



Billing Code 8120-08-U

TENNESSEE VALLEY AUTHORITY

Gallatin Fossil Plant Surface Impoundment Closure and Restoration Project Environmental Impact Statement

AGENCY: Tennessee Valley Authority.

ACTION: Record of decision.

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 Gallatin Fossil Plant (GAF) Surface Impoundment Closure and Restoration Project Environmental Impact Statement. The Final Environmental Impact Statement (EIS) was made available to the public on August 7, 2020. A Notice of Availability of the Final EIS was published in the Federal Register on August 14, 2020. The Preferred Alternative is "Closure of the Ash Pond Complex (APC) via Closure-by-Removal and Expansion of the Existing Onsite Landfill." 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 by closing CCR surface impoundments across the TVA system and to comply with the U.S. Environmental Protection Agency's CCR Rule and other applicable federal and state statutes and regulations. The proposed actions would also provide long-term onsite landfill space for operations and/or storage of CCR.

FOR FURTHER INFORMATION CONTACT: Elizabeth Smith, Tennessee Valley Authority, 400 West Summit Hill drive, WT11B-K, Knoxville, Tennessee 37902, or by email esmith14@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>.

SUPPLEMENTARY 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.

GAF was built between 1953 and 1959 and operates four coal-fired, steam-generating units. Four combustion turbine (CT) units were added to GAF in the 1970s, and another four were added in 2000. The plant generates about seven billion kilowatt-hours of electric power in a typical year, which is enough electrical energy to meet the needs of approximately 480,000 homes. The plant consumes an average of 3.5 million tons of coal per year, which results in the annual production of approximately 255,000 tons of CCR.

TVA has prepared an EIS pursuant to NEPA to assess the environmental impacts associated with several projects to facilitate long-term management of CCR at GAF which include the following.

- Surface impoundment closures of the Ash Pond Complex (APC) which includes Ash Pond A, Ash Pond E, Middle Pond A, Bottom Ash Pond, and stilling ponds
- Permanent disposition of CCR from the surface impoundments, including CCR previously removed from the Bottom Ash Pond that may be temporarily stockpiled in the existing onsite landfill, as well as *de minimis* amounts of CCR proposed to be removed from the stilling ponds

- Construction of a lateral expansion of the existing onsite landfill
- Location requirements analysis for a beneficial re-use processing facility
- Disposal of CCR materials not usable by a beneficial re-use processing facility in either the onsite landfill or an offsite landfill

TVA estimates that approximately 11,945,000 yd³ of CCR is located within the APC at GAF. TVA has evaluated the location requirements and environmental impacts associated with the potential construction and operation of an offsite proposed beneficial re-use processing facility that would be used to process CCR from GAF. TVA also considered potential impacts associated with the transport of CCR from GAF to an offsite beneficial re-use processing facility and an offsite landfill. Although a site has currently not been identified, TVA also conducted a supplemental NEPA analysis of two potential sites on the GAF Reservation for use by a beneficial re-use processing facility.

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 GAF tiers from the PEIS. The purpose, therefore, is to address the disposition of CCR onsite at GAF, 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 EPA's CCR Rule and other applicable federal and state statutes and regulations. The proposed actions would also provide long-term onsite landfill space for operations and/or storage of CCR.

Alternatives Considered

TVA considered two alternatives in the Draft EIS and Final EIS with two options for disposal and transport of CCR. These alternatives are:

Alternative A – No Action Alternative. Under the No Action Alternative, TVA would not close any of the surface impoundments (neither in-place nor by removal), would not construct an expansion of the existing onsite landfill, and would not complete any restorative actions at GAF. Under the No Action Alternative, all plant process wastewaters would be handled through the flow management system, which includes the bottom ash dewatering facility. The stilling ponds would continue to receive storm water. TVA would continue safety inspections of structural elements to maintain stability, and all surface impoundments would be subject to continued care and maintenance activities. Under the No Action Alternative, TVA would also continue its groundwater monitoring program at GAF until groundwater protection standards are reached or as required under TVA's agreement with the Tennessee Department of Environment and Conservation (TDEC) [i.e., approved Corrective Action/Risk Assessment Plan (CARA Plan)].

