Finding of No Significant Impact
for the
Proposed Use of Savannah River Site Lands for Military Training

Agency: U.S. Department of Energy

Action: Finding of No Significant Impact

Summary: The Department of Energy (DOE) has prepared an environmental assessment (DOE/EA-1606, P*roposed Use of Savannah River Site Lands for Military Training*, Army EA) to analyze the potential environmental impacts of the proposed use of Savannah River Site (SRS) lands and facilities for military training. The draft EA was made available to the States of South Carolina and Georgia, and to the public, for a 45-day comment period. Based on the analyses in the EA, DOE has determined that the proposed action is not a major Federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act (NEPA) of 1969. Therefore, the preparation of an environmental impact statement (EIS) is not required and DOE is issuing this finding of no significant impact (FONSI). Training exercises at SRS, as described in the Army EA, could begin as early as January 2012.

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

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The EA and FONSI are available on the web at http://www.srs.gov/general/srs-home.html and http://energy.gov/nepa/nepa-documents/environmental-assessments-ea.

Background: DOE prepared the Army EA to evaluate potential environmental impacts of proposed and alternative actions regarding the United States Departments of Defense and Homeland Security (DOD and DHS, respectively) and other government agencies use of the Savannah River Site (SRS) for military training purposes. In the Army EA and this FONSI, the expression 'Army' is used as an all-inclusive term to denote DOD, DHS, and other government agencies (e.g., Army, Navy, Marine Corps, Air Force, Coast Guard, National Guard and reserve units, other military organizations, and civilian employees, sponsors, and contractors associated with or attached) that may use SRS for training purposes.

In response to the demands of contemporary and future military operating environments, Army training doctrine requires the use of large tracts of contiguous and noncontiguous training lands. However, due to factors such as urban encroachment and lack of resources to purchase additional acreage, the Army currently is experiencing a critical shortfall in training lands. This shortfall has been exacerbated by initiatives such as the Army Transformation, the 2005 Base Realignment and Closure, and the Army's Global Defense Posture Realignment. The Department of Defense has estimated that this shortfall in training land will have increased to approximately 5,000,000 acres [2,023,472 hectares (ha)] by 2011.

SRS is a 198,400-acre (80,291 ha) DOE reservation located along the Savannah River in southwestern South Carolina. SRS was established in the early 1950s to produce materials for America's nuclear weapons program. As the Cold War came to an end, cleanup of the Cold War legacy became a more prominent part of the mission. Now, as that mission is maturing and the site looks to the future, SRS is committed to using the Site's workforce, knowledge, and assets to help the nation address its critical missions in environmental stewardship, clean energy, and national security.

SRS possesses large tracts of undeveloped land with road networks, terrain features, vegetative cover, and existing or proposed decommissioned facilities suitable for light infantry and other low-intensity tactical maneuver training activities. Additionally, SRS's central location relative to multiple Army bases creates a unique training opportunity allowing functional groups from multiple bases to converge at SRS for joint training exercises. Use of SRS by the Army for military training purposes will, in part, mitigate the Army's immediate need for additional training lands.

In a Memorandum of Understanding (MOU) dated June 11, 2007, DOE and the Army established a framework for providing Army access to SRS for low intensity non-live-fire military tactical maneuver training. This MOU was implemented by an Interagency Agreement (IAG) entered into by the DOE-Savannah River Operations Office (DOE-SR) and the Department of the Army – Fort Gordon (DOA-FG) on September 4, 2009. Guidelines, procedures, and processes governing the Army's use of SRS for the proposed military training mission are contained in the Joint Standard Operating Procedures (JSOP) developed by DOE and the Army.

Purpose and Need for Agency Action: The primary mission of the Army is to provide forces and capabilities necessary to maintain and protect the nation's security. In partial support of this mission, the Army requires suitable land area to conduct tactical maneuver training activities. There is currently a lack of sufficient land area for these training activities in the continental U.S. and the shortfall is growing. SRS possesses large tracts of undeveloped land suitable for military training. The purpose of the proposed action considered in this EA is to enable the Army to conduct low intensity, non-live-fire tactical maneuver training activities on SRS to support current and future Army mission requirements. The utilization of SRS by the Army will satisfy, in part, its need for additional land area to support its training mission.

