



Billing Code 8120-08-P

## TENNESSEE VALLEY AUTHORITY

### Allen Fossil Plant Ash Impoundment Closure Environmental Impact Statement

**AGENCY:** Tennessee Valley Authority.

**ACTION:** Record of Decision.

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**SUMMARY:** This notice is provided in accordance with the Council on Environmental Quality's regulations and Tennessee Valley Authority's (TVA's) procedures for implementing the National Environmental Policy Act (NEPA). TVA has decided to adopt the Preferred Alternative identified in the Allen Fossil Plant (ALF) Ash Impoundment Closure Environmental Impact Statement. The Final Environmental Impact Statement (EIS) was made available to the public on March 6, 2020. A Notice of Availability of the Final EIS was published in the Federal Register on March 13, 2020. The Preferred Alternative is "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." This alternative would achieve the purpose and need of the project to support the implementation of TVA's goal to eliminate all wet Coal Combustion Residuals (CCR) storage at its coal plants; close CCR surface impoundments across the TVA system; comply with the U.S. Environmental Protection Agency's CCR Rule and other applicable federal and state statutes and regulations; and enhance future economic development in the greater Memphis area.

**FOR FURTHER INFORMATION, CONTACT:** W. Douglas White, Tennessee Valley Authority, 400 West Summit Hill drive, WT11B-K, Knoxville, Tennessee 37902;

telephone (865) 638-2252, or by email [wdwhite0@tva.gov](mailto:wdwhite0@tva.gov). The Final EIS, this Record of Decision (ROD) and other project documents are available on TVA's website <https://www.tva.gov/nepa>.

**SUPPLEMENTAL INFORMATION:** TVA is a corporate agency of the United States that provides electricity for business customers and local power distributors serving more than 10 million people in an 80,000 square mile area comprised of most of Tennessee and parts of Virginia, North Carolina, Georgia, Alabama, Mississippi, and Kentucky. TVA receives no taxpayer funding, deriving virtually all of its revenues from sales of electricity. In addition to operation of its power system, TVA provides flood control, navigation and land management for the Tennessee River system and assists local power companies and state and local governments with economic development and job creation.

ALF was constructed in the 1950s by the Memphis Light, Gas and Water Division (MLGW). TVA purchased the plant in 1984 and operated the plant until ALF's three coal-fired units were retired on March 31, 2018. While in operation, ALF consumed approximately 7,200 tons of coal a day and produced approximately 5,160 million kilowatt-hours of electricity a year. CCR produced by the collective units included approximately 85,000 dry tons of slag and fly ash annually. Unlike other TVA power plants, much of the land occupied by ALF is not owned by TVA, but by third parties, including the City of Memphis, Shelby County, and MLGW. ALF is also located in a heavily industrialized area, which means that redevelopment is of particular interest as the land holds significant economic potential for the non-TVA owners due to its location within the Frank C. Pidgeon Industrial Park as well as its access to the Port of Memphis via McKellar Lake.

TVA has prepared an EIS pursuant to NEPA to assess the environmental impacts of the proposed closures of the East Ash Pond Complex (including the Coal Yard Runoff Pond), the West Ash Pond and the Metal Cleaning Pond at ALF. TVA estimates that approximately 3,500,000 yd<sup>3</sup> of CCR is located within the project areas at ALF. TVA has also evaluated the location requirements and environmental impacts associated with the potential construction and utilization of an off-site proposed beneficial re-use processing facility that would be used to process CCR from ALF. TVA also considered potential impacts associated with the transport of borrow from previously permitted sites and the disposal of CCR at existing, off-site permitted landfills.

With a long-standing commitment to safe and reliable operations and to environmental stewardship, TVA began, in 2009, to convert from wet to dry management of CCR. On April 17, 2015, the U.S. Environmental Protection Agency (EPA) published the Final Disposal of Coal Combustion Residuals from Electric Utilities rule (CCR Rule) in the Federal Register (80 Federal Register 21302). The CCR Rule establishes national criteria and schedules for the management and closure of CCR facilities.

