

FINDING OF NO SIGNIFICANT IMPACT
TENNESSEE VALLEY AUTHORITY
ALLEN FOSSIL PLANT
DECONTAMINATION AND DECONSTRUCTION
ENVIRONMENTAL ASSESSMENT
SHELBY COUNTY, TENNESSEE

Tennessee Valley Authority (TVA) is proposing to deconstruct its Allen Fossil Plant (ALF) located in Shelby County, Tennessee. TVA needs to manage the disposition of the ALF site to provide necessary structures and facilities for ongoing site activities while considering capital cost, long-term operations and maintenance costs, environmental risks, safety and security at the plant site, and making the land available for future economic development.

ALF's three coal-fired generating units (Units 1, 2, and 3) were permanently retired on March 31, 2018. TVA replaced the ALF coal-fired plant with the Allen Combined Cycle (ACC) Plant which operates on natural gas. Additional generation for peaking operations is provided by the Allen Combustion Turbine (ACT) Plant, which is located within the ALF property boundary. The ACC and ACT will continue operations at this site. Similarly, the impact of activities associated with the closure of the ash disposal areas, metal cleaning pond, and the coal yard will be assessed in separate environmental reviews, since all such activities would occur independently of the decontamination and deconstruction of ALF.

Alternatives

TVA considered several options for the disposition of ALF, including closing and securing the plant in an "idle and vacant" status, selective decontamination, and demolition of ancillary structures and equipment while leaving the main powerhouse standing. However, these alternatives were rejected from detailed analysis in the Environmental Assessment (EA) because they did not meet the purpose and need of the project to make the land available for future economic development.

TVA carried forward the following alternatives for analysis in the EA:

- Alternative D1, D2, and D3 – Full Demolition to Grade Resulting in a Brownfield Site with Stack Removal Options
- Alternative E – No Action

The impacts of these alternatives were assessed in the attached EA, which is incorporated herein by reference.

Alternative D1, D2, and D3: Alternative D includes the decontamination of all buildings, sumps and structures associated with plant operations to remove hazardous materials and demolishing the powerhouse and all associated structures to 3 feet below final grade resulting in a brownfield site.

Stacks of ALF Units 1 through 3, each 400 feet tall, could be removed via mechanical deconstruction, explosive demolition, or a combination of methods.

Demolition activities under Alternative D would create approximately 17,000 cubic yards of demolition debris and asbestos containing materials (ACM) and 69,000 cubic yards of scrap metal that would be hauled offsite by truck, rail or barge to be recycled or disposed at an appropriate facility in accordance with all federal, state, and local regulations. If hauled by truck, TVA estimates that offsite transport of this material would be to an existing permitted landfill within 30 miles of ALF. If debris is transported by rail or barge, the material would be loaded onto the barge or rail at the ALF site and would be transported to a landfill or recycling facility. All buried utilities would be severed and properly abandoned in place.

Below-grade building areas would be backfilled with suitable concrete/masonry materials or other suitable clean fill material, and the site would be restored to grade while providing proper drainage. All disturbed areas would have topsoil installed and seeded or otherwise permanently stabilized. Restoration of the site would require the addition of approximately 170,000 cubic yards of borrow material to achieve proposed finished grades and provide a suitable medium to support stabilization of the site. Borrow would be obtained from one or more previously developed commercial borrow site(s) within 30 miles of ALF.

Certain buildings will remain at ALF for continued use. These include the following buildings and facilities:

- 161 kilovolt (kV) Switchyard
- Switch House
- Site Security building
- ACT Plant including CT units 1 through 20, oil tanks, CT regulation yard, CT maintenance and control building
- Harsco Metals and Minerals plant, a provider of recycling solutions for industrial byproducts
- Railroad tracks
- Perimeter fencing
- 22-inch buried gas main (belongs to Memphis Light, Gas and Water Division (MLGW))
- 12-inch portable water loop (belongs to MLGW)

TVA will determine the status of the following items at a later date:

- Condenser cooling water (CCW) pump house
- CCW discharge outlet tunnel seal well
- Fuel oil unloading station on mooring cell

The stacks of ALF Units 1 through 3 could be removed via three different methods. Under Alternative D1, the stacks and other structures would be demolished by means of dropping by conventional construction methods. Under Alternative D2, mechanical deconstruction or other controlled methods of deconstruction would be utilized. Alternative D3 would utilize a hybrid method, demolishing through a combination of mechanical deconstruction or other controlled methods for the upper portions of the stack and conventional controlled demolition for the lower portions.