Proposed Action: The proposed action is for the Army to use specific areas of SRS for low intensity, non-live-fire, tactical maneuver training purposes. Included training activities will involve infantry-based low intensity non-live-fire offensive and/or defensive exercises, some in conjunction with air support. Special operation forces and infantry units ranging from squad to battalion size (up to 550 troops) would be involved in these training sessions. The EA describes 26 training activities. The Army will conduct air combat and logistical support operations using fixed-wing, rotary-wing and tilt-rotor aircraft, in conjunction with certain infantry-based ground exercises. Aircraft will be limited to air space over the proposed Army training area. The construction of permanent or semi-permanent training facilities will not be allowed until DOE is assured by the Army that adequate funding is available for construction, maintenance, and environmental protection requirements.

As part of the proposed action, three permanent training facilities will be constructed and operated at SRS, two Forward Operating Bases (FOBs) and one parachute drop zone [DZ]. Proposed locations for these permanent training facilities are identified and considered in the EA.

In addition to the construction of new facilities, the Army also proposes to utilize selected existing SRS industrial facilities (after DOE decommissioning) for urban area and facility seizure operations. These existing facilities include structures within the D-Area powerhouse complex and the 681-1G Pumphouse on the Savannah River. Other structures may be made available for use as training facilities after proper coordination between the Army and DOE, and appropriate NEPA review.

Selected tracts of land within the portion of SRS proposed for Army's use will be off limits for some or all proposed low intensity tactical maneuver training activities or will not be available at certain times due to environmental restrictions or land use conflicts with DOE missions. With only a few specific exceptions, training activities will be prohibited on waste units identified in the SRS Federal Facility Agreement (FFA). For example, the Dunbarton Railyard may be used by the Army for unloading and loading of training vehicles, equipment, and supplies, even though it is listed as an FFA waste unit. Also, low intensity tactical maneuver training activities will be generally prohibited in L-Lake, PAR Pond, and manmade ponds in the vicinity of R-Reactor and PAR Pond. However, these water bodies may be crossed with vehicular and foot traffic using existing roads. Additionally, case-by-case requests may be considered by DOE for activities on PAR Pond and L-Lake for which it can be clearly demonstrated that the proposed training activity does not have the potential to disturb sediments. Other exceptions also may include classroom use for lecture or presentation types of instruction, as well as Work-For-Others specialized tactical training sponsored by Savannah River National Laboratory (SRNL). DOE may consider other exceptions to training prohibitions in these and other areas on a case-by-case basis.

The Army will not be allowed to conduct low intensity tactical maneuver training exercises within selected environmentally sensitive areas such as Carolina bays, bald eagle (*Haliaeetus leucocephalus*) territorial management zones, rare plant ranges, cemeteries, closed or capped waste units, or contaminated areas. Training activities within red-cockaded woodpecker (RCW, *Picoides borealis)* management areas will be conducted in accordance with the 2009 Amendment to Savannah River Site Red-Cockaded Woodpecker Management Plan. The only training activity which will necessitate the clearing of forestland (approximately 150 acres [61 ha]) will be the construction and operation of a DZ. Implementation of this training activity will require a site construction permit and possible coverage under SRS's National Pollutant Discharge Elimination System Stormwater General Permit.

Prior to the initiation of each training event, the Army will evaluate proposed training exercises and areas and prepare a site-specific training plan designed to protect and sustain the human environment, and DOE will document pre-training site conditions of the training area. This evaluation will identify potential land use conflicts, such as the presence of sensitive environmental resources and/or controlled areas which will require avoidance. Subsequent to each training event, DOE will assess the training site and determine what actions will be required to mitigate any observed environmental damage. The Army will be responsible for restoring impacted SRS resources to their documented pre-training state and DOE will determine if the mitigation actions taken are adequate. Planning and mitigation procedures are described in Joint Standard Operating Procedures (JSOP) developed by DOE and the Army (the JSOP is Appendix A of the Army EA).