In June of 2016, TVA issued a Final Programmatic Environmental Impact Statement (PEIS) that analyzed methods for closing impoundments that hold CCR materials at TVA fossil plants and identified specific screening and evaluation factors to help frame its evaluation of closures at additional facilities. The purpose of the PEIS was to support TVA's goal to eliminate all wet CCR storage at its coal plants by closing CCR surface impoundments across TVA's system and to assist TVA in complying with the EPA's CCR Rule.

The proposed action at ALF tiers from the PEIS. The purpose, therefore, is to eliminate all wet CCR storage at ALF; close its CCR surface impoundments; comply with the

EPA's CCR Rule and other applicable federal and state statutes and regulations; and help make the property available by its non-TVA owners for future economic development projects in the greater Memphis area.

### **Alternatives Considered**

TVA considered three alternatives in the Draft EIS and Final EIS. These alternatives are:

*Alternative A – No Action Alternative.* Under the No Action Alternative, TVA would not close the East Ash Pond Complex (which includes the Coal Yard Runoff Pond) or the Metal Cleaning Pond. The West Ash Pond would remain in its current closed state. No closure activities (i.e., no excavation or transport activities) would occur. However, 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.

*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 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 impoundments with approved, non-invasive seed mixes designed to quickly establish desirable vegetation. Closure-by-Removal of the surface impoundments is expected to require approximately 3 million yd<sup>3</sup> of suitable borrow material. No specific borrow site(s) has been identified at this time and ultimate site selection will be determined by 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 borrow site. Accordingly, potential impacts associated with the transport of borrow material to ALF are based upon the “bounding” or worst case characteristics of this action that were developed in consideration of the use of a range of identified candidate sites in the vicinity of ALF.

Offsite transport of CCR is another component action to be undertaken in conjunction with this alternative. CCR removed from the ash impoundments would be transported offsite to an existing permitted landfill. Because the selection of a particular receiving landfill is dependent upon TVA’s NEPA decision, contract arrangements and other factors, identification of a specific receiving landfill is premature. Actual landfill selection will be determined during the project implementation phase. Under this alternative, TVA will consider only previously developed and/or permitted landfills having sufficient excess capacity and the ability to construct dedicated cells to accommodate a monofill for CCR from a single generator. TVA would not own or operate the landfill to which CCR from ALF is transported. Therefore, TVA has conducted a bounding analysis of potential

environmental effects associated with transport of CCR to an offsite landfill by either truck or rail. Transport of CCR by barge was also considered by TVA. ALF has a barge unloading facility available for use and with minor modification and repairs, the existing reclamation hoppers and associated conveyors from the coal yard to the transfer station could be re-configured for use. However, additional infrastructure would also need to be constructed to support loading of CCR onto a barge. While such modifications could be accomplished, no suitable landfill was identified by TVA that is equipped to receive CCR from barges. Consequently, the transport of CCR by barge as a mode of transportation was eliminated from further consideration.

*Alternative C – Closure of the Metal Cleaning Pond, Closure-by-Removal 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 (constructed and operated by others) to be processed for use in concrete and other building materials. Borrow material suitable for use as backfill within the ALF impoundments 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 re-use processing facility would be constructed has been developed at this time. However, because it is expected that the feasibility of such a facility is dependent upon the presence of available CCR at ALF, this facility is also evaluated as a component action in the EIS. Because no specific provider or site for the potential beneficial re-use processing facility has been identified, impacts of this option to process CCR from ALF

are based on a bounding analysis of the characteristics of a representative beneficial re-use processing facility.

### **Environmentally Preferred Alternative**

Alternative A—No Action would result in the lowest level of environmental impacts as the impacts associated with closure of the impoundments and disposal of CCR under Alternatives B and C would be avoided. However, Alternative A – No Action, does not meet the purpose and need for the project. The scope of Alternatives B and C is formed by the purpose and need of the proposed action. Under both of these alternatives, CCR would be removed from the impoundments and borrow material suitable for use as backfill would be transported onsite to support site restoration. Removal of CCR from the impoundments would result in predominantly minor impacts to the natural environment (surface water, floodplains, vegetation, wildlife, aquatic ecology and wetlands), that would be temporary and localized. Consultation with U.S. Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act (ESA) determined that project activities may affect, but are not likely to adversely affect, the interior least tern, Indiana bat, and northern long-eared bat. Closure of the impoundments by removal eliminates both CCR and water within the impoundments, thereby resulting in a long-term beneficial impact to groundwater. No federal post-closure care measures are required as the impoundments would be closed under the Closure-by-Removal option. State requirements for post-closure care would be implemented as needed. Remedial investigations and actions at ALF, including the Environmental Investigation Plan (EIP) that is being undertaken in accordance with an administrative order issued by the Tennessee Department of Environment and Conservation (TDEC) in 2015, and the current Interim Response Actions (IRAs) for groundwater that are part of a remedial

