

FINDING OF NO SIGNIFICANT IMPACT
TENNESSEE VALLEY AUTHORITY
WIDOWS CREEK FOSSIL PLANT
GYPSUM REMOVAL PROJECT
JACKSON COUNTY, ALABAMA

Proposed Action and Need

Tennessee Valley Authority (TVA) proposes to remove gypsum that was deposited in a section of Widows Creek as a result of an accidental release of gypsum slurry from its Widows Creek Fossil Plant on January 9, 2009. TVA has determined that the cap from an unused standpipe in a gypsum pond was dislodged, allowing water and gypsum to flow into an adjacent settling pond, which itself filled to capacity and overflowed into Widows Creek. If not removed from the creek, the gypsum has the potential to affect water quality as well as aquatic life and habitat of the creek. Additionally, the gypsum has the potential to migrate downstream and into the Tennessee River. TVA has reviewed the proposed action and reasonable alternatives in a final environmental assessment (FEA) prepared in accordance with its procedures in implementing the *National Environmental Policy Act* (NEPA). This FEA is incorporated by reference.

The proposed action of the FEA is Phase II of a two-phase effort to remove the gypsum from Widows Creek. Shortly after the discovery of the gypsum spill on January 9, 2009, an Incident Command System (ICS) was activated to effectively manage the response to the spill. The ICS was also the initial operational control for cleanup of the spill for the first 77 days following the incident (January 9, through March 26, 2009). These activities were conducted prior to the implementation of Phase I and consisted primarily of the removal of gypsum from the banks along Widows Creek, the affected settling pond, and affected outfall canals. Phase I has been limited to removal of gypsum from the shallow inlet of the creek, referred to as the "triangle area," i.e., the area adjacent to the settling pond where most of the gypsum entered and remained in the creek. This area encompasses approximately 13 acres of surface water that ranges in depth from approximately 1 to 2 feet. The impact of the effort in Phase I was assessed under Categorical Exclusion 5.2.1 in TVA's Procedures for Implementation of NEPA. Phase II activities would encompass removal of gypsum from the remaining affected areas of Widows Creek.

Alternatives

TVA considered the No Action Alternative and a proposed Action Alternative, which is TVA's preferred alternative. The Action Alternative is to remove the gypsum from the affected section of Widows Creek according to the Phase II Gypsum Removal Plan provided in Appendix C of the referenced FEA.

The proposed action for Phase II activities would include the removal of the spilled material from the affected creek areas in accordance with criteria described in the referenced FEA. Hydraulic methods such as pumps and small dredges (with and without cutter heads) will be utilized for gypsum removal. The preferred disposal method is on-site disposal by pumping the gypsum/water slurry to the ash pond dredge cell and/or flue gas desulfurization disposal area. This will be performed by pumping directly from the dredge to a booster pump via flex hose to

the disposal area. Due to the variable water depths in the nonchannel areas in the Phase II area (typically 1 to 2 feet), the use of only small, shallow draft vessels, such as flat bottom boats or “mini barges,” would be feasible. Best management practices (BMPs) will be utilized to minimize impacts to water quality. The BMPs would include a turbidity curtain to be placed downstream of the Phase II removal area, as well as limiting the rate of removal as necessary.

Impacts Assessment

Resources potentially temporarily affected by the removal of gypsum from the affected section of Widows Creek are surface water quality and aquatic life. To a lesser degree, there also exists a potential for the spread of hydrilla, a federal aquatic exotic invasive species.

Resuspension of gypsum during the Phase II dredging operation would likely cause moderate, temporary impacts to water quality and aquatic habitat in the area during the dredging process. Most of these impacts would be from the increase in suspended solids occurring during Phase II dredging operations. In addition, there is a small risk of impacts from exposure to trace metals, such as mercury, in the sediment. These temporary impacts would continue as long as dredging operations were taking place. Management practices, such as use of silt curtains, and administrative practices, including operational corrections based on water quality data, would prevent impacts to surface waters or aquatic life from being significant. Dredging activities could contribute to the spread of hydrilla since the species reproduces by fragmentation, which could occur as plants are disturbed and broken apart during the dredging process. To minimize the impacts from the spread of these noxious weeds by fragmentation, blocking screens will be used to catch plant fragments moving downstream. Overall, removal of the gypsum material would improve the existing post-spill conditions for water quality and aquatic habitat in the creek.

Commitments and Mitigation Measures

- Silt curtains, turbidity curtains, and/or surface booms will be used to control downstream loss of material where practical.
- To minimize the impacts from the spread of noxious weeds by fragmentation, barriers constructed of blocking screen will be used to catch plant fragments moving downstream.
- Native aquatic species such as butterweed, yellow water lotus, pondweeds, and/or coontail, will be used to revegetate aquatic beds disturbed during the gypsum removal process.
- Staging activities will be conducted when conditions are dry, and ground disturbance will not occur along the shoreline of the creek channel.
- Spoil material will be disposed of and contained within the ash pond dredge cell, which will prevent the reentry of the spoil material into the reservoir.
- Should TVA determine the need for an alternative off-site upland location for disposal of dredged material, TVA will reinitiate consultation with the State Historic Preservation Officer to determine if this disposal will result in effects to historic properties.
- Construction BMPs such as silt fences will be used as appropriate to control erosion and sedimentation.
- Measures will be implemented to protect all dredge disposal lines from heavy equipment damage at all road crossings.

Public and Intergovernmental Review

TVA consulted with the Alabama Department of Environmental Management and the U.S. Fish and Wildlife Service throughout development of the proposed action. Consultation was also conducted with the Alabama Historic Commission and federally recognized Indian tribes.

Conclusion and Findings

Based on the findings listed above and the analyses in the FEA, TVA has determined that the potential environmental consequences of the proposed action will not significantly affect the quality of the environment. Accordingly, an environmental impact statement is not required. This finding of no significant impact is contingent upon adherence to the identified mitigation measures.



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Date Signed