Alternative Actions: In accordance with NEPA regulations, DOE examined the following alternatives to the proposed action:

No Action Alternative: Under the 'No Action' alternative, the Army would not establish and conduct low intensity, non-live-fire tactical maneuver training missions at SRS. Consequently,

the Army would not mitigate, at least in part, its training land shortfall in the continental U.S. In the past, SRS has supported periodic use by Special Operation Forces and other specialized military units for limited, short-term, non-live-fire tactical training exercises. Prior to their advent, each of these training events were individually reviewed under NEPA and categorically excluded from further NEPA review. Under the 'No Action' alternative, DOE expects that this baseline level of military training at SRS would continue.

Alternatives Considered But Not Evaluated: The first alternative action is the same as the proposed action, with the exception that the Army would conduct live fire training exercises on existing or new dedicated firing ranges on SRS. This alternative is not considered a viable option and was eliminated from review and consideration for the following reasons:

- The scope of the IAG between DOE-SR and DOA-FG covers low intensity tactical maneuver training and simulated weapons fire only. Other than possible future use of the existing Bobby Davis Range (BDR), the conduct of Army live fire on SRS would present significant security and safety hazards and is not provided for in the IAG.

- SRS's protective force (WSI-SRS Team [WSI-SRS], formerly known as Wackenhut) uses the existing ranges at BDR to meet its live fire training needs. BDR has no excess capacity to accommodate Army training needs.

- Implementation of this alternative would necessitate the establishment of impact areas to accommodate the firing of dud producing munitions. The Army currently has a moratorium on establishing new duded impact areas on its own installations because it cannot ensure that such areas can be environmentally sustained. Establishing this type of land use on SRS would adversely impact the human environment and not provide for the prudent multiple use of Federal property.

The second alternative action is the same as the proposed action, with the exception that the Army would conduct low intensity non-live-fire tactical maneuver training over the entire SRS. This alternative is not considered a viable option and was eliminated from review and consideration for the following reasons:

- The administrative and industrial core of SRS possesses operating administrative and industrial complexes and multiple waste storage/treatment/disposal facilities. Low intensity, non-live-fire tactical maneuver training in this area would significantly interfere with critical DOE missions and operations and create unsafe conditions for both Army and SRS personnel.

- Certain areas of SRS contain ecologically or culturally sensitive resources or contamination. Low intensity, non-live-fire tactical maneuver training in these areas would adversely impact critical cultural/ecological resources or present human health issues relative to potential exposure to contaminants or pose a risk of damage to remedial systems/structures in place to effect environmental cleanup or prevent exposure to hazardous substances.

- SRS possesses multiple nuclear facilities and waste sites. Use of the entire SRS for low intensity, non-live-fire tactical maneuver training may cause concern among the civilian community regarding the safety and integrity of these facilities.

Environmental Impacts: The proposed action includes the construction of three permanent training facilities (two FOBs and one DZ). The remaining training activities involve the movement of troops, vehicles, aircraft, and related equipment, are temporary in nature, and do

not require land disturbance. The anticipated impacts of the proposed action on the human environment are described below.

Air Quality: The primary source of air emissions for the proposed training activities will be engine exhaust from vehicles, aircraft, portable generators, and portable pumps. Emissions will include volatile organic compounds (VOCs), carbon monoxide, nitrogen oxides, sulfur dioxide, and particulate matter (PM). Other sources of air emissions will be training activities which generate fugitive dust such as helicopter rotor wash and vehicular traffic, obscurants, the combustion of primer and propellant during blank weapons fire, and the use of pyrotechnics. Emissions from these activities also will include VOCs, PM, and low quantities of toxic air pollutants.

