Document Type: EA-Administrative Record
Index Field: Finding of No Significant Impact (FONSI)
Project Name: JOF Decontamination and Deconstruction
Project Number: 2017-27

FINDING OF NO SIGNIFICANT IMPACT

TENNESSEE VALLEY AUTHORITY

JOHNSONVILLE FOSSIL PLANT DECONTAMINATION AND DECONSTRUCTION
HUMPHREYS COUNTY, TENNESSEE

The Tennessee Valley Authority (TVA) is proposing to deconstruct its Johnsonville Fossil Plant (JOF) in Humphreys County, Tennessee, which ceased operation on December 31, 2017. Prior to retirement, JOF was the oldest fossil plant in the TVA system with ten coal-fired generating units. Decommissioning activities at JOF have already begun on Units 5 through 10 under an agreement that TVA entered into with the United States (U.S.) Environmental Protection Agency (EPA) in April 2011. Separate from the JOF, the Johnsonville Combustion Turbine (JCT) facility will continue operations on the site. TVA needs to manage the disposition of the JOF site to provide necessary structures and facilities for ongoing site activities while considering capital costs, long-term operations and maintenance costs, environmental risks, and safety and security at the plant site. TVA has prepared an environmental assessment (EA) for this proposed action, which is incorporated by reference.

Alternatives
TVA evaluated four alternatives in the EA.

Under all of the action alternatives, the following buildings and facilities will remain at JOF:

- Intake Pump Station
- Water Treatment Building and R.O. Trailers
- Booster Fan Building
- Draft Sys XFMR YD
- Diesel Fire Pump House
- Demineralized Water Tanks
- Combustion Turbine (CT) Storage Building
- CT Facility (20 units)
- Road access from Highway 70 past the switchyard to the CT site
- JCT Perimeter Fencing
- Fuel Oil Truck Unloading Facility for JCT
- Coal Yard Drainage Pond (to be addressed under a separate analysis)
- Switch Houses
- 69-kV, 161-kV and 500-kV switchyards and all associated insulating oil piping and pits will remain operational.

Alternative A2 – Assess, Close, and Secure Site; Close all CCW tunnels; Implement Operations and Maintenance Program to Maintain Structures and Equipment

The objective of Alternative A2 is to de-energize non-essential systems at JOF Units 1-10 and associated facilities, to minimize environmental and safety risks, and to convert the powerhouse and associated facilities to a closed “cold, dark, and dry” status. Existing JOF buildings, structures, and equipment within the deconstruction project area would remain in place. CCW intake and discharge tunnels would be abandoned in place by installing bulkheads and/or stop logs. Only essential lighting, HVAC, and water service necessary to allow inspections, cool electrical equipment, and provide fire suppression would remain operational. Deteriorating

hazardous materials would be removed, and high-risk environmental and safety issues would be addressed. Select sump pumps would be maintained to prevent below-grade flooding or unpermitted discharges to the environment. Work staff would be minimized to the extent practicable and personnel from other TVA facilities may be used, as necessary, to assist with performing operations and maintenance activities.

Alternative B – Selective Demolition of Outlying Facilities including the Coal Handling Facilities

This alternative includes the actions for Alternative A2 along with the removal of most outlying structures including the coal handling facilities. The powerhouse, stack, switchyards and certain other infrastructure would not be disturbed. Buildings, other retired or abandoned structures, select plant roads and parking lots would be decontaminated and demolished to 3 feet below finished grade. Buried utilities (except for the main sewer network connected to the Johnsonville municipal waste system) would be cut and capped and left in place. Cooling water intake and discharge tunnels would be sealed or removed. Hazardous materials and potential safety risks would be removed. Disturbed areas would be covered with topsoil and seeded to restore the areas to brownfield condition. Approximately five workers would be required to perform all necessary operations and maintenance activities and personnel from other TVA facilities may be used as necessary to provide assistance.

Alternatives C1, C2, C3, and C4 – Demolish to Grade ("Brownfield") with Stack Options

All four Alternative C options would include the removal actions described under Alternative A2 and Alternative B. Additionally, the Alternative C options could include removal of the powerhouse (Units 1-10), flue gas stack, roads and parking lots, guard house and plant perimeter fencing. The common objective of all four Alternative C options is to remove all unneeded structures, roads, and parking lots. In addition, all environmental issues associated with identified structures would be assessed and abated, including the decontamination of all buildings, structures, conveyers, and tunnels associated with plant operations, to remove hazardous materials. All removed structures would be demolished to 3 feet below final grade leaving roughly 40 feet of basement wall. Further, all basements, pits, and trenches would be backfilled up to the surrounding grade while providing proper drainage. All disturbed areas would have topsoil installed and seeded or otherwise stabilized. Additionally, a new guardhouse would be constructed south of the JOF facility.

Under Alternative C1, the flue gas stack would remain in place. Under Alternative C2, the flue gas stack would be dropped by conventional construction equipment including cranes, excavators, and explosives. The flue gas stack would be removed by hand (mechanical deconstruction) or other controlled deconstruction method under Alternative C3. Under Alternative C4, a hybrid method would be used to remove the flue gas stack. The stack would first be lowered to a specific minimum height by hand (mechanical deconstruction) or other controlled deconstruction method, followed by explosive drop/fall to fully demolish the remaining portions of the structure.

Alternative D – No Action

Under the No Action Alternative, TVA would not perform any deconstruction or other disposition activities. Consequently, JOF Units 1-10 would be left in place in their current condition. 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 JOF. 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.