The No Action Alternative provides a baseline for potential changes to environmental resources; however, the alternative is inconsistent with TVA's plans to convert all of its wet CCR systems to dry systems. The No Action Alternative also would be inconsistent with EPA's CCR Rule and TVA's commitments to the State of Tennessee and TDEC. 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 of implementation of Alternative B.

Alternative B – Closure of the APC via Closure-by-Removal and Expansion of the Existing Onsite Landfill. Under Alternative B, TVA would remove the CCR from the APC via Closure-by-Removal and construct a lateral expansion of the existing onsite landfill. In addition to CCR located in the impoundments, any CCR that may have been previously removed from the Bottom Ash Pond in conjunction with a previous GAF wastewater project, and that may be temporarily stockpiled in the existing onsite landfill, would also be removed.

The primary actions under Alternative B that TVA is considering at GAF consist of closure of the surface impoundments that make up the APC and expansion of the existing onsite landfill. Closure of the APC will require stabilization of ponded areas and removal of CCR material and underlying soil within the impoundment footprint. Specific closure activities would include:

- Dewatering
- Clearing and grubbing
- Karst remediation, if necessary
- Excavation of ash using a tracked excavator and staging CCR material

- Mechanical moisture conditioning the excavated ash by dumping, scooping, and windrowing the ash within the existing footprint of the impoundment until it is sufficiently dried for hauling
- Storm water management
- Over-excavation of soil within the impoundment footprint
- Hauling dry ash and soil to the onsite permitted landfill or beneficial re-use processing facility

Following excavation activities, lower portions of the APC would be converted to storm water management basins with appropriate approvals. The stilling ponds would continue to receive storm water from existing offsite areas north and east of the ponds and could continue to receive storm water runoff from the restored pond area. Upon completion of closure activities, the site would be graded and vegetated to provide appropriate surface water management.

To facilitate the construction activities associated with closing the surface impoundments, an approximately 31-acre area located between the NRL Landfill and Ash Pond A would be used for laydown, access, and logistical purposes. This laydown/logistical use area would support equipment storage, material stockpiles, construction trailer placement, and would provide direct access for excavation and dewatering equipment to the APC.

Closure of the surface impoundments may 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. Suitable borrow material would be obtained from the TVA-owned permitted borrow site located 1.5 miles northwest of the fossil plant.

The existing onsite landfill at GAF, the 52-acre NRL Landfill, is a Class II disposal facility that went into service in 2016. The NRL Landfill has a permitted disposal capacity of approximately 6.8 million yd³ and is currently utilized for disposal of CCR produced by GAF operations. The NRL Landfill does not have the capacity for storage of the estimated 11.9 million yd³ of CCR contained in the APC. Therefore, TVA is proposing to permit and develop an expansion of the NRL Landfill to store the CCR currently contained in the APC. The expansion would be of sufficient size to store ash removed from these surface impoundments and would also provide additional storage capacity to supplement the capacity of the NRL Landfill.

The lateral landfill expansion, referred to as the South Rail Loop (SRL) Landfill, will contain a 130-acre disposal area adjacent to the NRL Landfill with an approximate landfill volume of 17.2 million yd³. The estimated capacity provides adequate storage capacity for CCR removed from the surface impoundments at GAF. Construction of the landfill expansion would require the disturbance of 174 acres of primarily undeveloped land and previously developed areas associated with plant operations. Landfill development in this location would also require disturbance of streams, wetlands, and cemeteries. Other ancillary facilities and actions affected by landfill development include:

- relocation of a communications tower and ammonia sensor,
- the closure and remediation of a decommissioned firearms range,
- demolition of existing conference center/facilities building, and
- development of an office complex facility.

Under Alternative B, TVA is considering two options for disposal of CCR removed from the APC. Option 1, CCR removed from surface impoundments would be transported via

onsite haul roads and placed in either the existing onsite NRL Landfill, an expansion of the existing landfill (SRL Landfill), or a combination of these landfills.