Alternative E: Under the No Action Alternative, TVA would not perform any demolition, deconstruction, decontamination, or other disposition activities at ALF. Consequently, the facility would be left in the “as-is” condition. TVA would continue to restrict access to ALF, perform

periodic inspections and critical maintenance as needed, and conduct environmental monitoring and reporting as required. If left in this condition, it likely would present a higher risk than Alternatives D1 through D3 with the potential to contaminate soil and groundwater and increased runoff to surface water as systems and structures degrade. In addition, the No Action Alternative would not make the land available for future economic development of the site. As such, this alternative is not a reasonable alternative. However, the No Action Alternative is included because it provides a baseline for describing the anticipated environmental effects of the other alternatives.

Preferred Alternative

TVA's preferred alternative is Full Demolition to Grade Resulting in a Brownfield Site with Stack Removal Options (Alternative D1, D2 or D3). Under these alternatives, decontamination of all buildings, sumps and structures associated with plant operations would occur to remove hazardous materials. Additionally, the powerhouse and all associated structures would be demolished to 3-feet below final grade, along with removal of the three 400-foot tall stacks, resulting in a brownfield site.

Implementation of this alternative would meet the Purpose and Need of the project to enhance future economic development in the area and would avoid the potential environmental and public safety impacts associated with leaving ALF in the "as-is" condition.

Impacts Assessment

Based on the analyses in the EA, TVA concludes that the implementation of any of the Alternative D options would not adversely affect climate change, geology, wetlands, cultural and historic resources, land use, prime farmland, or utilities and service systems.

The implementation of Alternative D may result in minor effects on threatened and endangered species. However, those actions would not likely result in adversely affecting listed species.

Activities associated with decontamination and deconstruction have the potential to result in temporary, minor adverse impacts to shallow groundwater, floodplains, vegetation, wildlife, and visual resources; however, these resources would benefit from the action in the long term.

During demolition, there would be short-term increases in employment, payroll, and tax payments, resulting in minor beneficial direct and indirect economic impacts. Implementing Alternative D would not cause low-income or minority populations to be disproportionately affected by adverse environmental impacts.

Onsite grading and deconstruction activities would potentially disturb soil stability and increase erosion, resulting in temporary, minor impacts to soils. Similarly, there would be temporary, minor impacts to surface water and aquatic resources due to surface water runoff from the demolition site, as well as in-water work such as the removal of the mooring cells and barge unloader. These impacts would be minimized through the use of best management practices (BMPs), a site-specific Stormwater Pollution Prevention Plan, and applicable permit requirements. Onsite demolition activities would also result in temporary impacts to the Ensley Bottoms Complex Important Bird Area, as well as recreational boating, fishing, and bird watching activities in the immediate vicinity of ALF. These impacts would be minor given the abundance of high-quality shorebird habitat and opportunities for bird watching in the area, and the limited recreational use of McKellar Lake due to its industrial nature.

Onsite decontamination and deconstruction activities would result in temporary impacts to air quality, noise and vibration, and public health and safety. Impacts to these resources would be minor under all stack removal options but would be greater under Alternative D1 than Alternative D2 due to the increased impacts of explosive drop removal compared to mechanical deconstruction of the stacks. Impacts to these resources under Alternative D3, hybrid stack removal, would be less than Alternative D1 but greater than Alternative D2.

