



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-0435

DAVID W. SALYERS, P.E.
COMMISSIONER

BILL LEE
GOVERNOR

November 25, 2019

Via Electronic Mail to wdwhite0@tva.gov

Attn: W. Douglas White, NEPA Specialist
Tennessee Valley Authority
400 West Summit Hill Drive, WT 11B-K
Knoxville, TN 37902

Dear Mr. White:

The Tennessee Department of Environment and Conservation (TDEC) appreciates the opportunity to provide comments on the Tennessee Valley Authority (TVA) *Draft Environmental Impact Statement* (EIS) which addresses the potential environmental effects associated with the future management of coal combustion residuals (CCR) material at the Allen Fossil Plant (ALF) located in Shelby County, Tennessee, southwest of the City of Memphis. According to TVA, the purpose of the Draft EIS is to support the implementation of TVA's goal to eliminate all wet CCR storage at its coal plants by closing CCR surface impoundments across the TVA system, and to assist TVA in complying with the Environmental Protection Agency's (EPA) CCR Rule. In addition, the proposed actions would make the ALF closure area land available for future economic development projects in the greater Memphis area. TVA has evaluated closure of the East Ash Pond Complex, the West Ash Pond, and the Metal Cleaning Pond.¹ In addition to these closures, TVA has analyzed potential location requirements and environmental impacts associated with construction and utilization of a proposed beneficial re-use facility to process CCR materials. TVA has also evaluated potential impacts associated with actions requiring use of permitted borrow sites and the disposal of CCR at existing off-site permitted landfills.

On August 6, 2015, TDEC issued a Commissioner's Order (TDEC Order) to the TVA directing the investigation, assessment and remediation of all coal ash disposal sites across Tennessee. The requirements of the TDEC Order are supplemental to the CCR rule. TDEC recognized that TVA may, in compliance with the federal CCR rule requirements, elect to close CCR surface impoundments and/or landfills before the full extent of contamination at a site has been determined. However, TDEC's Order makes it clear that if TVA elects to do so, it may be later required by the Order to take other and further

¹ Two project areas for ash impoundment closures have been identified at ALF including the East Ash Pond Complex project area and the West Ash Pond project area. The East Ash Pond Complex project area includes dredge cells on the western end, the east ash pond in the central part, a stilling pond and the Coal Yard Runoff Pond. The West Ash Pond project area includes the West Ash Pond and the Metal Cleaning Pond. Collectively, there are approximately 3.5 million cubic yards (yd³) of CCR remaining in the surface impoundments and below the Coal Yard Runoff Pond and Metal Cleaning Pond at ALF.

remedial actions. TDEC's review and comment on TVA's Management of CCR from ALF Draft EIS shall not be deemed as an approval of actions required under the Order or as a waiver of any requirement of the Order.

Actions considered in detail within the Draft EIS include:

- **Alternative A – No Action Alternative** – Under the No Action Alternative, TVA would not close the East Ash Pond Complex or the Metal Cleaning Pond, and the West Ash Pond would remain in its current closed state. No closure activities (i.e., no excavation or transport activities) would occur. However, according to TVA, the No Action Alternative is inconsistent with TVA's plans to convert all of its wet CCR systems to dry systems and is inconsistent with the general intent of EPA's CCR Rule. In addition, under the No Action Alternative, the ALF closure area land would not be made available to its owners for future economic development projects in the greater Memphis area. Consequently, this alternative would not satisfy the project Purpose and Need and, therefore, is not considered viable or reasonable. It does, however, provide a benchmark for comparing the environmental impacts associated with implementation of Alternatives B and C.

TVA will continue to collect groundwater samples from existing monitoring wells and review the analytical results as a part of the TDEC Order, the EPA's CCR Rule, and other regulatory requirements. TVA is also implementing the Interim Response Actions (IRA) and corrective measures to control and begin treating impacted groundwater identified in some shallow aquifer monitoring wells around the East Ash Pond Complex.