investigation (RI) directed by TDEC that began in 2017, will continue. Any future long-term remedy would continue to be implemented and groundwater quality would be restored where contamination from arsenic or other constituents is present. There would be only minor short-term impacts to the natural environment associated with procurement and transport of borrow and transport of CCR to an offsite landfill.

Impacts to the human environment (air quality, climate change, visual resources, land use, socioeconomics, and public and worker safety) would be primarily related to closure activities and would be minor and short-term. Although the proposed closure of the impoundments under either alternative would have a minor impact on the regional transportation system, there could be moderate localized impacts to low volume roadways used jointly by trucks transporting CCR and borrow, sensitive noise receptors along the transport routes, and users of recreational facilities located adjacent to low volume roadway segments. In addition, there could be moderate to large impacts associated with borrow and CCR transport by truck, disproportionate to environmental justice populations. These impacts would be minimized with implementation of a traffic management plan that is designed to address congestion and avoidance of borrow sites accessed by low volume roadways serving residential areas. There would be no effect to solid and hazardous waste, although CCR previously managed in the impoundments at ALF would be disposed in an existing, permitted landfill. There would be no effect to cultural resources with adherence to the mitigation measures defined below.

Reasonably foreseeable future projects that are planned to occur on ALF include the deconstruction and demolition activities of the plant. Such actions could contribute to cumulative impacts on the local transportation network if these activities are concurrent with the proposed ash impoundment closure project. The number of trucks associated

with the transport of debris from ALF deconstruction, added to the number of trucks required to remove CCR from impoundments at ALF and transport of borrow material for restoration activities could result in a very large number of trucks and other vehicles entering and exiting the facility on a daily basis. TVA would mitigate congestion in the vicinity of ALF with a traffic management plan. Possibilities include staging of trucks, temporary signals, spacing logistics, or timing truck traffic to occur during lighter traffic hours (such as not in the morning or afternoon commute hours). With implementation of these mitigation measures, cumulative impacts to transportation would be moderate and would only occur during the construction phases of these activities.

Impacts associated with Alternative C would be the same as for Alternative B, except most of the CCR removed from the impoundments would be transported to a beneficial re-use facility to be processed for use in concrete and other building materials. Therefore, implementation of this alternative would involve minor impacts associated with the construction and operation of the facility. In addition, this alternative would have a long-term moderate beneficial impact to solid waste as the majority of CCR would be beneficially re-used as compared to disposal in a landfill.

## **Decision**

TVA has decided to implement the preferred alternative identified in the Final EIS: 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. This alternative would achieve the purpose and need of the project. Alternative C would also meet the purpose and need of the project and would have similar impacts as Alternative B. However, construction of a new facility (by others) to process CCR from ALF would extend the duration of closure which would delay the future economic

development of the site. This would result in greater direct and cumulative impacts associated with air emissions, noise emissions, impacts to transportation system, impacts to environmental justice communities, safety risks and disruptions to the public associated with the extended time frame for closure.

### **Public Involvement**

On November 30, 2018, a Notice of Intent (NOI) to prepare an EIS to address the closure of the impoundments at ALF was published in the Federal Register. In addition to the NOI in the Federal Register, TVA published information about the review on TVA's project Web site, notified the media, and sent notices to numerous individuals, organizations, local and regional stakeholders, governments and interested parties.

