



November 8, 2021

FY2021 Annual Inspection of CCR Facilities, Allen Fossil Plant – East Ash Disposal Area, Shelby County, Tennessee

Introduction

The FY2021 Annual Inspection of CCR facilities at the Tennessee Valley Authority's (TVA's) Allen Fossil (ALF) Plant included review of the East Ash Disposal Area facility. The field reconnaissance was performed on September 15, 2021. The weather at the time of the inspection was cloudy and 85 degrees Fahrenheit. Less than 0.1 inches of rain was recorded during the week prior to the inspection.

The results of the field inspection (inspection forms, photo logs, and site layout maps) and instrumentation review are included within this report and the attached documents. This report and attachments were prepared in accordance with the guidance document prepared in 2020 by TVA's CCR Structural Stability Program titled "Performance Monitoring of CCR Storage Facilities".

Data Review

Documents reviewed prior to performing the field work included:

- Previous Inspection Reports
- Monthly Instrumentation Reports
- Instrumentation Performance Reports
- Construction Record Drawings and Certification Reports
- Published CCR Rules established by the EPA CCR Rule demonstrations available on TVA's publicly available CCR Rules Website

These documents were reviewed for previously identified areas of interest, potential locations of structural weakness, instrumentation condition and readings, and documentation of any construction activities that occurred since the previous annual inspection.

General Conditions

The East Ash Disposal Area is an inactive ash storage facility, that previously received sluiced fly ash and boiler slag from the plant, storm water runoff from across the ALF facility, and effluent from various other plant operations and sumps. The East Ash Disposal Area historically consisted of the Coal Yard Run-Off Pond, Dredge Cells, Main Ash Pond, and Stilling Pond (from west to east). During operation, the ALF CCR sluice water and process water flowed into the Dredge Cells with various piping, before flowing to the Main Ash Pond and then Stilling Pond, before discharge to McKellar Lake via NPDES Outfall 001. Stormwater run-off from the Coal Yard was piped to the Coal Yard Run-Off Pond for settling of coal fines, before flowing into the

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Main Ash Pond. ALF ceased coal firing operations in March 2018. In April 2019, all flows into the East Ash Disposal Area ceased, as a result of decommissioning of the plant and redirection of stormwater flows.

Currently, this unit is under construction as part of the East Ash Disposal Area Closure project, and drawdown and dewatering activities are underway. The Coal Yard Run-Off Pond is currently being excavated to native soil and regraded to facilitate the greater East Ash Disposal Area Closure project. The NPDES Outfalls 001 and 001A for the Stilling Pond are currently inactive, and all stormwater flows leaving the East Ash Disposal Area are being pumped through an on-site water treatment facility prior to discharge to the Mississippi River via the Outfall 002 discharge channel.

Additional information and inspection observations about the East Ash Disposal Area can be found in Attachment A.

A general overview of site conditions is provided below.

- A good stand of grass is generally maintained on the slopes of the perimeter dikes. No bare spots were observed during the inspection.
- No instabilities were observed in the perimeter dikes during the inspection.
- Various maintenance activities at the facilities have been performed since the previous annual inspection, including repairing animal burrows and maintaining vegetation. No new maintenance needs were observed during the inspection.
- No evidence of sinkholes or major depressions was observed during the inspection.
- Outlet structures and drainage pipes were observed during the inspection to be in generally good condition.
- No evidence of unsafe or unreliable operational conditions was observed during the inspection.

The inspection team did not observe any deficiencies that would be considered significant. Significant inspection findings are conditions that indicate that the integrity of a significant or high hazard potential water retaining structure could be in jeopardy (potential loss of life and/or significant property damage) if corrective action is not taken. For dikes and embankments, significant findings might include, but not be limited to, crest settlement, sloughing or wet areas in the downstream slope, increase in the volume of seepage or seepage containing soils, or adverse changes in piezometric levels.

Areas of Interest

No structural deficiencies, unstable areas, or maintenance deficiencies were observed during the inspection.

Instrumentation

Available instrumentation data was reviewed from November 17, 2020 through September 15, 2021. This data included automated and manual water level readings obtained at the piezometers. Instrumentation data

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is analyzed monthly by TVA for significant fluctuations in piezometers water levels. A table of the maximum reported instrumentation readings and an instrumentation figure are provided in Attachment A.

CCR Rule Compliance

Based on 40 CFR §257.83 and §257.84 from the published EPA CCR Rules, various metrics are required to be provided at each CCR impoundment and landfill facility for the annual inspection in addition to the visual assessment of the CCR units. A table of these metrics is presented in Attachment B.

Regards,

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Attachment: Attachment A – East Ash Disposal Area Documents
Attachment B – CCR Rule Requirements Table

**ATTACHMENT A
EAST ASH DISPOSAL AREA DOCUMENTS**

- **Inspection Checklist**
- **Site Layout**
- **Photo Log**
- **Observation Log**
- **Instrumentation Layout**
- **Instrumentation**

ATTACHMENT B
CCR RULE REQUIREMENTS TABLE