

**FINDING OF NO SIGNIFICANT IMPACT**  
**TENNESSEE VALLEY AUTHORITY**  
**WATTS BAR FOSSIL PLANT DECONSTRUCTION**  
**RHEA COUNTY, TENNESSEE**

The Tennessee Valley Authority (TVA) proposes to deconstruct the Watts Bar Fossil Plant (WBF) to alleviate hazardous conditions. The plant and some associated structures are deteriorating, and their long-term structural integrity is in jeopardy. The brick exterior walls of the plant are distressed and are likely to collapse without extensive refurbishment. Examples of environmental hazards present in the powerhouse include asbestos, lead, mercury, and polychlorinated biphenyls (PCBs). TVA proposes to properly remove and dispose of asbestos, PCBs, and hazardous materials and to deconstruct the WBF Powerhouse and adjacent structures to eliminate safety hazards and environmental risks.

WBF is located in Rhea County, Tennessee, downstream of the Watts Bar Dam on the Tennessee River. It was the first coal-fired power plant built by TVA, constructed in stages between 1940 and 1945. WBF supplied power to meet the growing demand for electricity due in part to World War II production efforts. The plant operated until 1957, when it was placed in extended shutdown mode. It was returned to service in 1970, but was again placed in extended shutdown mode in 1983. TVA terminated air permits for the plant in 1997. In 2007, TVA, in consultation with the Tennessee State Historic Preservation Officer (SHPO), determined that, due to its architectural significance, the WBF site was eligible for listing in the National Register of Historic Places.

TVA has prepared an environmental assessment (EA) of the impacts of this proposed action. This EA is incorporated by reference.

**Alternatives**

On several occasions, TVA has evaluated the feasibility of refurbishing the WBF Powerhouse for another use. However, extensive remediation of hazardous materials and reconstruction of the structure's exterior would be required prior to use of the building. TVA has identified no feasible use for the deteriorating building. Therefore, the EA evaluates the environmental impacts of taking no action and of deconstructing WBF.

Under the No Action Alternative, the WBF Powerhouse would be left in place in the current condition. The building is not heated, cooled, or supplied with electricity. Access to the powerhouse would be restricted. Current operations and maintenance practices would be continued to manage hazardous materials and conditions. TVA would maintain necessary permits and perform environmental monitoring and reporting as required.

Deconstruction of WBF (i.e., the Action Alternative) would involve dismantling the nine-story powerhouse and an associated concrete block building. Deconstruction would be completed over approximately nine months using standard heavy equipment. TVA would hire a licensed contractor experienced with deconstruction of industrial facilities. All work would be performed in accordance with current federal and state rules and regulations. TVA would retain oversight authority for the project including approval of work plans and oversight for the proper handling

and disposal of any hazardous, special, or universal waste generated during the project. Materials that are reusable or have scrap value would be removed by TVA's contractor and marketed for sale. Concrete, masonry, and other acceptable materials would be used as on-site fill and topped with a layer of soil. The disturbed ground would be seeded to restore the powerhouse area to a field. TVA's Preferred Alternative is the Action Alternative, deconstruction of WBF.

### **Impacts Assessment**

Under the No Action Alternative, continued deterioration of the WBF Powerhouse would result in safety hazards and environmental risks. TVA would not implement provisions in the 2011 amendment to the memorandum of agreement (MOA) with the Tennessee SHPO, which mitigate adverse impacts of deconstructing the WBF Powerhouse. Over time, deterioration of the WBF Powerhouse could eventually adversely affect this historic resource. Additionally, the gradual deterioration would result in negative aesthetic consequences.

Under the Action Alternative, proper handling and disposal of scrap materials, demolition debris, and hazardous materials would result in minimal environmental impacts. Potential effects to local transportation services would be temporary and minor. TVA would implement the MOA with the Tennessee SHPO, as amended in 2011, which would mitigate adverse impacts to historic resources. Entering into this MOA with the Tennessee SHPO satisfies TVA's obligations under Section 106 of the National Historic Preservation Act.

Direct impacts to wetlands and streams in the project area would be avoided by establishing 50-foot-wide streamside management zones (SMZs) on both sides of the two streams. The SMZs would encompass both wetlands. TVA would implement best management practices (BMPs) in the site integrated pollution prevention and spill response plan (IPP) to minimize indirect impacts to streams and wetlands from spills, erosion, and runoff. BMPs would be implemented for any areas where the ground is disturbed. No cumulative impacts to streams and wetlands are anticipated. Implementation of the planned wetland avoidance measure would eliminate wetland impacts, and therefore is consistent with Executive Order 11990, Protection of Wetlands. The two streams in the project area are first-order tributaries to the Tennessee River in the Watts Bar tailwater. Both streams are potential habitat for the flame chub, a species listed by the State of Tennessee as "in need of management." However, with implementation of the stream avoidance measures described above, the proposed activities would not adversely affect the flame chub or other aquatic species present in the streams. No habitat suitable for other state-listed or federally listed species is present in the project area. Therefore, no direct, indirect, or cumulative impacts to federally listed or state-listed species are anticipated, and requirements under Section 7 of the Endangered Species Act have been met.

TVA would implement provisions of the 2007 MOA with the Tennessee SHPO that addresses deconstruction of the riverside barge unloading crane. Adopting the Action Alternative would have the beneficial effect of ultimately eliminating safety hazards and environmental risks associated with the powerhouse.

Under either alternative, there would be no or negligible impacts to archaeological or natural resources and air quality.

Under both alternatives, TVA would strive to generate no more than 100 kilograms of hazardous waste per month; hazardous materials would be handled, transported, and disposed of offsite in state-approved facilities.

## Mitigation

Routine compliance requirements that would be implemented as part of the proposed action and required environmental practices are described in the EA. Additionally, TVA would ensure that the following nonroutine measures are implemented in undertaking the proposed action:

1. Commitments in the 2007 MOA between TVA and the Tennessee SHPO, and the 2011 amendment to that MOA, will be implemented.
2. The existing WBF IPP shall be updated to include deconstruction activities and project contact personnel and shall be implemented during deconstruction.
3. Disturbed ground shall be revegetated with native or noninvasive, nonnative species.
4. Heavy equipment, temporary storage areas, and other activities shall be kept out of the 50-foot-wide SMZ that would be established on either side of the two streams near WBF.

## Conclusion and Findings

TVA has determined that the deconstruction of the WBF would not result in significant adverse impacts, either individually or cumulatively. Consequently, TVA concludes that implementation of this project would not be a major federal action significantly affecting the environment, subject to the identified mitigation measures. Accordingly, an environmental impact statement is not required.



for

June 22, 2011

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Federal Determinations  
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Date Signed