A public information session was held on January 17, 2019, at the Mitchell Community Center in Memphis, TN, to provide additional information related to the proposed actions to the public. TVA's efforts to notify local residents of the January 2019 public information meeting included issuing an additional media advisory and notifying the 35 people who had attended a previous meeting related to activities underway at ALF. TVA also sent letters to all residents within a 5-mile radius of the plant and contacted three neighborhood associations surrounding the plant to inform them of the meeting. In addition, TVA distributed 540 flyers throughout the Memphis Public Library System. A total of 77 people attended the public meeting. Attendees included members of the general public, media representatives, and other special interest groups.

Public comments on the scope of the EIS were collected from November 30, 2018 through January 31, 2019, and at the public information session. TVA received 63 comment submissions from members of the public and federal agencies. Comments

received that requested TVA extend the scoping period and hold a public meeting were addressed by TVA during the public scoping period. Comments received on the proposed alternatives generally expressed support for the complete removal of CCR and remediation of the site. Other commenters stressed the need to ensure the safe transport and disposal of CCR. Comments also included requests that the EIS include analysis of impacts to the following resources: groundwater, surface water, the surrounding community, onsite workers, wildlife that frequent the impoundments and recreators who enjoy observing the wildlife that frequent the impoundments. Comments were received requesting the EIS provide more detail regarding the beneficiation process and its potential environmental impacts and that the EIS consider the cumulative impact of future economic development of the ALF site. TVA also received comments requesting the analysis of the operation of the Allen Combined Cycle Plant be included in the scope of the project. TVA considered these comments in the preparation of the Final EIS.

TVA released the Draft EIS for public review on October 4, 2019. A Notice of Availability (NOA) for the Draft EIS was published in the Federal Register on October 11, 2019. Publication of the NOA in the Federal Register opened the 45-day comment period, which ended on November 25, 2019. To solicit public input, the availability of the Draft EIS was announced in regional and local newspapers serving the Memphis area and on TVA's social media accounts. The availability of the Draft EIS was also announced in newspapers serving the communities in surrounding states where landfills capable of receiving CCR from ALF were identified in the Draft EIS. A news release was issued to the media and posted on TVA's web site. The Draft EIS was posted on TVA's website, and hard copies were made available by request. Two public information sessions were held during the review period to allow the public the opportunity to learn more about the

project. The first session was held on October 8, 2019, at the Mitchell Community Center in Memphis, TN. A second session was held on October 30, 2019, at the Benjamin L. Hooks Public Library in Memphis, TN. Public comments were accepted between October 4, 2019 and November 25, 2019, and at both public information sessions. TVA also conducted additional outreach activities through attendance at local community group events and meetings to provide information regarding activities at ALF.

TVA accepted comments submitted through mail, email, a comment form on TVA's public website, and at the public meetings. TVA received 28 comment submissions from members of the public, organizations and state and federal agencies. Comment submissions were carefully reviewed and compiled into 69 specific comments which received responses. Most of the comments received were related to the results of the landfill screening analysis which concluded that, among others, the Taylor County Landfill and the Arrowhead Landfill met the requirements to be considered in the bounding analysis for transportation of CCR to an offsite landfill for disposal. Other comments received were related to groundwater impacts and the ongoing investigations at ALF, sufficiency of the bounding analyses, consideration of impacts to communities requiring environmental justice considerations and the consideration of cumulative impacts. TVA provided responses to these comments, made appropriate minor revisions to the Draft EIS and issued this Final EIS.

TVA received an additional 54 comments after closure of the comment period, one of which was signed by 30 members of the public. These comments all expressed opposition to use of the Taylor County Landfill in Georgia for disposal of CCR from ALF. As these comments were sufficiently addressed by TVA in response to comments received while the comment period was open, TVA has not provided individual

responses to these comments. However, the comments are retained as part of the project's Administrative Record.

The NOA for the Final EIS was published in the Federal Register on March 13, 2020. TVA received three comments during the mandatory 30-day waiting period after the Final EIS was released. One comment questioned the data and analysis regarding the health and safety of rail transport versus truck transport which TVA obtained from previous studies conducted by other entities and presented in the Draft and Final EIS. TVA has determined that no additional analysis is required. A second comment was from an advocacy group that expressed opposition to disposal of CCR from ALF at the Arrowhead Landfill. This concern was addressed in TVA's response to comments in the Final EIS. A third comment was received from a regulatory agency, noting their comments had been adequately resolved in the Final EIS.