The generation of air emissions from internal combustion engines during most training events will be site-specific, short-lived, and quickly dispersed into the atmosphere. Air emissions associated with aircraft and convoy-related operations will typically be generated over a larger geographic area. The resulting pollutant loadings will therefore be diffuse and quickly assimilated into the atmosphere. The release of air pollutants from blank weapons fire and pyrotechnics during training activities is anticipated to be insignificant based on calculations performed for similar training activities conducted by WSI-SRS. The generation of fugitive dust by vehicular and helicopter traffic will be site-specific, short-lived, and minimized by the application of Best Management Practices (BMPs) where appropriate.

None of the air emissions generated by implementation of the proposed action will be considered significant by the South Carolina Department of Health and Environmental Control. All generators will be "temporary or portable" internal combustion engines that meet the definition of "non-road engine" under the Code of Federal Regulations, Title 40, Part 89, and therefore also will be exempt from Clean Air Act permitting. DOE anticipates that the impact of air emissions from the proposed action on air quality will be negligible and will not contravene criteria air pollutant standards.

Greenhouse Gas Emissions: Greenhouse gas emissions include carbon dioxide, methane, and nitrous oxide. The proposed action will result in no new stationary sources of greenhouse gases. There will be a nominal increase in aircraft and vehicle usage due to training activities. DOE anticipates that the incremental increase in fuel consumption will not significantly impact the amount of fossil-fuel consumed regionally. DOE anticipates that any increase in greenhouse gas emissions attributable to the proposed action will have a negligible impact on ambient air quality and global climate change.

Wetlands and Streams: Pedestrian crossings of wetlands and streams may occur in up to five proposed training activities for approximately 30-550 troops per exercise, with the number depending on the training activity and the size of the training scenario. Crossing locations must have prior approval from DOE. During these stream crossings, a temporary increase in stream turbidity, limited disturbance of bottom sediments, and trampling of wetland vegetation will occur. Aquatic macrofauna within these habitats will be temporarily displaced or disturbed but not otherwise impacted. Neither discharges of dredged or fill material into wetlands and streams, nor construction of hardened crossings, is a component of the proposed action. DOE anticipates that the impact of proposed Army training activities on SRS streams and wetlands will be negligible to minor in magnitude.

Water Quality: Wastewater streams generated by proposed training activities are comprised of sanitary wastewater from portable toilets, grey water from field kitchens, and rinse water from decontamination exercises. Sanitary wastewater will be collected by an authorized

contractor and transported to the SRS Central Sanitary Wastewater Treatment Facility (CSWTF) for treatment and disposition. Discharge of treated effluent from this facility is into Fourmile Branch and the addition of the Army's waste stream to the CSWTF will not adversely impact plant capacity, operations, or permit compliance. Grey water generated by field kitchens and decontamination operations will be collected and, following removal of any gross solids such as food scraps, be broadcast onto the ground surface or channeled into a shallow sump for infiltration into the soil column. Grey water will not be discharged into surface streams or wetlands and application sites will be rotated to prevent the saturation of the soil column.

Personnel decontamination processes will involve only clean water. Clean rinse water generated during decontamination exercises will be broadcast onto the ground surface. No radiological, biological, or chemical test sources will be utilized to alarm detection equipment during the conduct of this training activity, unless approved and monitored by DOE and SRNL. The decontamination process will not differ between simulated chemical, biological, or radiological agents. Simulated agents will not contact the decontamination water.

If DOE and SRNL were to approve a chemical, biological, or radiological source for training use, the same decontamination process will be used as for the simulated agents. Water quality will not be affected because the sources will not come in contact with the decontamination water. However, the Army will rely on DOE and SRNL, as agreed, to monitor the used decontamination water for potential presence of the source, and to properly dispose of used decontamination water containing a source.

Water-based training activities are likely to cause increases in turbidity due to wave action created by watercraft operation, and by the beaching of watercraft and troops exiting watercraft. Pedestrian travel though streams and wetlands may cause temporary increases in turbidity at, and downstream of, the crossing location. The Army will implement erosion control BMPs during DZ construction to minimize sediment-laden runoff and subsequent impacts to water quality. Construction activities will require compliance with applicable construction stormwater regulations. The potential for rutting or soil erosion on road shoulders and unimproved roads that could cause sediment-laden runoff to reach streams will be mitigated by the Army through the implementation of BMPs to maintain soil integrity and prevent sediment runoff.

