Finding of No Significant Impact
for the
Construction, Operation, and Closure of the
Burma Road II Borrow Pit
at the Savannah River Site

Agency: U.S. Department of Energy

Action: Finding of No Significant Impact

Summary: The U.S. Department of Energy (DOE) has prepared an environmental assessment (EA) (DOE/EA-1501) to analyze the potential environmental impacts of a new borrow pit, and its alternatives, at the Savannah River Site (SRS), located near Aiken, South Carolina. Based on the analyses in the EA, DOE has determined that this action is not a major Federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act of 1969 (NEPA). Therefore, the preparation of an environmental impact statement (EIS) is not required, and DOE is issuing this finding of no significant impact (FONSI).

Public Availability: Copies of the EA and FONSI or further information on the DOE NEPA process are available from:

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Background: Both planned and potential future activities at SRS involve the need for suitable soil to be used as structural subbase and general fill material in a variety of site operations, maintenance, and new construction. In addition, there has been an increasing need for such materials for waste site closure activities. The current onsite sources of suitable soils cannot support the projected site needs for fill material. To meet the structural fill quantity and quality requirements, a new source of such materials for SRS projects and activities needs to be identified and implemented. A survey of SRS for the presence of suitable fill material resulted in the identification of a tract of land near the old Burma Road Borrow Pit. The development of that new location as a site borrow pit would have the potential to support SRS's projected structural fill needs for several decades.

Purpose and Need for Agency Action: The purpose of the proposed action is to provide SRS with an onsite source of suitable soils for use as structural fill material. DOE needs to establish a readily-available onsite source for these materials to support SRS construction and maintenance activities, as well as waste site closure actions.

Proposed Action: The proposed action is to implement the Burma Road II Borrow Pit project. This entails three specific components: 1) construction of the proposed facility; 2) operation of the facility; and 3) close-out and restoration of the site. The proposed Burma Road II Borrow Pit would be located in the central western portion of SRS and would be bounded by Burma Road and SRS Road A-6. The proposed site encompasses an area of approximately 154 acres.

The proposed borrow pit would cost an estimated $600,000 to build and begin operations. The annual operational and maintenance budget would be $74,000. Operations are expected to begin in October 2004. The proposed action would be implemented in a phased manner as site needs are identified. The initial phase would encompass 34 acres, which would provide approximately 900,000 cubic yards of fill to SRS projects over the next three years. Ultimately, the facility could be expanded to include a total of 80 acres of excavation pits based on site needs. This facility is expected to remain operational, meeting the SRS need for structural fill past the year 2020. Following the depletion of that location's soil reserves, the facility's excavation pits could, if properly permitted, be used as a construction and demolition (C&D) debris landfill.

Initial construction of the proposed facility would involve the previously mentioned 34 acres. The project site would be cleared of merchantable timber, grubbed/graded, and stripped of topsoil, which would be stockpiled for future site use. Next, the facility's infrastructure would be set up, including a mobile office facility, supply storage facility, access road, lockable gates at access points, sedimentation basin, and erosion control structures. Electrical power for office lighting and heating/cooling would be provided by a stand-alone portable generator. Except in the area of the access road entrance, standing timber would be left around the boundaries of the borrow pit footprint. This would provide both a wind buffer and visual screen for the proposed facility. During peak construction 17 to 20 site workers would be employed.

Operational activities at the proposed borrow pit would entail the use of face excavation practices. The excavation activities, varying about 6-40 feet in depth, would be accomplished by means of a backhoe filling the dump trucks used for hauling the borrow material to a specific project location onsite. Any onsite grading would be conducted using a bulldozer. The proposed facility would operate for a maximum of approximately 260 days during the calendar year. The number of site employees at the proposed facility would vary from two to four. No site utilities would be needed to support the subject facility. The stand-alone portable generator would only be operated as needed. Emergency services (i.e., fire, medical and law enforcement) would be provided by SRS. The facility would only be accessible through a locked gate in order to control access. Transportation of material to specific project locations would be over the existing SRS roadway system. The proposed facility would have a stormwater management system, draining into a sedimentation basin designed to contain a 25-year storm event.

Following termination of the excavation activities, the project site could be used as a C&D landfill. The operation of that facility would be permitted by the South Carolina Department of Health and Environmental Control. The C&D landfill operations would be staffed by one full-time attendant and one operating engineer. Per regulations, closure of the filled excavation areas would entail the placement of a stabilized final cover (i.e., seeded with native grasses or other suitable ground cover). The project site would then be allowed to continue further re-vegetation naturally.

Alternatives: In accordance with NEPA regulations, DOE examined the following alternatives to the proposed action: (1) no action, continue to use existing SRS borrow pits; (2) build the borrow pit at another onsite location, and (3) use offsite commercial sources of structural fill material**.** The no action alternative would consist of DOE continuing to use the existing SRS borrow pits to provide structural fill materials in support of site activities. If DOE chooses this alternative, none of the impacts associated with implementing a new borrow pit would occur. This alternative would not enable SRS to meet the immediate need for suitable and readily available borrow material. The site would not be able to complete either facility and infrastructure construction and maintenance or waste site closure actions in a timely or cost-effective manner.

Another alternative would be to implement the proposed action at a different location on SRS. A total of three potential alternate locations were explored by assessing their capability to provide suitable soil to support the site criteria. Due to water table issues and layer thickness of available material, these sites would have required the development of two to three times the acreage to access the same quantity of fill material as the proposed Burma Road facility.

A third alternative would be to obtain the needed borrow material from an offsite commercial source. Although this option might meet the site needs, it would necessitate the purchase of fill material and increase the transportation scope of work to include an offsite component. The per unit cost of fill from offsite sources would be seven times higher compared to the proposed action, and would therefore not be cost effective.

Environmental Impacts: The land use impacts associated with the proposed action would be minimal. The principal cumulative impacts would be those effects associated with the loss of less than 0.04 percent of forested lands encompassed by the entire SRS. The site lands available for timber management would be reduced by less than 0.06 percent. There would be no measurable impact on the local economy as a result of the proposed action. No additional adverse impacts to either site surface or groundwater quality would be expected. A temporary loss of less than 0.04 percent of the available wildlife habitat on SRS would result from the construction and operation of the new borrow pit. There are no Federally-listed threatened and endangered species found on the project site and none would be adversely impacted by the proposed action. One State-listed species of concern, the sandhill lily (*Nolina georgiana*), is present within the proposed project boundaries. The individuals of that species would be relocated to a nearby unoccupied site that has suitable habitat conditions. Following archaeological surveys of the proposed location, potential impacts to cultural resources would be

mitigated based on consultation with the South Carolina Historic Preservation Office prior to construction. There are no floodplains or wetlands found on the project site. Additional impacts to the local air quality would be negligible. The proposed action would not pose any additional potential problems for either public health or safety. There would be no change in the latent fatal cancers within the region as a result of the proposed action. Any increases in site traffic accident rates would be minimal as a result of the proposed action.

Determination: Based on the information and analyses in the EA (DOE/EA-1501) and after careful consideration of all comments, DOE has determined that the proposed Burma Road II Borrow Pit at SRS does not constitute a major Federal action significantly affecting the quality of the human environment within the meaning of NEPA. Therefore, an EIS is not required and DOE is issuing this FONSI.

Signed in Aiken, South Carolina, this 20th day of July, 2004.

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