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

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October 9, 2019

Via Electronic Mail to arfarless@tva.gov
Attn: Ashley Farless, NEPA Specialist
Tennessee Valley Authority
1101 Market Street, BR2C-C
Chattanooga, TN 37402

Dear Ms. Farless:

The Tennessee Department of Environment and Conservation (TDEC) appreciates the opportunity to provide comments on the Tennessee Valley Authority (TVA) *Bottom Ash Dewatering* (BADW) *Facility Permanent Flow Management System Draft Supplemental Environmental Assessment* (EA) for Gallatin Fossil Plant (GAF) in Sumner County, Tennessee. TVA is preparing a SEA to address the potential environmental effects associated with a permanent flow management system to treat process wastewater at GAF. The SEA supplements an Environmental Assessment (EA) and subsequent Finding of No Significant Impact (FONSI) that TVA issued in 2017, which evaluated a BADW system that is currently under construction at GAF.[1] According to TVA, the permanent flow management system would work in conjunction with the BADW system to treat process wastewater at the site and assist TVA in complying with state requirements, the Environmental Protection Agency's (EPA) Coal Combustion Residual (CCR) Rule and TVA's own plans to transition to dry storage of CCR. This project would allow TVA to permanently handle process flows without use of the existing surface impoundments which is required by the CCR Rule.

Actions considered in detail within the Draft SEA include:

- **Alternative A – No Action Alternative** – This is TVA's preferred alternative. The EPA CCR Rule requires TVA to stop sluicing CCR material to surface impoundments on-site at GAF by EPA's deadline for CCR Rule compliance. To meet this goal, TVA needs to divert and/or treat all process water flows from the plant, coal yard, and coal handling areas that go to the Ash Pond Complex. To accomplish this, TVA has implemented an interim flow management system. However, according to TVA, this system is not intended to permanently replace use of the surface impoundments. Ultimately, CCR will be permanently dried and managed using the on-site BADW facility and a permanent flow management system. Under the No Action Alternative, TVA would continue to use the interim flow management system as the permanent flow management system after several minor modifications are made (e.g., removal/abandonment of some discharge piping or tanks) and it is connected with the BADW facility.[2] The current interim flow management

[1] Process wastewater is no longer being sluiced to onsite ash ponds at GAF, and is currently being sent to an interim flow management system while TVA constructs the BADW facility.
[2] The interim flow management system consists of piping and a series of tanks designed to provide temporary bottom ash dewatering and process wastewater treatment. A primary settling tank receives process flow discharged from the existing bottom ash sluice piping and is

system would continue treatment operations until construction on the new BADW facility is completed and it becomes operational. Under Alternative A, the Bottom Ash Pond would not be closed, and the process water basin(s) would not be constructed. According to TVA, as they have progressed with the interim flow management system, TVA has learned that these tank systems are an efficient and effective way to treat process water flows to maintain compliance with the GAF National Pollutant Discharge Elimination System (NPDES) permit limits. It is anticipated that the system will further improve once the BADW facility is completed and operational. Therefore, TVA has elected not to construct the process water basin(s) to treat water in conjunction with the BADW facility at this time.

- **Alternative B – Closure of the Bottom Ash Pond, Construction of Process Water Basin(s) and Permanent Flow Management System[3] –** Under Alternative B, the existing Bottom Ash Pond would be closed. TVA proposes to close the pond by removal and would excavate all visible bottom ash and some soil (approximately 1 foot) under the bottom ash within the approximate 15-acre pond limits. Excavated bottom ash and soil would be removed and transported by truck to the on-site landfill where it would be temporarily stockpiled or beneficially reused for appropriate and approved uses within the landfill.

  An approximate 10-acre process water basin (or two basins equaling approximately 10 acres) would be constructed in the former location of the Bottom Ash Pond following removal of all CCR and an appropriate amount of the underlying soil in that location. Backfill from an approved source (e.g., GAF borrow site) would be obtained and the area would be lined with a geosynthetic liner underlain by a clay liner to prevent seepage through the basin. The process water basin(s) would be incorporated into the flow management system and receive treated process flows and provide for treatment to meet NPDES discharge limits from the flows. Following treatment in the process water basin(s), process waters would be discharged via gravity to NPDES Outfall 010.

  Permanent modifications (e.g., removal/abandonment of some discharge piping or tanks) would be made to the interim flow management system (see No Action Alternative). Discharge from the polishing tanks would flow into the process water basin(s). The area adjacent to and surrounding the coal pile could potentially be used for laydown of materials during construction.[4] Structural fill would be required to provide access along the alignment of the treated wastewater conveyance piping.[5]

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

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used to remove bottom ash and suspended solids. In addition to the bottom ash process flows, leachate from the North Rail Loop (NRL) Landfill and runoff from the coal pile and coal handling areas is redirected to the primary settling tank. Chemical coagulant is added as needed. Adjacent to the primary settling tank is a concrete pad that facilitates removal of the collected solids. When cleanout occurs, removed bottom ash and solids are staged on the pad, allowed to drain and dry for transport, loaded into a truck and transported to the on-site landfill for disposal. Following bottom ash removal in the primary settling tank, two (2) secondary settling chambers provide further suspended solids removal. Flocculant is added in the tanks as needed and the pH is adjusted as necessary. The discharge from the secondary settling chambers flow via gravity to a polishing tank comprised of two (2) chambers. Following final treatment in the polishing tank, the flow discharges via gravity through a HDPE pipeline and concrete channel to NPDES Outfall 010 located south of Ash Pond E.