Refueling activities and the storage or dispensing of petroleum, oils, and lubricants will not be conducted within 200 feet (61 meters) of any surface water body or groundwater well. This buffer requirement, as well as the implementation of BMPs and procedures to prevent and rapidly respond to spills (e.g., catch basins for fuel bladders), will serve to protect area surface and groundwater resources. The Army will minimize the leakage of petroleum products into the environment by implementing a Spill Prevention, Control, and Countermeasure Plan, including the regular inspection of vehicles and aircraft, conducting routine maintenance of equipment, and the use of drip pans when vehicles are at rest.

Direct discharges to surface or subsurface waters of the State are not a component of the proposed action. DOE anticipates that the impact of proposed Army training activities on SRS water quality will be negligible.

Terrestrial Productivity: The impact of the proposed action on terrestrial productivity will range from negligible to moderate, excluding construction and operation of the Water Gap DZ. Construction of the proposed Water Gap DZ will require the clearing of approximately 150 acres (61 ha) of forestland and subsequent conversion of the site to grassland. The initial impact of forest clearing on the DZ site's terrestrial productivity will be moderate. Subsequent conversion of the site to grassland, however, will return it to natural production and partially

mitigate this loss. DOE anticipates that the overall impact on terrestrial productivity at SRS will be minor due to the size of the DZ relative to the size of SRS. Appropriate BMPs (e.g., erosion control) will be implemented as required to protect and sustain SRS's human environment. Although the proposed FOBs will involve the construction and operation of permanent facilities, these bases will be established on previously developed sites with marginal terrestrial productivity, such as concrete pads where demolished structures stood. DOE anticipates that the net impact on terrestrial productivity will be negligible due to the continuing impacts of previous anthropogenic activity. Remaining training activity will require no permanent facilities or result in land use/cover changes, and will only minimally impact terrestrial ecosystems. Minimal impacts will include trampling of surface vegetation by foot/vehicular traffic and limited compaction of soil in moderate to high traffic areas. Effects on vegetation and soil will be localized and temporary, with an anticipated natural recovery from potential adverse impacts following cessation of the training activity. DOE anticipates that the proposed action will have a negligible effect on terrestrial productivity.

Wildlife: Proposed Army training activities will increase the amount of human activity in the designated training area, including foot/vehicular/aircraft traffic, firing of small arms blank ammunition, and pyrotechnics simulating artillery fire and similar explosive-type sounds. The periodic increases in activity and noise associated with implementation of the proposed action will be expected to disturb area wildlife. These disturbances will be short-lived and limited to specific geographic areas or locations (excluding aircraft flight paths and convoy routes). DOE anticipates that the majority of affected wildlife will adapt by acclimating (negligible impact) or physically vacating the area and returning after cessation of the training event (minor impact). The Army will coordinate with DOE and the U.S. Forest Service to avoid wildlife disturbance that might jeopardize wildlife research projects. Proposed Army training activities will result in the increased use of aircraft (primarily helicopters) on portions of SRS. DOE anticipates that avian mortality resulting from bird-aircraft strikes associated with the proposed increase in aircraft use will be negligible.

Archaeological, Historical, and Cultural Resources: The Water Gap DZ is proposed for construction in an area possessing moderate to significant potential for archaeological resources. A comprehensive survey of the site, and possible mitigation of archaeological resources, will be required prior to development of the site as a DZ. The impact of establishing the Water Gap DZ on SRS archaeological, cultural and historical resources will be minor because appropriate regulatory compliance activities will be completed prior to commencement of construction activities. Previous industrial development activities during the 1950s-1960s at both FOB sites resulted in substantial soil disturbance, which would have destroyed any archaeological or historical resources present at that time. Construction of the FOB sites will occur in these areas of previous disturbance, thereby avoiding impacts to archaeological/historical resources. DOE anticipates that impacts will be negligible to archaeological/historical/cultural resources for the remaining 24 proposed training activities because they do not contain a land-disturbing component. DOE also anticipates that other training activities not specified in this EA but without a land disturbance component also will be considered to have negligible impacts on these resources.