- **Alternative B – Closure of the Metal Cleaning Pond, Closure-by-Removal of the East Ash Pond Complex and the West Ash Pond; Disposal of CCR in an Offsite Landfill Location** – Under Alternative B, the primary actions include the closure of the East Ash Pond Complex, the West Ash Pond and the Metal Cleaning Pond via Closure-by-Removal. Closure-by-Removal involves excavation and relocation of the CCR from the ash impoundments in accordance with federal and state requirements. TVA would stabilize residual ponded areas and then remove CCR material, underlying impacted soil, and support structures within the impoundment footprint. Closure activities would include:
 - Excavation of ash using a tracked excavator
 - Mechanical moisture conditioning the excavated ash by dumping, scooping, and windrowing the ash within the existing footprint of the impoundment or pond until it is sufficiently dried for hauling
 - After drying, ash would be hauled to an existing, offsite permitted landfill
 - Over-excavation of soil within the CCR unit footprint
 - Upon completion of closure activities, impoundments would be restored to a natural soil and vegetated state

The following are approximate amounts of CCR in the East Ash Pond Complex (includes the Coal Yard Runoff Pond) project area and the West Ash Pond project area:

- East Ash Pond Complex: 3,000,000 yd³
- West Ash Pond: 500,000 yd³ (includes CCR located under the metal cleaning pond)

Other specific actions proposed for the East Ash Pond Complex project area would include:

- All or part of the Stilling Pond east containment dike would be regraded or removed and used for fill onsite
- Up to two storm water outfalls would be constructed into the Horn Lake Cutoff drainage area (directly east of the Stilling Pond). TVA intends to construct these outfalls above the ordinary high water mark elevation (210 feet)
- Outfall 001A would be abandoned. This would likely consist of a combination of excavation and demolition of the existing risers/outfall pipes and/or placement of graded aggregate/rip-rap and may result in minor fill placement below the ordinary high water mark elevation (210 feet)
- Potential minor modifications to the Ensley Levee (subject to U.S. Army Corps of Engineers (USACE) approval) which may include near surface utility relocation/abandonment on (or near) the levee, removal of existing CCR/fill materials against the levee, and placement of engineered fill against the levee
- Subsurface utility relocation north and south of the Ensley Levee. The relocated utilities would be located along the same general alignment area and depths as the existing force main pipe that crosses the East Ash Pond. The portion of this work north of the USACE levee would require minor excavation and backfilling operations.
- Temporary construction access along the toe of the Ensley Levee to access Outfall 001 and the toe of the south containment dike to access the City of Memphis sewers
- Installation of erosion control measures such as silt fencing, wattles, and other measures as appropriate

TVA would also close the Coal Yard Runoff Pond as part of the closure of the East Ash Pond Complex. Closure of the Coal Yard Runoff Pond would include:

- Dewatering and drying the sediments and CCR underneath the Coal Yard Runoff Pond to a condition that they can be excavated
- After drying, the sediments, CCR dikes, and CCR foundation materials would be excavated and disposed of with the rest of the CCR materials excavated from the East Ash Pond Complex project area

Other specific actions proposed for the West Ash Pond project area would include:

- Potential minor modifications to the Ensley Levee (subject to USACE approval) which may include near surface utility relocation/abandonment on (or near) the levee, removal of existing CCR/fill materials against the levee, and placement of engineered fill against the levee

- CCR under the metal cleaning pond would be removed, and the area would be backfilled and closed
- Installation of erosion control measures such as silt fencing, wattles, and other measures as appropriate

The procurement and transport of borrow material is a “component action” under this alternative. Closure of the surface impoundments at ALF would entail the addition of borrow material to achieve proposed finished grades and provide a suitable medium to support restoration of the former impoundment with approved, non-invasive seed mixes designed to quickly establish desirable vegetation. As part of this component action, Closure-by-Removal of the ponds is expected to require approximately 3 million yd³ of suitable borrow material. No specific site has been identified at this time and ultimate site selection will be left up to the contractor. As part of the contracting process to obtain borrow, TVA will require that any borrow material be obtained from a previously developed and/or permitted site. Accordingly, potential impacts associated with the transport of borrow material to ALF are based upon bounding characteristics of this action that are based upon the use of a range of identified candidate sites in the vicinity of ALF.²

- **Alternative C – Closure of the Metal Cleaning Pond, Closure-in-Place of the East Ash Pond Complex and West Ash Pond; Disposal of CCR in a Beneficial Re-Use Process & Offsite Landfill Location** – Under Alternative C, TVA would close the surface impoundments in the same manner as Alternative B. However, instead of transporting all excavated CCR material to an offsite landfill, most CCR (ranging from approximately 75 to 95 percent) would be transported to a beneficial re-use facility to be processed for use in concrete and other building materials. Borrow material suitable for use as backfill within the ALF ponds would also be required under this alternative similar to that described for Alternative B.