[3] Separate from this environmental review, TVA has agreed to remove the CCR from the Bottom Ash Pond. If TVA were to choose Alternative B, TVA would excavate the CCR from the Bottom Ash Pond in accordance with regulatory requirements and agreements with the State. The permanent disposition of any removed ash from the Bottom Ash Pond is not addressed in this environmental review and will be evaluated in other NEPA documents.

[4] The Middle Pond A area would also be improved to provide an area for laydown of materials. The improvements would be made using soil from Stockpile G, an existing stockpile consisting of spoils from the scrubber construction. Stockpile G is located within Middle Pond A.

[5] Fill from Stockpile G or the existing landfill rock fill and structural fill stockpiles adjacent to the on-site landfill would be utilized for the construction. The rock fill and structural fill stockpile areas could also be utilized as a potential laydown area if needed. Aggregate from off-site commercial sources or the TVA owned borrow site north of the plant may also be utilized.

Cultural and Natural Resources

TDEC believes the Draft SEA adequately addresses potential impacts to cultural and natural resources within the proposed project area.[6]

Air Resources

TDEC anticipates that the primary air quality impacts for this project will be from the construction related activities onsite that would generate fugitive dust emissions. Additional transitory, minor emissions will likely be generated from the onsite construction equipment in use. Based on the nature of the proposed action and its alternative, air permitting regulations may require TVA to secure a modification to its existing Title V permit for the facility (*Permit # 561209*).[7] TDEC encourages TVA to reflect the potential need for a Title V permit amendment in its Final SEA.

The project area is projected to encompass approximately 10 acres (as a single site or in two separate areas) where excavation will require removal of all CCR present. TDEC recommends that TVA include discussion in the Final SEA as to how CCR material identified for removal will be handled to prevent any fugitive dust emissions and what best management practices will be implemented to reduce fugitive dust emissions.

Currently, the project area is covered by "low-quality, mixed evergreen-deciduous forest, and non-native turf grasses, weeds, and other early successional plants", that will be required to be removed and disposed of. The method of disposal is not identified in the Draft SEA. TDEC recommends that TVA include information on the method of disposal and management of any trees and related vegetative debris generated from the project area. Further, TDEC encourages TVA to use methods other than open burning whenever possible.

The Draft SEA discusses demolition activities that are proposed to occur as part of the construction phase of the project. There is no mention of whether there will be a need for Asbestos Demolition or Renovation Notification and only that the "proposed project activities would be conducted in a manner to ensure that waste materials are contained, and the introduction of pollutants to the receiving waters would be minimized."[8] TDEC encourages TVA to include discussion relating to the need to complete appropriate notification(s) in advance of any demolition activities as required under the state of Tennessee asbestos regulations and that if Regulated Asbestos-Containing Material is identified as present or likely to be encountered during the proposed project, that appropriate measures be taken to abate the asbestos as needed.

Solid Waste

Based on review of the Draft SEA there is limited information on the flow capacities of the two alternatives. Flow capacities of the two alternatives have implications on future changes in landfill operating practices and any future landfill expansion permitting, development, and operations. TDEC encourages TVA to include discussion relating to how these two alternatives relate to potential future capacity needs.

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[6] 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).

[7] For more information on TDEC's Title V Permitting program, please visit https://www.tn.gov/environment/program-areas/apc-air-pollution-control-home/apc/permits-air/air-quality-operating-permit0/permit-air-title-v-operating-permit.html.

[8] For more information on TDEC's Asbestos Demolition or Renovation Notification requirements, please visit https://www.tn.gov/environment/program-areas/apc-air-pollution-control-home/apc/asbestos-information/notification-of-asbestos-demolition-or-renovation.html.

TDEC recommends that any wastes associated with the proposed action or its alternatives be managed in accordance with the Solid and Hazardous Waste Rules and Regulations of the State of Tennessee.[9] TDEC recommends that the Final SEA reference that any wastes that are generated during the construction process or uncovered during site preparation are subject to the Solid and Hazardous Waste Rules and Regulations of the State of Tennessee.

Water Resources

TDEC concurs with TVA that both alternatives are going to require a Construction Stormwater Permit and a Multi-Sector General Stormwater Pollution Prevention Plan and associated best management practices since the project will involve the disturbance of more than one acre of land.

On page 3-14, TVA notes that monitoring parameters for thallium and cadmium exceeded TDEC guidelines because the test method used had detection limits over the TDEC criterion for each metal. TDEC encourages TVA to include additional discussion and justification in the Final SEA for why this test method was used and why TVA did not use a test method that is more capable of monitoring these parameters relative to the TDEC criterion.

TDEC appreciates the opportunity to comment on this Draft SEA. 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,

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cc: Daniel Brock, TDEC, DOA
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[9] Reference TDEC SWM Rule 0400 Chapter 11 for Solid Waste and Chapter 12 for Hazardous Waste http://sos.tn.gov/effective-rules.