Under Option 2, CCR would be transported to an offsite beneficial re-use processing facility to be processed for use in concrete and other marketable materials. Under Option 2, some of the CCR may be unusable for beneficial re-use and would be disposed of in either the onsite landfill or transported to an existing offsite landfill previously permitted to receive CCR. TVA estimates that a minimum of 80% of CCR in the APC, or approximately 800,000 yd³ per year, could be beneficially re-used, with the remaining CCR, up to 200,000 yd³ per year, transported to a landfill for disposal.

No specific provider of the beneficiation services or the specific site in which a beneficial re-use processing facility would be constructed has been developed at this time. However, TVA recognizes that such a facility would be constructed and operated because TVA has the necessary raw materials (i.e., CCR) to make such a facility viable. It is expected that such a facility would be sited and constructed within 10 miles of GAF or the nearest interstate system serving the GAF area to facilitate efficient transport of CCR. 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 B (Option 2). Because a specific site for the potential beneficial re-use processing facility has not been identified, impacts of this option to process CCR from GAF 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 Alternative B would be avoided. However, Alternative A – No Action, does not meet the purpose and need for the project. TVA’s preferred alternative is Alternative B with Option 1 as it would achieve the purpose and need of the project. Alternative B would include the closure of the APC by removal and the lateral expansion of the existing onsite landfill. Under Option 1, CCR removed from surface impoundments would be transported via onsite haul roads and placed in either the existing onsite NRL Landfill, an expansion of the existing landfill (SRL Landfill), or a combination of these landfills. Option 1 would result in minor impacts to the natural environment primarily from the construction of the onsite landfill, but these are not significant and are mitigated, as appropriate. Under Option 1, air and noise emissions, transportation impacts, safety risks and disruptions to the public that would be associated with the offsite transport of CCR along public roadways are minimized relative to Option 2.

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. Alternative B would provide a long-term benefit to groundwater by the removal of the potential future source of CCR constituents from the impoundments to groundwater. It would also eliminate the potential interaction between the CCR and the uppermost aquifer and eliminate new groundwater risk from groundwater constituents of concern potentially migrating offsite.

No federal post-closure care measures are currently required as the impoundments would be closed under the Closure-by-Removal option. State requirements for post-closure care

would be implemented as needed and the CARA Plan would be implemented. TVA will implement supplemental mitigative measures as required by TDEC, as well as its approved closure plan, which could include additional groundwater monitoring, assessment or corrective action programs. There would be only minor short-term impacts to the natural environment associated with transport of CCR to an offsite beneficial re-use processing facility or 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 landfill construction, and would be minor and short-term. Although the proposed closure of the impoundments would have a minor impact on the regional transportation system, there could be moderate localized impacts to low volume roadways due to increased operations, construction workforce, and borrow transport. There would be no effect to solid and hazardous waste, although CCR previously managed in the impoundments at GAF would be disposed in a permitted landfill.

Closure of the impoundments and expansion of the existing onsite landfill could impact six cemeteries located within the GAF reservation. Because of the potential importance of these cemeteries to the surrounding community and to local history, and in order to respect state law regarding cemeteries, TVA proposes to remove all graves in the affected cemeteries and relocate them to a new burial ground in consultation with the Tennessee State Historic Preservation Officer (SHPO), federally-recognized Indian tribes, and interested members of the Gallatin community. In consultation with the SHPO, TVA proposes delineating the cemetery boundaries, generating accurate maps, completing historical and genealogical research, engaging the community in the cemetery relocation project, completing analyses of grave contents, and installing signage or a marker. TVA would also ensure the relocation cemetery preserves information about the original

cemeteries and is accessible to members of the public. These measures are further stipulated in a Memorandum of Agreement (MOA) that has been signed by TVA and the SHPO. With the signing of the MOA, TVA may proceed with the project under the National Historic Preservation Act (NHPA) Section 106 as long as TVA remains in compliance with the obligations set forth in the MOA. After completing these steps, TVA would reinter all the graves in the relocation cemetery with the original grave markers.