No specific provider of the beneficiation services or the specific site at which a beneficial reuse processing facility would be constructed has been developed at this time. However, TVA recognizes that such a facility has the potential to be constructed and operated because TVA has the necessary raw materials (i.e., CCR) to make such a facility viable. Therefore, while TVA does not intend to own or operate the facility, TVA recognizes that such a facility is an action that is “connected” to TVA’s action of potential Closure-by-Removal of TVA’s ash ponds. As described in 40 Code of Federal Regulations (CFR) 1508.25, connected actions are those that “...are closely related and therefore should be discussed in the same impact statement. Actions are connected if they:

- (i) Automatically trigger other actions which may require environmental impact statements.
- (ii) Cannot or will not proceed unless other actions are taken previously or simultaneously.
- (iii) Are interdependent parts of a larger action and depend on the larger action for their justification.”

² Offsite transport of CCR is another component action to be undertaken in conjunction with Alternative B. As described in detail in Draft EIS Sections 2.4.1.3 to 2.4.1.5, TVA considered the transport of CCR materials to an existing permitted offsite landfill for disposal by either truck or rail, or barge.

Because it is expected that such a facility would not be sited and constructed in the vicinity of ALF but for the presence of available CCR at ALF, this facility is also evaluated as a “component action” in this EIS. Based upon information provided by potential vendors, TVA has developed information to characterize the beneficiation facility and its associated processes to support an analysis of environmental impacts of such a facility in conjunction with Alternative C in Chapter 3 of the Draft EIS.

This alternative, therefore, includes a consideration of the potential effects of a beneficial re-use facility as a means of processing and reusing the CCR from ALF. A specific site for the potential beneficial re-use processing facility has not been identified. Therefore, impacts of this option for CCR disposal are based on a bounding analysis of the characteristics of a representative beneficial re-use processing facility. Following completion of this EIS, if a site is identified for use that does not fall within the criteria of the bounding analysis, a supplemental NEPA document will be required.

TDEC has reviewed the Draft EIS and provides the following comments:

General Comments

In accordance with the TDEC Order, prior to initiating any closure activities at ALF, TVA should provide plans, drawings, and a narrative description of measures that will be used to protect existing monitor wells or other infrastructure installed or relied upon for the Remedial Investigation and Environmental Investigation at ALF. Additionally, TVA shall provide final drawings to TDEC for review prior to initiation of closure construction activities.

Cultural and Natural Resources

TDEC believes the Draft EIS adequately addresses potential impacts to cultural and natural resources within the proposed project area.³

Air Resources

The ALF TVA facility located in Shelby County falls under the permitting and regulatory jurisdiction of the local Shelby County Health Department’s Air Pollution Control Program rather than TDEC’s State Division of Air Pollution Control Program and as such would be required to have any existing permit modifications or new permits processed and issued through that local program. Additionally, the local program would be responsible for evaluation of the effectiveness of all fugitive dust control measures and National Emission Standards for Hazardous Air Pollutants Regulated Asbestos Containing Material

³ This is a state-level review only and cannot be substituted for a federal agency Section 106 review/response. Additionally, a court order from Chancery Court must be obtained prior to the removal of any human graves. If human remains are encountered or accidentally uncovered by earthmoving activities, all activity within the immediate area must cease. The county coroner or medical examiner, a local law enforcement agency, and the state archaeologist’s office should be notified at once (Tennessee Code Annotated 11-6-107d).

(ACM) Demolition and Renovation notifications submitted during the project. TDEC encourages TVA to include these additional details in the Final EIS.

TVA has described adequate measures to mitigate fugitive dust emissions likely to be generated during the site closure and transport phases of the project. If the site deconstruction is also planned to occur at the same time, additional consideration should be given to insure that demolition related emissions are minimized, that any ACM is identified and managed properly during demolition and that the appropriate notifications be provided prior to demolition activity commencing. TDEC encourages TVA to include these additional details in the Final EIS.

