



REPORT

Corrective Measures Report

Stanton Station - Bottom Ash Impoundment

Submitted to:

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1.0 INTRODUCTION

WSP USA Inc. (WSP) has prepared this report to document corrective measures implemented at the Bottom Ash Impoundment Coal Combustion Residual (CCR) Surface Impoundment at Great River Energy's (GRE) Stanton Station. Corrective measures were implemented in response to a non-groundwater release of CCR contact water during emptying of the sump dewatering system double-wall tank. The CCR units discussed in this report are regulated by the North Dakota Department of Environmental Quality (NDDEQ) under Permit Number 0043 in accordance with North Dakota Administrative Code (NDAC) 33.1-20, Solid Waste Management and Land Protection. The CCR units discussed in this report are also regulated under the United States Environmental Protection Agency (USEPA) CCR Rule, 40 Code of Federal Regulations (CFR) Part 257. This report has been prepared in accordance with 40 CFR Part 257.83(b)(5) which states, "If a deficiency or release is identified during an inspection, the owner or operator must remedy the deficiency or release as soon as feasible and prepare documentation detailing the corrective measures taken."

2.0 BACKGROUND

Stanton Station was a coal-fired electric generation facility located along the Missouri River in Mercer County, approximately 3 miles southeast of Stanton, North Dakota. The Bottom Ash CCR Landfill (Bottom Ash Landfill) and Bottom Ash CCR Surface Impoundment (Bottom Ash Impoundment) are the two CCR units on site covered under the Federal and State CCR rules. Locations of the CCR units are shown in Figure 1.

CCR unit closure and site restoration activities began in 2019 and were completed in the summer of 2020. The south cell of the Bottom Ash Impoundment was closed with permitted wastes remaining in place and in accordance with the final cover design outlined in the Closure and Post-Closure Plan (GAI 2019).

Closure of the Bottom Ash Impoundment includes dewatering of the south cell. To aid in dewatering the south cell of the Bottom Ash Impoundment, an automated dewatering system was installed near the sump that includes a double-wall tank surrounded by a tertiary spill containment barrier to primarily capture potential spills from piping to and from the tank. Water pumped from within the Bottom Ash Impoundment is pumped to the tank for storage prior to disposal off-site.

3.0 NON-GROUNDWATER RELEASE AND CORRECTIVE MEASURES

As part of routine operations to empty the Bottom Ash Impoundment tank, a vacuum truck is used to remove water from the tank. While emptying the tank on the morning of July 2, 2025, the vacuum truck was filled beyond capacity, resulting in a spill of approximately 20 to 40 gallons of water to the gravel pad located near the tank.

3.1 Identified Release

The leachate spill was immediately identified by the onsite dewatering contractor and was contained to the uppermost zone of the gravel pad and roadway constructed on the crown of the Bottom Ash Impoundment and the perimeter berm crest. The leachate evaporated or infiltrated into the near-surface gravel pad materials near the tank, with no evidence that the leachate traveled beyond the immediate area of the spill. Figure 2 and Figure 3 document the identified area where the spill occurred. The spill was reported to the NDDEQ in accordance with required reporting procedures.



Figure 2: Area of identified spill, north and east of the Bottom Ash Impoundment tank (looking southwest). For reference, the tank is approximately 9.5 feet tall.



Figure 3: Area of identified spill east of the Bottom Ash Impoundment Tank looking west towards the tank unloading valve/spigot near the bottom of the tank and gravel tank pad.

3.2 Remedy and Corrective Measures

Following the spill, the onsite earthworks contractor (Baranko Companies) excavated soils visually impacted by the spill on July 3, 2025. Material was excavated from the gravel pad and adjacent roadway northeast of the tank, including underneath the tertiary spill containment barrier installed around the Bottom Ash Impoundment tank. Approximately 4 cubic yards of impacted earthen material were removed. Figure 4a, 5a, and 6a show the area following excavation of the impacted materials and Figure 4b, 5b, and 6b show the area after backfilling to original grades and regrading the impacted area to maintain site access and allow surface water drainage



Figure 4: Impacted area east of the Bottom Ash Impoundment tank looking west a) after excavation of impacted tank pad earth materials and b) after backfilling and regrading activities.



Figure 5: Impacted roadway area north of the Bottom Ash Impoundment tank looking west a) after excavation of impacted roadway earthen materials and b) after backfilling and regrading activities.



Figure 6: Impacted tank pad earth materials excavated northeast and beneath the tertiary spill containment barrier a) after excavation of earthen materials and b) after backfilling and regrading activities.

3.3 Monitoring of the Corrective Measure

To assess the effectiveness of the corrective measure and the potential for additional releases, the following approaches will be used:

- Owner representative personnel (GRE or their consultant, WSP) are scheduled to be on site to observe the next tank emptying event.
- Alterations were made to the tank emptying procedure to prevent spillage, including a requirement to ensure that vacuum is being pulled by the vacuum truck prior to attaching the hose to the tank.

4.0 CONCLUSIONS

Based on observations made by GRE, WSP, and Baranko Companies personnel, a spill occurred during emptying of the Bottom Ash Impoundment tank. In accordance with USEPA CCR Rule, 40 CFR Part 257.83(b)(5) which states, "If a deficiency or release is identified during an inspection, the owner or operator must remedy the deficiency or release as soon as feasible and prepare documentation detailing the corrective measures taken," the following steps were taken after identifying the release:

- The release was reported to the NDDEQ.
- The materials impacted by the release were excavated for disposal and the area was regraded to original grades to allow continued site access and surface water drainage.
- Additional observation and operational changes were implemented to decrease the likelihood for such releases or spills in the future.
- The implemented corrective measures are documented with this report.

Monitoring of the groundwater of the facility is ongoing, and will be used to continue to determine the efficacy of corrective measures.

Signature Page

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[https://wsponlinenam.sharepoint.com/sites/gld-170737/project files/5 technical work/2025 - stanton non-gw/tank corrective measure/for admin/gl21509219.000_rpt_cm-tankspill_jul2025.docx](https://wsponlinenam.sharepoint.com/sites/gld-170737/project%20files/5%20technical%20work/2025%20-%20stanton%20non-gw/tank%20corrective%20measure/for%20admin/gl21509219.000_rpt_cm-tankspill_jul2025.docx)

5.0 REFERENCES

GAI (Golder Associates Inc.). 2019. Closure and Post-Closure Plan, Revision 1, Bottom Ash CCR Surface Impoundment – Stanton Station. September 2019.

USEPA (United State Environmental Protection Agency). 2015. Code of Federal Regulations Title 40 Part 257: Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities. April 17, 2015.

Figure



NOTE(S)

1. AERIAL IMAGERY FROM UNITED STATES DEPARTMENT OF AGRICULTURE NATIONAL AGRICULTURE IMAGERY PROGRAM, 2023.





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