Under NHPA Section 106, TVA has consulted with the SHPO regarding TVA's determination that five of the cemeteries are potentially eligible for the NRHP. Under the MOA, TVA will carry out additional investigations to more fully determine the cemeteries' NRHP eligibility. These investigations will include informant interviews, examinations of additional historical records, and a tabulation of the remains found in disinterred graves. Should the investigations indicate that any of the cemeteries to be relocated would qualify for inclusion in the NRHP, TVA will make a finding of adverse effect, will consult further with the SHPO and other consulting parties, and will perform mitigation steps to resolve the adverse effect.

Decision

TVA has decided to implement the preferred alternative identified in the Final EIS: Alternative B – Closure of the APC via Closure-by-Removal and Expansion of the Existing Onsite Landfill, with Option 1. This alternative would achieve the purpose and need of the project. Option 2 would also meet the purpose and need and would have similar impacts to Option 1; however, impacts related to air emissions, noise emissions, transportation impacts, safety risks and disruptions to the public that would be associated with the offsite transport of CCR along public roadways would be greater. Although TVA has chosen Option 1 for onsite CCR disposal at GAF, TVA is committed to evaluating emerging

technologies and best practices for beneficial re-use of CCR and for handling/transportation of CCR in the future.

Public Involvement

On December 7, 2018, a Notice of Intent (NOI) to prepare an EIS to address the closure of the APC and expansion of the existing landfill at GAF 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.

Public comments on the scope of the EIS were collected from December 7, 2018 through January 11, 2019. TVA received 13 comment submissions from members of the public and state and federal agencies. Comments received on the proposed alternatives generally expressed concern regarding onsite storage of CCR material and requested that it be moved to an offsite location away from the Cumberland River or other bodies of water. Other commenters stressed concerns regarding potential risks to surface water and ground water quality in conjunction with the disposition of CCR in the existing ash ponds. Comments also included requests that the EIS include analysis of impacts to fish and wildlife resources. Several commenters expressed a desire to close the ash ponds by removal to reduce potential effects to sensitive resources and to consider the closure of coal plants to be replaced with natural gas or renewable energy. A comment was received requesting the EIS provide more detail regarding the beneficiation process and its potential issues relating to heavy metals. TVA considered these comments in the preparation of the Final EIS.

TVA released the Draft EIS for public review on December 27, 2019. A Notice of Availability (NOA) for the Draft EIS was published in the Federal Register on January 4, 2020. Publication of the NOA in the Federal Register opened the 45-day comment period, which ended on February 18, 2020. To solicit public input, the availability of the Draft EIS was announced in regional and local newspapers serving the Gallatin area. The Draft EIS was posted on TVA's website, and hard copies were made available by request. TVA hosted an open house meeting to solicit public input on January 16, 2020, at the Gallatin Civic Center in Gallatin, Tennessee to allow the public to attend at their convenience and meet with TVA staff to discuss the project on an informal basis.

TVA accepted comments submitted through mail, email, a comment form on TVA's public website, and at the public meeting. TVA received 96 comment submissions from members of the public, organizations and state and federal agencies. Comment submissions were carefully reviewed and compiled into 127 specific comments which received responses. Most of the comments received were of a general nature, such as the promotion of clean air and water and environmental stewardship. Other comments received were related to public health and safety, groundwater impacts, sufficiency of the bounding analyses, beneficial re-use, cemetery relocation, and consideration of impacts to communities requiring environmental justice considerations. TVA provided responses to these comments, made appropriate minor revisions to the Draft EIS and issued the Final EIS. The NOA for the Final EIS was published in the Federal Register on August 14, 2020.

Mitigation Measures

TVA will use appropriate best management practices (BMPs) during all phases of closure of the APC and expansion of the existing onsite landfill. Mitigation measures and actions

taken to reduce adverse impacts associated with the proposed action are detailed in the Final EIS and include:

- Standard BMPs will be applied during construction activities to minimize environmental effects and would be implemented by construction personnel or included in contract specifications.
- A General Permit for Storm Water Discharges Associated with Construction Activities TNR100000 or an Individual Construction Storm Water Permit will be obtained and would require development of a project-specific Storm Water Pollution Prevention Plan (SWPPP) in accordance with the TDEC General Construction Storm Water permit and the Tennessee Erosion and Sediment Control Handbook.
- Erosion and sedimentation control BMPs described in The Tennessee Erosion and Sediment Control Handbook – 4th Edition and outlined in the project-specific SWPPP will be implemented to minimize erosion, protect surface waters and groundwater, and preserve soils and geologic features during construction and site restoration activities..
- Equipment washing and dust control discharges will be handled in accordance with BMPs described in the Construction General Permit's SWPPP or BMP Plan required by the site's NPDES Permit TN0005428 to minimize construction impacts to surface waters.
- BMPs for herbicide and fertilizer application and to control sediment infiltration will be used to protect groundwater.
- TVA will comply with fugitive dust emission standards specified in the GAF's Title V Operating Air Permit, the GAF CCR fugitive dust control plan and associated BMPs, and the construction permit from TDEC.

- Noise emissions will be minimized through implementation of BMPs.
- Customary industrial safety standards including OSHA requirements for workers will be followed during all project activities.
- Sanitary wastes generated during construction activities will be collected by the existing onsite septic system(s) or by means of portable toilets (i.e., porta lets).
- Solid and hazardous wastes generated by proposed project activities will be managed in accordance with standard procedures for spill prevention and cleanup and waste management protocols in accordance with pertinent federal, state and local requirements.
- Consistent with EO 13112 as amended by EO 13751, disturbed areas will be graded and revegetated with native or non-native, non-invasive plant species to avoid the introduction or spread of invasive species.
- A CCR removal plan will be submitted for TDEC approval prior to removal.
- The proposed new SRL landfill expansion would adhere to TDEC Class II permitting and EPA CCR Rule requirements.
- Potential risk and impact to karst features will be investigated and mitigated during construction activities according to a karst mitigation plan that recommends stages and actions to be performed both prior to landfill construction and during landfill construction.
- State requirements for post-closure care and/or remediation will be implemented as needed and the CARA Plan will be implemented.
- Leachate from the proposed landfill expansion will be collected in either a collection tank or a sump and pumped to the flow management system, where it will be treated prior to discharge from a permitted NPDES outfall.

- The conservation measures required for this project are identified on pages 5-7 of the TVA Bat Strategy Project Screening Form, and they will be implemented as part of the proposed project.
- A survey will be performed between one and three months prior to removal of structures located within the landfill expansion footprint to determine if wildlife or active nests of migratory birds are present.
- Should the two osprey nests located on transmission line towers within the proposed project area be active in future years, ash pond closure activities will be minimized within a 660-foot diameter buffer around the nest during the osprey nesting season.
- A Tennessee Stream Quantification Tool will be required per TDEC regulations to assess the quality of streams to be impacted by the proposed projects. A TDEC Section 401 Water Quality Certification/ARAP and USACE 404 permit will be required for disturbance to wetlands and stream features, and the terms and conditions of these permits would include mitigation for unavoidable adverse impacts.
- Non-critical actions proposed within the 100-year floodplain that were not reviewed in TVA's 1981 Class Review of Repetitive Actions in the 100-Year Floodplain will be subject to further review under the floodplains No Practicable Alternative analysis. Critical actions would need to be located outside the 500-year floodplain. Specific conditions to minimize adverse impacts for any non-critical actions proposed within the 100-year floodplain will be determined in a subsequent environmental review.

- TVA will mitigate impacts to cemeteries located within the project area by removing all graves and relocating them to a new burial ground per stipulations outlined in the MOA signed by TVA and the SHPO .
- TVA commits to conducting a traffic analysis and traffic management plan to identify and evaluate potential mitigative measures and their effectiveness for reducing traffic related impacts.
- In addition to any federal requirements that may apply to the impoundments at GAF after closure is completed, TVA will implement supplemental mitigative measures as required by TDEC, as well as its approved closure plan, which could include additional groundwater monitoring, assessment or corrective action programs.
- If the proposed action were to change significantly from that described in the EIS because of additional or new information, additional environmental analyses will be undertaken if necessary.

Dated: September 17, 2020.

Robert M. Deacy, Sr.,

Senior Vice President,

Generation Construction, Projects & Services,

Tennessee Valley Authority.

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