Alternatives A2, B, C1, and D have a higher potential for environmental impacts than the other action alternatives since existing structures would be left in place at the facility. Deteriorating structures would cause an increasingly unsafe environment for operations and maintenance personnel. Remaining structures would decrease in structural stability over time, and furthermore they would become more environmentally unstable. Alternatives C2, C3, and C4 have the lowest cumulative cost of all action alternatives.

TVA's preferred alternative is demolition to a brownfield site (Alternatives C2, C3, or C4). Under these alternatives, Units 1-10 and other structures would be demolished to a minimum of 3 feet below final grade (Brownfield) along with removal of the 600-foot tall flue stack.

Impacts Assessment

Based on the analyses in the EA, TVA concludes that the implementation of Alternatives C2, C3, or C4 would have no negative impact on land use, prime farmland, geology, wetlands, aquatic ecology, vegetation, threatened and endangered species, natural areas and parks, cultural and historic resources, and environmental justice. There would be temporary minor adverse impacts to noise and vibration; groundwater; surface water; wildlife; air quality and climate change; hazardous materials, and solid and hazardous waste; transportation; recreation; and safety.

Alternatives C2, C3, and C4 would have minor beneficial impacts on floodplains, visual resources, utilities and service systems, and socioeconomics.

TVA conducted a desktop review of the land within the area of potential effect and concluded that it contains no historic properties. In a letter dated February 23, 2015, the State Historic Preservation Officer (SHPO) concurred with TVA's finding that there are no NRHP listed or eligible properties affected by this undertaking. TVA conducted a survey of the proposed laydown areas and location for a new guard shack in October 2018 and found no historic properties within these areas. In November and December 2018, the SHPO, United Keetowah Band of Cherokee Indians in Oklahoma, and the Cherokee Nation concurred with TVA's findings of no effect in association with the proposed laydown areas and location of a new guard shack.

Implementation of Alternatives C2, C3, or C4 would not result in disproportionate adverse impacts to minority or low income populations. Deconstruction activities would have a minor positive effect on the local economy with the short-term employment of workers and the purchase of any materials, equipment, and services.

Public and Intergovernmental Review

The Draft EA was released for public review and comment for 30 days beginning on August 20, 2018. The availability of the Draft EA was announced in two local newspapers, and posted on the TVA website. TVA's agency involvement includes circulation of the Draft EA to local, state and federal agencies for review. Federally recognized tribes were notified of the availability of the Draft EA for review and comment. TVA received comments on the Draft EA from four private citizens and from the Tennessee Department of Environment and Conservation (TDEC). In addition, the Draft EA was reviewed by the appropriate state agencies in the Tennessee

State e-Clearinghouse. TVA considered all of the substantive comments received on the Draft EA and has responded to them in the Final EA. Federally recognized Native American tribes were consulted concerning the proposed undertaking, and TVA received no objections. Further, implementation of Alternatives C2, C3, or C4 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 best management practices described in the EA to avoid or reduce minor adverse environmental effects associated with the decontamination and deconstruction activities. The following mitigation measures have been identified to reduce potential health, safety, and environmental effects.

Mitigation Measures
- Minimize one-time emissions of fugitive dust from facilities expected to produce large volumes (such as demolition of the stack) by working with the demolition contractor on a site-specific plan.
- Conduct presence/absence surveys prior to demolition of structures to determine if migratory birds or listed bat species are utilizing the buildings. Coordinate with the U.S. Fish and Wildlife Service if nests or roosting species are identified to determine best options for carrying out demolition activities.
- Schedule any necessary removal of trees to be conducted between October 15 and March 31, outside of the summer roosting season of the listed bat species. However, if tree removal must occur during this time frame a bat habitat assessment would be performed and TVA would track and document removal of potentially suitable summer roost trees and include in annual reporting in accordance with TVA's programmatic biological assessment on routine actions and federally listed bats in accordance with ESA Section 7(a)(2). For those activities with potential to affect bats, TVA would committed to implementing specific conservation measures to ensure that direct and indirect impacts to federally-listed bat species would be minor.
- Osprey nests observed on the lighting structures around the coal yard would be removed when lighting structures are demolished. No nests would be removed while they are occupied and active (typically March-July).
- Develop a project-specific SWPPP as required under the General Permit for Stormwater Discharges Associated with Construction Activities prior to beginning deconstruction activities.
- Restrict or close roads in the vicinity should blasting be used to demolish the stack (Alternatives C2 and C4). No barge or boat traffic would be allowed in the area during the stack blasting 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.
- Evaluate the potential for vibration and blast impacts and require the demolition contractor to develop and implement a blast plan to minimize effects at JOF and in the vicinity.
- During the construction planning process, determine mitigation measures to minimize impacts to onsite power transmission equipment including any power disruptions.

- Explosives would be managed under the direction of a licensed blaster, 24-hour security would be provided to monitor the explosives, and detailed security plans would be developed and provided to area emergency response agencies.
- If construction or operations have the potential to emit pollutants greater than acceptable thresholds in JOF's existing Title V permit, mitigation would include a request to modify the permit, which would be required for the prevention of significant deterioration of air quality.

Conclusion and Findings
Based on the findings in the EA, TVA concludes that implementing Alternative C2, C3, or C4 would not be a major federal action significantly affecting the environment. Accordingly, an environmental impact statement is not required to implement any of these action alternatives. TVA's preferred alternative and the one it is inclined to implement is Alternative C2, C3, or C4.

Alternatives A2, B, C1, and D have a higher potential for environmental impacts than the other action alternatives since existing structures would be left in place. Deteriorating structures would cause an increasingly unsafe environment for operations and maintenance personnel. Remaining structures would decrease in structural stability over time, and furthermore they would become more environmentally unstable. Alternatives C2, C3, and C4 have the lowest cumulative cost of all action alternatives.

12/18/2018

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Date