SRS Infrastructure: A major premise of the proposed action is that Army units training on SRS will be self-sufficient. Specifically, these units will bring with them the resources necessary to sustain their operations and successfully complete assigned training missions. Implementation of the proposed action, however, will necessitate Army's use of SRS infrastructure, including site roads, the potable water system, the wastewater treatment system, and selected decommissioned industrial facilities. The existing SRS infrastructure possesses the capacity to support a site workforce of approximately 20,000 people. However, the workforce is

approximately 8,000 (2012 fiscal year), so many components of the site's infrastructure (e.g., roads, potable water, wastewater treatment) are under-utilized and could easily accommodate the additional loading associated with the proposed action. DOE anticipates that the impacts of the proposed action on SRS's infrastructure will range from negligible to minor.

Air Space: A portion of SRS airspace, as well as airspace of the surrounding area, will be used by aircraft in 19 of the 26 proposed training activities. Army will conduct air combat and logistical support operations using fixed-wing, rotary-wing and tilt-rotor aircraft. Aircraft will be limited to air space over the proposed Army training area and be prohibited from flying over SRS's administrative and industrial core, BDR, Southern Company's Plant Vogtle across the Savannah River from SRS, and potentially other facilities. The Army will communicate with DOE, Federal Aviation Administration and civilian air traffic controls to coordinate the use of site and regional air space and avoid interfering with WSI-SRS, commercial, and civilian air traffic. DOE anticipates that the impacts of the proposed action on regional air space will be temporary and range from negligible to moderate, depending on the number of flights and the number of aircraft used in the training exercise.

Noise: Aircraft, wheeled vehicles, watercraft, generators, pumps, troops, blank ammunition, and pyrotechnics will produce increased noise levels during the training exercises. Most of the land area surrounding SRS is rural or undeveloped. DOE expects that the noise resulting from the proposed action (exclusive of aircraft-generated noise) will be barely discernable to human receptors in areas beyond the site boundary. Based on noise modeling conducted by the Army, DOE anticipates that the resultant noise levels will be compatible with the surrounding noise environment and will not generate an incompatible noise zone. Aircraft noise approaching and leaving SRS air space during this training activity will be most evident to offsite human and wildlife receptors located in the vicinity of the proposed flight paths. Although there will be potential for individual events to cause annoyance and generate complaints (moderate impact), DOE anticipates that the overall impact on the public of aircraft-generated noise associated with the proposed action will range from minor to moderate. DOE anticipates that noise-related impacts of the proposed action on SRS's workforce, most of which is located within the site's administrative/industrial core but outside of the proposed Army training area, will be temporary and range from negligible to minor.

Human Receptors and Human Health: For most training activities, noise is the only factor potentially affecting human receptors. Another proposed training activity with potential human receptors is the Army's potential use of high energy microwave transmissions during tactical communications operations training. There are potential health risks associated with the use of high-powered radio frequencies; however, the Army will implement appropriate BMPs to ensure the protection of human health regarding microwave transmissions. Training activities will not occur in areas where known health and safety hazards exist (e.g., active timber management activities and controlled sites, including waste units and radiologically contaminated areas) to prevent exposure to human receptors. DOE anticipates that the proposed training activities will have negligible effects on human receptors, health, and safety due to the avoidance of contaminated areas, use of personal protective clothing and equipment, and the implementation of appropriate planning and safety practices during the conduct of military training activities. The comprehensive planning process outlined in the JSOP will serve to protect the health and safety of both military and SRS personnel. This up-front planning process will ensure that the location and timing of Army activities do not interfere with SRS operations, thereby significantly reducing the potential for unexpected encounters.