Under any of the Alternative D options, offsite transportation-related activities such as debris disposal, transport of borrow, and workforce transportation would result in temporary impacts to transportation, noise, and air quality. Increased traffic on Riverport Road and other roads in the vicinity of ALF could lead to moderate impacts to the roadway network, particularly if demolition debris and scrap metal are transported offsite via truck. Should barges or rail be utilized, impacts to the river and railroad transportation networks would not be anticipated based on the frequency of barge and rail traffic in the area and the expected waste quantities. Roadway traffic impacts could be mitigated by timing of entry and exit to the facility, managing access to ALF to include both Plant Road and Riverport Road, and possible busing of workers, if necessary. Additionally, mitigation measures, including implementing BMPs for controlling fugitive dust and proper maintenance of vehicles for controlling emissions, would reduce transportation-related air quality impacts.

Environmental Justice communities located along transportation routes could be adversely impacted by noise, fugitive dust and air emissions associated with the increased traffic. However, these impacts would be temporary and minor and would be reduced through the implementation of BMPs designed to minimize emissions of fugitive dust and noise.

Under any of the Alternative D options, impacts to solid and hazardous waste would be minor, as these materials would be managed and disposed of in accordance with all applicable state and federal regulations. Alternative D is preferable to the No Action Alternative in this regard, as the potential degradation of structures and associated hazardous materials remaining onsite would lead to increased risk of soil and groundwater contamination.

The reasonably foreseeable future projects such as the proposed CCR impoundment closures at ALF would contribute to additional traffic volumes on the local transportation network. 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 the associated transport of borrow to support closure and restoration activities could result in a very large number of trucks entering and exiting the facility on a daily basis. This could lead to cumulative impacts associated with congestion along adjacent arterial roadways and possibly on Interstate 55. TVA would mitigate congestion in the vicinity of ALF with a traffic plan, as needed. Possibilities include staging of trucks, 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 of the proposed action to transportation would be moderate and temporary.

Most of the communities within the vicinity of ALF meet the criteria for environmental justice consideration. Given the distance of these communities from ALF, there is a potential that these communities would be indirectly impacted due to an increase in traffic, noise, exposure to fugitive dust, and exhaust emissions from the trucks used to transport the borrow material and demolition debris. It is also likely that some of these communities would be located along the routes taken during construction activities for the closure of CCR impoundments at ALF, or other planned construction projects within the vicinity of ALF. Because these short term actions

are potentially coincident, potential cumulative effects may be expected to occur on a local basis. Therefore, the cumulative effects of the proposed action on noise and dust emissions within low income and minority communities have the potential to represent a moderate increase in impact to environmental justice populations, if these activities occur concurrently with other construction activities in the geographic area. Such physical impacts associated with the transport of borrow material or demolition debris (i.e., noise, dust) would be mitigated through BMPs or by the selection of borrow sites that are not within identified environmental justice communities.

Public and Intergovernmental Review

The Draft EA was released for public review and comment for 30 days beginning on May 31, 2019. TVA notified local, state, and federal agencies and federally recognized Indian tribes of its availability through their required consultations. Pursuant to Section 106 of the National Historic Preservation Act, TVA consulted with the Tennessee State Historic Preservation Officer (SHPO) and federally recognized tribes requesting concurrence that the proposed action would have no effect on cultural resources. The SHPO concurred with this determination by letters dated November 1, 2018 and February 21, 2019, and no tribe objected or raised concerns.

TVA received two comment letters from members of the public via TVA's website. The remaining comments received on the draft EA were from the Memphis and Shelby County Port Commission, Tennessee Department of Environment and Conservation, and the U.S. Environmental Protection Agency. TVA considered all of the substantive comments received on the Draft EA and has responded to them in the Final EA. Further, implementation of Alternatives D1, D2, or D3 would be consistent with Executive Order (EO) 11998 (Floodplains Management) and EO 11990 (Protection of Wetlands).