The amount of material to be processed if only considering the removal of CCR materials is substantial and will require a significant number of dump trucks and related loading vehicles for use on site. The use of truck wheel washing stations and wetting; will likely reduce the possible track-out of CCR materials onto local roads and highways leading to the disposal locations. Alternative locations in the region where disposal would be accomplished by barge and rail car transport were also considered, and are a considerable distance from the removal work site(s). Truck transport would be limited to no more than 30 miles from the CCR removal site. Emissions generated by the gasoline and diesel fueled trucks and construction equipment used on and offsite are expected to be transitory and minimized through the use of proper maintenance and new emissions control technologies and fuels. TDEC encourages TVA to include these additional details in the Final EIS.

Solid Waste

In June 2019, TVA released a Draft Environmental Assessment (EA) which evaluated the disposition of buildings and physical structures at ALF. The Draft EA identified that certain aspects of decontamination and deconstruction would be influenced by future decisions relating to closure of ALF ash impoundments, specifically as outlined in Sections 2.1 of the Draft EA. In Section 2.1, TVA listed the buried Condenser Cooling Water (CCW) tunnel that runs through/beneath the West Ash Pond as “determine the status...at a later date”. Given TVA’s proposed plan to excavate and beneficially reuse and/or dispose of CCR material from the West Ash Pond, TVA will need to address the CCW tunnel removal/closure, or if not provide additional details as to how this activity will not impact the CCW tunnel. TDEC encourages TVA to provide additional discussion relating to this in the Final EIS. With respect to the preferred alternative, closure activities include but are not limited to excavation of ash, mechanical moisture conditioning, hauling of ash, onsite borrow material transport, over-excavation of soil within the CCR unit footprint, and natural/vegetative restoration of closed impoundments. Per Section 3.12 “Solid and Hazardous Waste” of the Draft EIS, it is understood that the implementation the proposed plans for closure and restoration will entail the generation of various hazardous and solid wastes as described in Table 3-17 (pp. 131-132). Per the Draft EIS, there are multiple best management practices and mitigation measures that TVA would utilize to avoid or reduce adverse impacts from either of the assessed alternatives (p. 82-83). TDEC recommends that the Final EIS consider and explicitly reflect that any wastes associated with such activities in Tennessee be managed in accordance with the Solid and Hazardous Waste Rules and Regulation of the State of Tennessee (TDEC DSWM Rule 0400 Chapters 11 and 12, respectively).

Water Resources

Alternative B would require a construction stormwater general permit (CGP) including a Storm Water Pollution Prevention Plan (SWPPP). Two outfalls to McKellar Lake would be abandoned and two new outfalls would need to be created for Horn Lake Cutoff, requiring either a National Pollutant Discharge Elimination System (NPDES) permit modification or the issuance of a new permit. Modifications to the Multi-Sector General Stormwater Permit's (TMSP) would need to be changed to reflect the closure changes. Additionally, it is possible that there would be additional monitoring requirements. TDEC encourages TVA to reflect this information in the Final EIS.

Alternative C would also require a CGP, modifications or reissuance of an NPDES permit and a TMSP. An Aquatic Resource Alteration Permit (ARAP) could be necessary if there will be any alterations to wet weather conveyances, streams, wetlands, or other aquatic resources. It is possible that there would be additional monitoring requirements. If the facility will rely on a septic system or a stand - alone sewer treatment system, they would have to be permitted as well. The septic system would likely be considered a large capacity septic system. TDEC encourages TVA to reflect this information in the Final EIS.

The Draft EIS does not address or have any effect on the TVA IRA for treatment of arsenic in groundwater at ALF resulting from the TDEC Order. TDEC encourages TVA to include a statement regarding this in the Final EIS.

TDEC appreciates the opportunity to comment on this Draft EIS. Please note that these comments are not indicative of approval or disapproval of the proposed action or its alternatives, nor should they be interpreted as an indication regarding future permitting decisions by TDEC. Please contact me should you have any questions regarding these comments.

Sincerely,



Matthew Taylor
Senior Policy Analyst, Office of Policy and Sustainable Practices
Tennessee Department of Environment and Conservation
Matthew.K.Taylor@tn.gov
(615) 532-1291

cc: Kendra Abkowitz, TDEC, OPSP
Chuck Head, TDEC, BOE
Lisa Hughey, TDEC, DSWM
Tom Moss, TDEC, DWR
Robert Wilkinson, TDEC, BOE