wfec western farmers electric cooperative

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January 8, 2024

Ms. Hillary Young, P.E.
Chief Engineer
Land Protection Division
Oklahoma Department of Environmental Quality
707 N. Robinson
P.O. Box 1677
Oklahoma City, OK 73162

Re: 2023 Fugitive Dust Control Report and Annual Inspection by a Professional Engineer
Coal Combustion and Residuals (CCR) Landfill
Western Farmers Electric Cooperative (WFEC) - Hugo Power Station, Fort Towson, Oklahoma
Solid Waste Permit No. 3152008

Dear Ms. Young:

Enclosed, please find a copy of the 2023 Annual Fugitive Dust Control Report and the 2023 Annual Inspection Report for the Coal Combustion Residual (CCR) landfill (CCR Unit 1) at Western Farmers Electric Cooperative's (WFEC's) Hugo Facility (Facility). The 2023 Annual Fugitive Dust Control Report is prepared to meet the requirements as outlined in Oklahoma Administrative Code (OAC) 252:517-13-1(c). The 2023 Annual Inspection Report is prepared to meet the requirements as outlined in OAC 252:517-13-5(b)(2).

A copy of this report will be placed in the facility's operating record and on the facility's publicly accessible internet website. Please notify me at 405-247-4298 or at k_fletcher@wfec.com if you have any questions.

Sincerely,

Kent Fletcher

Kent Fletcher
Environmental Coordinator

cc: John McCreight / Western Farmers Electric Cooperative
Chris Schaefer and Bert Smith / Altamira-US, LLC

2023 Annual Inspection Report

WESTERN FARMERS ELECTRIC COOPERATIVE
HUGO POWER STATION
Fort Towson, Oklahoma

January 8, 2024

Prepared for:

Western Farmers Electric Cooperative

P.O. Box 429

Anadarko, Oklahoma 73005

Prepared by:

Altamira-US, LLC

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Oklahoma City, Oklahoma 73105

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ALTAMIRA

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1.0 INTRODUCTION

Western Farmers Electric Cooperative (WFEC) operates and maintains a coal combustion residual (CCR) Landfill (CCR1) at its Hugo Power Station (HPS). WFEC previously operated a permitted CCR Impoundment at the HPS which consisted of two cells (CCR2 and CCR3). Former CCR2 was clean closed as of July 2020. Former CCR3 is also clean closed. Closure activities at former CCR3 were initiated in February 2021. The Oklahoma Department of Environmental Quality (ODEQ) approved certification of CCR removal on May 16, 2023 and final closure of former CCR3 was approved by the ODEQ on August 22, 2023. Pursuant to Oklahoma Administrative Code Chapter 517, Disposal of Coal Combustion Residuals from Electric Utilities (OAC 252:517) and in accordance with the inspection requirements contained in OAC 252:517-13-5(b), an annual inspection of the remaining CCR Unit (CCR1) was conducted in November 2023. Findings from the inspection are included herein.

2.0 FACILITY DESCRIPTION

The HPS is located approximately 3 miles west of Fort Towson, Oklahoma on U.S. Highway 70 in Choctaw County in southeastern Oklahoma. The HPS is a coal-fired electric generating plant owned and operated by WFEC. It went into commercial operation on April 1, 1982 and currently employs one unit that burns Wyoming coal with a net output of 450 net mega-watts. The HPS occupies approximately 2,560 acres, of which approximately 1,200 acres are developed for power plant operations. The HPS generates CCR in the form of fly ash, economizer ash, or bottom ash.

Fly ash and economizer ash are managed at the Landfill CCR unit (CCR1). CCR1 is a two-cell unit landfill located in the southwestern portion of the HPS and covers an area of approximately 35.2 acres. It has a storage capacity of 1,044,000 cubic yards. Fly ash is pneumatically transported from the electrostatic precipitators and temporarily stored in silos near CCR1. Most of the fly ash is sold for beneficial use. The remaining fly ash is placed in the north cell of CCR1. Economizer ash is pneumatically transported to a silo adjacent to the plant and subsequently placed in the north cell of CCR1. Ash is periodically reclaimed from the north cell of CCR1 for sale for beneficial use. Bottom ash (generated from closure of CCR2 and CCR3) was managed in the south cell of CCR1. As of the inspection on November 8, 2023, the approximate volume of CCR contained in the CCR1 is 490,695.35 cubic yards, with an approximate remaining capacity of 553,304.65 cubic yards.