Mitigation

TVA would implement operating permit requirements and the routine BMPs described in the EA to avoid or reduce minor adverse environmental effects associated with the decontamination and deconstruction activities. In addition, mitigation measures designed to avoid, minimize, or compensate for adverse impacts associated with the proposed activities include:

- TVA would minimize one-time emissions of fugitive dust from facilities expected to produce large volumes (such as demolition of the stacks) by working with the demolition contractor on a site-specific plan.
- TVA will notify Shelby County prior to any demolition activities that have the potential to mobilize dust.
- To minimize the potential for impacts to the interior least tern, TVA would implement certain avoidance measures that are outlined in the Section 7 Endangered Species Act consultation with US Fish and Wildlife Service.
 1. Surveys of the ALF D4 project areas would occur in late April of any given year (for the duration of the project) to identify any exposed ash, gravel, or sand-like substrate that could provide nesting habitat for least terns.
 2. Weekly observations of these potential nesting sites would occur beginning in mid-May and ending in mid-August of any given year (for the duration of the project) to identify any terns that return to the area.

3. If terns return to the ACC and are seen landing in the ACC gravel lot, the area would be vacated immediately. All personnel, equipment, and vehicles would be removed within a few days and the area would no longer be used again until all terns have left the area or until the end of September when birds are finished nesting, whichever comes first.
 4. If terns return to ALF and are seen nesting in the East Ash Pond, no demolition or loud activities would be permitted within 300 feet of the nests.
 5. If any of measures 1-4 cannot be met, TVA would reinitiate consultation with USFWS.
- TVA would conduct presence/absence surveys prior to demolition of the structures to determine if migratory birds or listed bat species are utilizing these buildings. If active nests of migratory birds are present and demolition activities must occur within the active nesting season, TVA would coordinate with U.S. Department of Agriculture Wildlife Services, who assists with managing any potential impacts to birds, to determine best options for carrying out demolition activities. Conservation measures identified in the Bat Strategy Form would be implemented to minimize the potential for impacts to federally listed bats roosting in buildings per TVA's programmatic consultation with the U.S. Fish and Wildlife Service on routine actions and federally listed bats in accordance with ESA Section 7(a)(2) completed in April 2018.
 - Borrow would be obtained from one or more previously developed 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 left up to the contractor. However, TVA would perform all necessary due diligence and consultation as required under Section 106 of the National Historic Preservation Act related to any offsite work.
 - To mitigate the potential for impacts to public safety, TVA would restrict or close roads in the vicinity should blasting be used to demolish the stack (Alternatives D1 and D3). No barge or boat traffic would be allowed in the area during the demolition activities. TVA would work with the demolition contractor to create a detailed site-specific plan for any public road closures that would be distributed to affected parties, including emergency personnel.
 - If determined necessary, TVA would mitigate traffic impacts by implementing measures such as timing of entry and exit to the facility, establishing alternate ingress/egress routes and possible busing of workers.
 - TVA would require the demolition contractor to develop and implement a demolition plan to minimize vibration effects at ALF and in the vicinity. Explosives would be managed under the direction of a licensed blaster; 24-hour security would be provided to monitor the explosives. Detailed security plans would be developed. Activities would be coordinated with local area emergency response agencies. Site security on the day of the event would be strictly enforced, and trespassing would not be tolerated. Notifications to the public would be issued prior to the use of explosives for demolition. Prior to the demolition, the area would be prepared, and the explosives contractors would establish a circular fall exclusion zone. During the blast event, no personnel would be allowed in the fall exclusion zone.
 - If deconstruction activities have the potential to emit pollutants greater than acceptable thresholds in ALF's existing Title V permit, mitigation may include a request to modify the

permit, which would be required for the prevention of significant deterioration of air quality.

- To minimize adverse impacts on natural and beneficial floodplain values, demolition and deconstruction material would be disposed of outside of the 100-year floodplain, and concrete and masonry used as backfill in the floodplain would be placed at-grade or below.

Conclusion and Findings

Based on the findings in the EA, TVA concludes that implementing Alternative D1, D2, or D3 – Full Demolition to Grade Resulting in a Brownfield Site with Stack Removal Options, would not be a major federal action significantly affecting the environment. Accordingly, an environmental impact statement is not required.



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Date Signed