

**FINDING OF NO SIGNIFICANT IMPACT**  
**TENNESSEE VALLEY AUTHORITY**  
**WIDOWS CREEK FOSSIL PLANT DECONSTRUCTION**  
**JACKSON COUNTY, ALABAMA**

The Tennessee Valley Authority (TVA) is proposing to deconstruct its retired Widows Creek Fossil Plant (WCF) in Jackson County, Alabama. WCF has eight coal-fired generating units and associated infrastructure. TVA began operations at WCF in 1952 and continued to utilize the plant until 2015. The eight coal-fired units are shut down and disconnected from TVA's transmission system. TVA needs to determine the most cost-effective disposition of WCF while also considering plant safety and security and the environmental risks.

TVA has prepared an environmental assessment (EA) for this proposed action that is incorporated by reference.

**Alternatives**

TVA evaluated four alternatives in the EA:

**Alternative A – Assess, Close, and Secure Power Production Facilities, and Implement Operations and Maintenance Program to Maintain Structures and Equipment:** TVA would de-energize systems at WCF, minimize environmental and safety risks, and close and secure the facility to a “cold, dark, and dry” status. Existing buildings, structures, and equipment within the approximately 200-acre decontamination/deconstruction boundary would remain in place. Only essential lighting and water service necessary to allow inspections and fire suppression would remain operational. Deteriorating hazardous materials would be removed, and high-risk environmental and safety issues would be addressed. Select sump pumps to prevent below-grade spaces from flooding would be maintained. The plant staff and regular maintenance would be minimized to the extent practicable and labor from other TVA sources would be utilized as necessary.

**Alternative B1 – Demolition to Grade with Controlled Explosive Demolition of Units 1-8 Chimneys (three chimneys total):** Buildings, including the main powerhouse, other retired or abandoned structures, roads, and parking lots associated with the coal-fired facility would be decontaminated, demolished, concrete foundations removed to 3 ft below finished grade, and the basements backfilled. Buried utilities would be cut and capped and left in place. Cooling water intake and discharge tunnels would be sealed or removed. Disturbed areas would be covered with topsoil and seeded to restore the project area to brownfield condition. Hazardous materials and potential safety risks would be removed. The Unit 1-8 chimneys would be demolished through controlled demolition using explosives. Permanent operations and maintenance staff would not be needed onsite. Regular inspections of the structures and equipment would no longer be necessary.

**Alternative B2 – Demolition to Grade with Units 1-8 Chimney Dismantlement:** Alternative B2 is identical to Alternative B1 with one exception; the Units 1-8 chimneys (three chimneys) would be dismantled instead of being demolished with controlled explosives. Dismantlement of chimneys would involve erecting a ring scaffolding or another support structure around the

chimneys and demolishing them from the top to bottom in a controlled manner. All other conditions as described under Alternative B1 would apply to Alternative B2.

### **Alternative B3 – Demolition to Grade with Units 1-8 Chimney Hybrid**

**Demolition/Dismantlement:** Alternative B3 is identical to Alternatives B1 and B2 with one exception, the Units 1-8 chimneys would be removed through a hybrid approach of dismantlement and controlled explosive demolition. All other conditions as described under Alternative B1 would apply to Alternative B3.

**Alternative C – No Action:** Under this alternative TVA would not perform any deconstruction or other disposition activities and would allow the WCF structures to remain in their current state. Additionally, TVA would take no action to maintain the units in operable condition. The plant would not generate power and it would not be possible to restart the units. The plant would not be heated, cooled, or supplied with electricity. TVA would continue to restrict access to WCF. Periodic inspections and critical maintenance would be performed as needed. TVA would maintain the NPDES permit, implement the Integrated Pollution Prevention Plan, and perform environmental monitoring and reporting as required. TVA would continue current operations and maintenance practices to remove hazardous materials from WCF.

Alternatives B1, B2 or B3 are safer and environmentally more beneficial than Alternatives A and C. Peeling lead paint, falling concrete, buckling floor tiles, and asbestos deterioration are examples of the onsite hazards that will develop if the structures are left in place under Alternatives A and C. There are also issues with the functionality of sump pumps over the long term. Alternatives A and C would leave all structures in place where they would degrade and potentially contaminate the environment and also present a health risk to trespassers, employees and any wildlife that might utilize the remaining buildings. Alternative B1 results in the lowest long-term maintenance and operation costs. Alternatives B2 and B3 have similar environmental impacts to Alternative B1 but higher cumulative costs. While Alternative B1 is TVA's preferred alternative and the one it is inclined to implement, it is possible that the choice of the engineering method for demolishing the chimneys and other considerations may influence TVA in the future to implement Alternative B2 or Alternative B3. Any of these choices (B1, B2 or B3) would be compliant with NEPA as TVA has concluded that the impacts of Alternatives B1, B2 or B3 are insignificant.

### **Impacts Assessment**

Based on the analyses in the EA, TVA concludes that the implementation of Alternative B1 would have no negative impact on geology and groundwater; surface water; wetlands; aquatic ecology; wildlife; threatened and endangered species; natural areas, parks, and recreation; cultural and historic resources; utilities and service systems; and environmental justice. Hazardous materials and solid and hazardous waste would be managed and disposed of in accordance with all applicable regulations such that there would be no measurable negative environmental impacts. There would be minor and mostly temporary adverse impacts to air quality, noise and vibration, and safety.