Previously, bottom ash was managed in the Surface Impoundment CCR Unit which was formerly comprised of two cells – a former northern cell (CCR2) and a southern cell (CCR3). CCR2 was clean closed as of July 2020. CCR3 was clean closed as of August 22, 2023. As such, the former surface impoundment CCR Units are no longer inspected under CCR regulation.

3.0 SCOPE

The purpose of the annual inspection is to comply with the requirements of OAC 525:517-13-5 (for CCR Landfills). The regulation requires an annual inspection performed by a "Qualified Professional Engineer" as defined in OAC 252:517-1-3. The CCR Rule specifies the Annual Inspection Report must address the following items for a CCR landfill:

- Changes in geometry since the previous annual inspection.
- Approximate volume of CCR at the time of inspection.
- Appearance of an actual or potential structural weakness.
- Existing conditions that are disrupting or have the potential to disrupt the operation and safety of the impoundment.
- Any other changes which may have affected the stability or operation of the landfill since the previous annual inspection.
- Deficiencies or releases.

4.0 INSPECTION

WFEC contracted with Altamira-US, LLC (Altamira) to perform the annual inspection of CCR1. Altamira's Qualified Professional Engineer (Christopher Schaefer) performed the inspection on November 8, 2023. Mr. Schaefer reviewed available documentation (including 7-Day Checklist forms, appropriate operation manuals, and appropriate construction drawings). Mr. Schaefer conducted a visual inspection of CCR1 (including the integrity of the hydraulic structures that passed through the cells of CCR1 to the extent possible). The inspection included walking around the CCR1 and making observations, taking notes, and taking photographs. Any berm issues, vegetation growth, or other potential detrimental activity were noted during the visual inspection. Field data and measurements were obtained as applicable for completion of the requirements of the Annual Inspection Report.

5.0 FINDINGS

The following inspection findings are reported according to OAC 252:517-13-5 based on field observations, measurements, and data provided by WFEC.

Regulation Citation OAC 252:517-13-5(b)(1)(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. results of inspections by a qualified person, and results of previous annual inspection).*

Findings: Altamira reviewed available information including the previous annual inspection report, and 7-Day Inspection checklist forms from the past year.

- The previous inspection report did not reveal any deficiencies or releases from CCR1. From the report, a small seep of apparent perched water was observed near the southeast corner of the south cell of CCR1. This seep was believed to be associated with heavy rainfalls that occurred prior to the inspection and did not appear to constitute a release or indicate a significant sign of distress or malfunction of CCR1. Because animals (like feral hogs) had rooted alongside the seep, forming a small channel downgradient of the seep, it was recommended that the seep, channel, and areas that had been rooted be corrected. Between late December 2022 and early January 2023 WFEC conducted remedial efforts. These efforts included clearing the area, digging below the noted seep and channel/rooted areas, and placement and compaction of new material to achieve the original topography. The report noted that bottom ash removed from closure of CCR3 was placed in CCR1. The report also noted that under the HPS standard practice, slope sloughs and other maintenance issues are noted on the 7-day Inspection checklist forms and logged into the HPS mechanical maintenance system.

- A review of 7-Day Inspection checklists from November 2022 through November 2023 did not indicate any structural issues, deficiencies, or releases.

Regulation Citation OAC 252:517-13-5(b)(1)(B) - *A visual inspection of the CCR unit to identify signs of distress or malfunction of the CCR unit.*

Findings: CCR1 was visually inspected on November 8, 2023. The inspection included walking around the structure, taking photographs, and taking notes. At the time of inspection, a portion of the north cell of CCR1 contained water from recent precipitation. According to WFEC personnel, water periodically accumulates in this cell following precipitation and this cell is then

drained as soon as practicable. Also, a sump area containing water and a pump was observed near the southwest corner of the south cell of CCR1. This area is to drain water from bottom ash that was generated from closure of CCR3 and placed in the south cell of CCR1. At the time of inspection, no apparent seeps were observed from CCR1. The seep, channel, and rooted area as observed in November 2022 appeared to be repaired. There was no evidence indicative of a release or any significant signs of distress or malfunction of CCR1. Some wooded vegetation was observed in the southwest portion of the southern cell of CCR1. It is recommended that WFEC take efforts to remove this vegetation when practicable.