### **Mitigation Measures**

TVA will use appropriate best management practices (BMPs) during all phases of closure of the ash impoundments. Mitigation measures and actions taken to reduce adverse impacts associated with the proposed action, include:

- TVA would mitigate traffic impacts by developing a traffic management plan that considers alternate access locations to/from ALF (i.e., Plant Road vs. Riverport Road to the west), staging and management of truck ingress/egress, borrow site selection to optimize use of borrow sites that do not require truck use of common roadway segments, potential alternate routing during local rail operations on Rivergate Road, and installation of temporary signals at key intersections.

- To avoid potential for indirect impacts to the interior least tern, TVA would implement specific conservation measures identified as per consultation with USFWS under Section 7 of the ESA.
- Should the osprey nest located north of the East Ash Pond Complex on a mooring cell structure in McKellar Lake be active during ash impoundment closure, activities would be minimized within a 660-foot diameter buffer around the nest during the osprey nesting season. These avoidance measures would result in no adverse impacts to these birds.
- TVA may elect to remove the osprey nest during the non-nesting season in conjunction with other on-going site decommissioning activities unrelated to ash impoundment closure. As such, TVA would ensure nest removal would follow guidance from the U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services Program.
- TVA will require that CCR be disposed of in a previously developed and/or permitted site having sufficient permitted capacity.
- Borrow would be obtained from one or more previously developed and/or permitted commercial borrow site(s) within 30 miles of ALF. No specific site has been identified at this time and ultimate site selection would be determined by the contractor. However, TVA would perform all necessary due diligence and consultation as required under Section 106 of the National Historic Preservation Act (NHPA) related to any offsite work.

- TVA will continue to collect groundwater samples from existing monitoring wells and review the analytical results as a part of the 2015 TDEC administrative order process, the EPA's CCR Rule, and other regulatory requirements. TVA is also implementing the IRAs and corrective measures to control and begin treating impacted groundwater identified in some shallow aquifer monitoring wells around the East Ash Pond Complex.
- A TDEC Section 401 Water Quality Certification/TDEC Aquatic Resource Alteration Permit and U.S. Army Corps of Engineers 404 permit would be required for disturbance to wetlands and stream features, and the terms and conditions of these permits would include mitigation for unavoidable adverse impacts, as appropriate.
- A National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activities or an Individual Construction Storm Water permit may be required for the proposed project, and a Storm Water Pollution Prevention Plan (SWPPP) would be required to detail sediment and erosion control BMPs.
- Several actions associated with the proposed closures were addressed in TVA's programmatic consultation with the USFWS on routine actions and federally-listed bats in accordance with ESA Section 7(a)(2) which was completed in April 2018. For those activities with potential to affect Indiana bats and northern long-eared bat, TVA committed to implementing specific conservation measures. These activities and associated conservation measures would be implemented as part of the proposed project.

- To minimize adverse impacts on natural and beneficial floodplain values, BMPs would be used during construction activities. In addition, TVA would obtain documentation from permitted landfill(s) receiving ash that the ash would be disposed in an area outside the 100-year floodplain.

BMPs employed to minimize impacts include:

- Fugitive dust emissions from site preparation and construction would be controlled by wet suppression, installation of a truck washing station and other BMPs, as appropriate. In addition, the Clean Air Act Title V operating permit incorporates fugitive dust management conditions.
- Erosion and sedimentation control BMPs (e.g., silt fences) would ensure that surface waters are protected from construction impacts.
- Consistent with EO 13112 as amended by EO 13751, disturbed areas would be revegetated with native or non-native, non-invasive plant species to avoid the introduction or spread of invasive species.
- BMPs as described in the project-specific SWPPP and the Tennessee Erosion and Sediment Control Handbook-4th Edition, 2012 would be used during construction activities to minimize impacts and restore areas disturbed during construction.
- TVA may decide to contract with outside vendors for construction and/or transportation services under Alternative B. It is TVA policy that all contractors have in place a site-specific health and safety plan prior to operation on TVA properties.

**Dated:**

**April 14, 2020.**

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[FR Doc. 2020-08420 Filed: 4/20/2020 8:45 am; Publication Date: 4/21/2020]