Changes in land use and effects on prime farmland and floodplains may result in minor beneficial impacts depending on the future use of the property. Additionally, there would be potential minor beneficial impacts to vegetation with the reseeding of the area. During demolition, there would be notable short-term increases in employment, payroll, and tax payments, resulting in beneficial direct and indirect socioeconomic impacts. Since the facility has been shut down since 2015, the economic impact of plant closure has already been experienced by the community. Future jobs may be created as the facility may be converted to another use. Implementing Alternative B1 would not cause low-income or minority populations to be disproportionately affected by adverse environmental impacts. The visual landscape would also be beneficially impacted as the stacks

and aging buildings will be removed from the riverside area which is primarily rural and recreational.

Impacts associated with Alternatives B2 and B3 would be similar to those described for Alternative B1. There would be smaller noise and vibration impacts under Alternative B2 as there would be no use of explosives. Implementation of all three alternatives would be consistent with EO 11988 and EO11990. All other impacts associated with Alternatives B2 and B3 would be similar to those described above.

Compared to Alternatives A and C, demolition of the facility to grade would result in substantially reduced negative potential impacts to groundwater (and potentially surface water and aquatic ecology) as no buildings or structures would be left in place to degrade, and all hazardous and solid waste would be removed. The temptation for trespassers to access the facility would be greatly reduced also reducing safety impacts. The property would be available for other potential beneficial uses.

### **Public and Intergovernmental Review**

A Draft EA of the proposed WCF Deconstruction project was released for comment on February 17, 2016. The 30-day comment period closed on March 18, 2016. The Draft EA was transmitted to state, federal, and local agencies and federally recognized tribes. It was also posted on TVA's public NEPA review website. A notice of availability, including a request for comments on the Draft EA, was published in newspapers serving the Stevenson, Alabama area. Comments were accepted through March 18, 2016, via TVA's website, mail, and e-mail.

TVA received four sets of comments: three from the Alabama Department of Environmental Management (ADEM) and one from a previous TVA WCF employee. TVA has considered all of the comments it received on the Draft EA and has responded to them in the Final EA as appropriate. Pursuant to Section 106 of the National Historic Preservation Act, TVA consulted with the Alabama State Historic Preservation Officer who concurred that the proposed demolition action would not adversely affect any historic property that is eligible for listing to the National Register of Historic Places. TVA received no objection from any of the federally recognized Native American tribes.

### **Mitigation**

TVA would implement operating permit requirements and routine best management practices listed in the EA for avoiding or reducing minor adverse environmental effects associated with the demolition of the plant. The following mitigation measures and best management practices (BMPs) have been identified to reduce potential health, safety, and environmental effects:

#### *Mitigation Measures*

- Obtain and comply with the terms of a Section 404 permit from the U.S. Army Corps of Engineers for any unavoidable wetland impacts.
- Survey of buildings and structures within the project footprint one month prior to demolition to determine if threatened or endangered species and/or migratory birds are nesting or roosting inside. Coordinate with the U.S. Fish and Wildlife Service (USFWS) if nests or roosting species are identified, and, if necessary, minimize and mitigate potential impacts to threatened and endangered species and/or migratory birds.
- Close all openings to the extent possible and use deterrents as appropriate to minimize potential for nesting or roosting.
- Consult with the USFWS if the decision is made to seal or remove the tunnels to develop a plan to assess for the presence of and, if necessary, minimize and mitigate potential impacts to threatened and endangered aquatic species.

- Remove ash from facilities prior to demolition and use dust control measures during demolition.
- Develop a demolition and security plan(s) to be communicated and distributed to affected parties including emergency personnel.
- Restrict river, rail, and road traffic in the vicinity during any explosive demolition activities.
- Prepare a vibration model simulating the effects of explosive demolition of the stacks to verify that the vibrations would not result in measurable impacts on nearby structures.
- Develop a mitigation plan to minimize vibration impacts to the onsite power transmission equipment.
- Notify the public prior to the use of explosives as defined in the demolition plan.

*Best Management Practices*

- Implement erosion controls and best management practices under applicable permits for minimizing storm water impacts.
- Use best management practices and comply with all relevant federal, state, and local regulations during the removal of hazardous material and solid waste.
- Use measures such as wetting the structure and fall zone and use of berms to minimize release of fugitive dust during stack felling.

**Conclusion and Findings**

Based on the findings in the EA, TVA concludes that implementing Alternative B1 – Demolition to Grade with Controlled Explosive Demolition of Units 1-8 Chimneys, Alternative B2 – Demolition to Grade with Units 1-8 Chimney Dismantlement, or Alternative B3 – Demolition to Grade with Units 1-8 Chimney Hybrid Demolition/Dismantlement would not be a major federal action significantly affecting the environment. Accordingly, an environmental impact statement is not required to implement any of these three alternatives. TVA’s preferred alternative and the one it is inclined to implement, is Alternative B1.




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Amy B. Henry, Manager  
 NEPA Program & Valley Projects  
 Environmental, Tennessee Valley Authority

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Date Signed