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**TENNESSEE VALLEY AUTHORITY**

Environmental Impact Statement -- Closure of CCR Impoundments

**AGENCY:** Tennessee Valley Authority

**ACTION:** Notice of Intent

**SUMMARY:** The Tennessee Valley Authority (TVA) intends to prepare an Environmental Impact Statement (EIS) to address the closure of coal combustion residual (CCR) impoundments at its coal-fired power plants. CCRs are byproducts produced from the combustion of coal or the control of combustion emissions and include fly ash, bottom ash, boiler slag, and flue gas desulfurization materials. The purpose of this EIS is to facilitate TVA's compliance with the CCR Rule that the U.S. Environmental Protection Agency (EPA) issued on April 17, 2015. This also will provide the public a meaningful opportunity to comment on the issues associated with that effort.

This EIS will programmatically consider the impacts of the two primary closure methods: (1) Closure-in-Place and (2) Closure-by-Removal. It will also consider the site-specific impacts of closing 11 of TVA's impoundments within three years. Public comment is invited concerning the scope of this EIS.

**DATES:** Comments on the scope of the EIS must be received on or before September 30, 2015.

**ADDRESSES:** Written comments should be sent to Ashley Farless, Tennessee Valley Authority, 1101 Market St., BR4A, Chattanooga, TN 37402. Comments also may be submitted to <http://www.tva.gov/environment/reports/ccr> or by email to [CCR@tva.gov](mailto:CCR@tva.gov).

**FOR FURTHER INFORMATION CONTACT:** Ashley Farless, 1101 Market Street BR 4A, Chattanooga, TN 37402, 423.751.2361, [CCR@tva.gov](mailto:CCR@tva.gov).

**SUPPLEMENTARY INFORMATION:** This notice is provided in accordance with the regulations promulgated by the Council on Environmental Quality (40 C.F.R. parts 1500 to 1508) and TVA's procedures implementing the National Environmental Policy Act ([http://www.tva.com/environment/reports/pdf/tvanepa\\_procedures.pdf](http://www.tva.com/environment/reports/pdf/tvanepa_procedures.pdf).)

### **TVA Power System and CCR Management**

TVA is a federal agency and instrumentality of the United States, established by an act of Congress in 1933. Its broad mission is to foster the social and economic welfare of the people of the Tennessee Valley region and to promote the proper use and conservation of the region's natural resources. One component of this mission is the generation, transmission, and sale of reliable and affordable electric energy.

TVA operates the nation's largest public power system, producing approximately 4 percent of all of the electricity in the nation. TVA provides electricity to most of Tennessee and parts of Virginia, North Carolina, Georgia, Alabama, Mississippi, and Kentucky. Currently, it serves more than 9 million people in this seven-state region. The TVA Act requires the TVA power system to be self supporting and operated on a nonprofit basis and directs TVA to sell electricity at rates as low as are feasible. TVA receives no appropriations.

Most of the electricity is generated on the TVA system from 3 nuclear plants, 10 coal-fired plants, 9 simple-cycle combustion turbine plants, 6 combined-cycle combustion turbine plants, 29 hydroelectric dams, a pumped-storage facility, a wind-turbine facility, a methane-gas cofiring facility, a diesel-fired facility, and several small solar photovoltaic facilities. Only its coal-fired power plants produce CCRs.

Historically, TVA has managed its CCRs in wet impoundments or dry landfills. After a CCR impoundment at its Kingston power plant failed in 2008, TVA committed to converting its CCR impoundments to dry systems. TVA has coal-fired plants and CCR impoundments in Alabama, Kentucky, and Tennessee. Its CCR impoundments or wet CCR management facilities vary in size from less than 10 acres to more than 300 acres. All of TVA's CCR facilities operate under permits issued by the States in which they are located.

### **EPA's CCR Rule and Determinations**

EPA's April 2015 CCR Rule establishes national criteria and schedules for the management and closure of CCR facilities. To support this rule, EPA compiled an extensive administrative record, including a number of technical and scientific studies. EPA decided to continue to regulate CCRs as solid waste and determined that compliance with its CCR criteria would ensure that CCR management activities and facilities would not pose a reasonable probability of adverse effects on health or the environment. The rule establishes location restrictions, liner design criteria, structural integrity requirements, operating criteria, groundwater monitoring and corrective action

requirements, closure and post-closure care requirements, and recordkeeping, notification, and internet posting requirements.