Regulation Citation OAC 252:517-13-5(b)(2)(A) - *Any changes in geometry of the structure since the previous annual inspection.*

Findings: No noticeable changes appear to have occurred to the geometry of CCR1 since the previous annual inspection report.

Regulation Citation OAC 252:517-13-5(b)(2)(B) - *The approximate volume of CCR contained in the unit at the time of inspection.*

Findings: As of the inspection on November 8, 2023, the approximate volume of CCR contained in the CCR1 is 490,695.35 cubic yards, with an approximate remaining capacity of 553,304.65 cubic yards.

Regulation Citation OAC 252:517-13-5(b)(2)(C) - *Any appearances of an actual 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.*

Findings: The visual inspection revealed that CCR1 was in general good condition. The dikes of CCR1 were designed and constructed at two (2) horizontal to one (1) vertical slope. These slopes require monitoring and occasional repair of sloughing. No conditions were identified that are disrupting or have the potential to disrupt the operation and safety of the CCR unit.

Regulation Citation OAC 252:517-13-5(b)(2)(D) - *Any other change(s) which may have affected the stability or operation of the CCR unit since the previous annual inspection.*

Findings: There were no changes identified that would affect the stability or operation of CCR1 since the previous annual inspection report.

6.0 SUMMARY AND CONCLUSIONS

In November 2023, an annual inspection of CCR1 was completed pursuant to Oklahoma Administrative Code Chapter 517, Disposal of Coal Combustion Residuals from Electric Utilities (OAC 252:517) and in accordance with the inspection requirements contained in OAC 252:517-13-5(b).

- At the time of inspection, a portion of the north cell of CCR1 contained water from recent precipitation. According to WFEC personnel, water periodically accumulates in this cell following precipitation and this cell is then drained as soon as practicable. Also, a sump area containing water and a pump was observed near the southwest corner of the south cell of CCR1. This area is to drain water from bottom ash that was generated from closure of CCR3 and placed in the south cell of CCR1. As of the inspection on November 8, 2023, the approximate volume of CCR contained in the CCR1 is 490,695.35 cubic yards, with an approximate remaining capacity of 553,304.65 cubic yards.

- The area of apparent perched water and rooting near the southeast corner of the south cell of CCR1 (as noted in the Year 2022 annual inspection report) has been corrected. At the time of inspection, no apparent seeps were observed.

- There was no evidence indicative of a release or any significant signs of distress or malfunction of CCR1.

- Some wooded vegetation was observed in the southwest portion of the southern cell of CCR1. It is recommended that WFEC take efforts to remove this vegetation when practicable.

- Under the HPS's standard practice, slope sloughs and other maintenance issues are noted on the 7-Day Inspection Checklist forms and logged into the HPS' mechanical maintenance system. Specifically, slope sloughs are assigned maintenance work orders by priority based on location and severity of the slough. Severity of a slope slough is objective and based on the amount of displaced material.

This annual inspection under the CCR Rule did not reveal any deficiencies or releases in CCR1. Altamira finds that CCR1 is designed, constructed, operated, and maintained consistent with recognized and generally accepted good engineering standards and no signs of distress or malfunction were identified at CCR1. It is recommended that WFEC take measures as practicable to remove vegetation that was observed in the south cell of CCR1.

7.0 ENGINEERING CERTIFICATE

Pursuant to OAC 252:517-13-5, and by means of this certification I attest that:

(i) I am familiar with the requirements of OAC 252:517;

(ii) I, or my agent, have visited and inspected the CCR units at the facility that are the subject of the Annual Inspection Report;

(iii) The aforementioned inspection(s) and this Annual Inspection Report have been conducted and prepared in accordance with good engineering practices, including consideration of applicable industry standards, and with the requirements of the CCR Rule; and

(iv) This Annual Inspection Report meets the requirements of OAC 252:517

(v) I am a "Qualified Professional Engineer" as defined in OAC 252-517-1-3 by the fact that I have the technical knowledge and experience to make specific technical certifications set forth herein.