carcasses. Continued monitoring and diligence in managing pests was recommended. FDU staff have addressed this item.
- **Minimal damage to above ground leachate transfer piping** was noted during the previous site inspection in 2022. While no leachate discharge was noted, any damaged or excessively worn piping should be fixed or new piping installed. FDU staff have addressed this item.

## 4.5 OTHER CHANGES SINCE PREVIOUS ANNUAL INSPECTION

No other changes to site conditions that appear to have the potential to affect the stability or operation of the facility were noted during the inspection.

## 5.0 FUTURE INSPECTIONS

### 5.1 EXISTING CCR LANDFILL

As stated in 40 CFR 257.84(b)(4), the owner or operator of the CCR unit must conduct the inspection required by paragraphs (b)(1) and (2) of this section on an annual basis. The date of completing the inspection report is the basis for establishing the deadline to complete the next subsequent inspection. Any required inspection may be conducted prior to the required deadline, provided the owner or operator places the completed inspection report into the facility's operating record within a reasonable amount of time. In all cases, the deadline for completing subsequent inspection reports is based on the date of completing the previous inspection report. The owner or operator has completed an inspection when the inspection report has been placed in the facility's operating record.

The next annual inspection of the CCR landfill must be completed within 1 year of the placement of this inspection report in the operating record for the Lon D. Wright Power Plant.