EPA indicated that current management of CCRs poses risks primarily associated with potential structural failures and groundwater contamination. In its technical analyses, EPA determined that CCR impoundments posed greater risks than CCR landfills because ponded water creates a hydraulic head that can stress impoundment structural integrity and promote groundwater contamination.

EPA's rule establishes two primary closure methods: (1) Closure with CCR in Place and (2) Closure through Removal. Closure-in-Place involves removing standing water from an impoundment and installing a final cover system that minimizes the infiltration of water. Closure-by-Removal involves excavating and relocating the CCRs from an impoundment (or beneficially using them in products or structural fills). EPA observed that most facilities would be closed in place because of the difficulty and cost of Closure-by-Removal. It determined that either closure method would be equally protective if done properly.

### **Closure-in-Place v. Closure-by-Removal**

TVA has decided to perform a programmatic review of the potential impacts of the two primary closure methods. EPA's technical analyses lend themselves to and support such an approach. Conclusions reached from such a programmatic comparison generally should be applicable to any CCR impoundment on the TVA system regardless of the location. Site specific conditions would affect the potential magnitude of effects, but not the kind of effects. For example, Closure-by-Removal would require excavating

the accumulated CCRs and transporting them elsewhere either for beneficial use or disposal in a CCR-compliant or municipal solid waste landfill. In every instance where CCRs are moved off site there would be transportation impacts of some kind and to some degree depending on the transportation distance and method. Identifying, assessing, and contrasting the effects of these two closure methods on a generic basis would allow their merits to be considered by the public, interested stakeholders, and TVA decision makers. In this programmatic review, TVA may be able to identify general criteria for method selection that could be applied to site-specific closure actions when those are assessed.

### **Site-Specific Actions**

EPA structured its CCR Rule to encourage regulated entities to accelerate the closure of CCR impoundments because of the significant decrease in risk that results from eliminating the hydraulic head of ponded water. EPA determined that once a CCR impoundment is dewatered and closed, the risks are no greater than those of an inactive CCR landfill that is not subject to additional requirements under the rule. This would require TVA to cease sending CCRs to an impoundment by October 19, 2015, remove the water, and close it by April 17, 2018. TVA has identified 11 CCR impoundments at six of its plants that it could cease using and close within the required timeframe. These are facilities at its Allen, Bull Run, Kingston and John Sevier plants in Tennessee and at its Widows Creek and Colbert plants in Alabama. The EIS would assess the site specific impacts of such closures.

### **EIS Scope**

Scoping is a process that allows the public to comment on an agency's plans for an EIS. This includes identifying issues that should be studied and those that have little significance. The public's views on the alternatives that should be addressed also can be helpful in preparing an EIS.

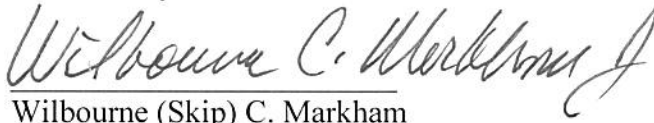
Programmatically, TVA proposes to examine two closure alternatives, Closure-in-Place and Closure-by-Removal. The EIS will address different methods of implementing the two closure approaches, including partial removal of CCRs. Various kinds of caps or surface liners could be used for Closure-in-Place and the merits of those approaches, sub-alternatives, will be addressed. Closure-by-Removal could involve moving CCRs off-site by truck, rail, or barge transportation and the potential impacts of these alternative transportation methods would be addressed. At the site-specific level, TVA will examine in more specific detail the implications of closing these eleven impoundments. TVA encourages the public to comment on this.

At either the programmatic or site-specific level, the typical range of resource impacts addressed in EISs would be assessed. This would include surface and groundwater impacts that were a focus of EPA's technical assessments. It also is likely that Closure-in-Place or Closure-by-Removal would involve movements to and from borrow areas to obtain cover material (soil, clay). For Closure-by-Removal, it would be necessary to fill in the depression or hole that is left when CCRs are removed unless it is possible to place the removed CCRs back into the hole after lining the bottom. It also may be possible to beneficially use some of the ash as cover material (structural fill) in lieu of using borrow material to close a dewatered CCR impoundment.

## Public Participation

The public is invited to submit comments on the scope of this EIS no later than the date identified in the "Dates" section of this notice. After TVA prepares a draft of the EIS, TVA will release it for public comment. TVA anticipates holding public meetings near the plants where site-specific early closure actions are proposed after release of the draft EIS. Meeting details will be posted on TVA's website. The schedule for releasing the Draft EIS is December 2015 or January 2016.

Dated: 8/19/15



Wilbourne (Skip) C. Markham  
Director, Environmental Compliance