Socioeconomics: Implementation of the proposed action will require no new employees for DOE or its contractors. Although Army units training at SRS are expected to be

self-sufficient, it is anticipated that they would contract with DOE for selected services such as potable water and the collection and disposal of sanitary waste water. The potential also exists that Army units will purchase supplies and services (e.g., lodging, food, fuel, construction materials) in communities surrounding SRS. The local economic impact is estimated at $600,000, based on four battalion-sized training groups per year. In comparison, SRS has an annual budget of approximately $1.2 billion and an approximate 8,000-member workforce. DOE anticipates that the socioeconomic impact of the proposed action on SRS's Region of Interest (ROI) will not be substantial.

Threatened and Endangered Species and Bald Eagle: The RCW, wood stork, shortnose sturgeon (*Acipenser brevirostrum*), pondberry (*Lindera melissifolia*), and smooth purple coneflower (*Echinacea laevigata*) are the five species known to occur on SRS that are protected by the Federal Endangered Species Act. The bald eagle also is known to occur on SRS and is protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Based on information provided by the Army in the Biological Evaluation, the U.S. Fish and Wildlife Service (USFWS) concurs that the proposed action is not likely to adversely affect the above-listed species. The Biological Evaluation and the USFWS opinion are included as Appendices to the Army EA.

Environmental Justice: Noise generated by aircraft entering and leaving SRS airspace will be evident to minority and/or low-income populations residing in the vicinity of proposed flight paths. Noise levels associated with aircraft traffic will be compatible with the surrounding environment and an incompatible noise zone will not be generated. Other potential environmental impacts associated with the proposed action (e.g., temporary increase in air pollution, land use changes) will be limited to specific areas of SRS and not evidenced beyond the site boundary. Air emissions will be short-lived, quickly dispersed, and not impact regional air quality, and there will be no discharges to State waters. Environmental resources such as air, land, water, and wildlife utilized by minority and/or low-income populations living in the vicinity of SRS will not be diminished or degraded by the proposed action. There will be no disproportionately high and adverse human health or environmental effects on minority and low-income populations within SRS's ROI.

Terrorist-Related Impacts: DOE does not believe that the presence of Army units at SRS will increase the probability of a terrorist attack on SRS, or that the troops themselves will be an attractive target for a terrorist attack. Measures to ensure that Army training activities are not co-opted to gain unauthorized access to SRS are described in the JSOP. Additionally, existing safeguards and security programs in place at SRS would prevent the successful implementation of terrorism-related activity should unauthorized access to the general site occur. DOE anticipates that the potential for the proposed action considered in this EA to result in terrorism-related activity or impacts at SRS will be negligible.

Cumulative Impacts: Council on Environmental Quality regulations define cumulative impact as an impact on the human environment that results when the incremental effects of a proposed action are added to the impacts of other past, present, proposed, and other reasonably foreseeable future actions within given spatial and temporal boundaries. Other past, present, and foreseeable future SRS activities within the area of SRS proposed for Army training that could potentially interact cumulatively with the proposed action include silvicultural activities, maintenance of infrastructure, ecological research, and wildlife management activities, as well as possible undefined future missions. With the exception of noise, DOE anticipates that the direct and indirect effects of these activities, in combination with the direct and indirect effects of the proposed action, will result in a negligible cumulative impact on the human environment.

There will be no direct wastewater discharges associated with the proposed action and the disposal of limited quantities of sanitary wastewater via the CSWTF will have a negligible cumulative affect on receiving water quality. DOE does not anticipate that the periodic land application of limited quantities of grey water generated by field kitchen operations will adversely impact (incrementally or cumulatively) the terrestrial ecosystem or underlying groundwater aquifer. With the application of appropriate BMPs during construction-related activities and training events, DOE anticipates that the potential for cumulative impacts on terrestrial resources, downstream water quality and wetland resources will be negligible. DOE anticipates that the potential for any air emissions resulting from the proposed action (e.g., equipment emissions, fugitive dust) to interact with other SRS air pollution sources, or have a cumulative effect on criteria air pollutant concentrations within SRS's airshed, will be negligible. Although the proposed action will result in a minor cumulative increase in SRS's noise environment, DOE anticipates that the incremental increase in noise associated with individual training events will be episodic and will not be considered a significant impact on the human environment. Although establishment of a DZ will result in site-specific terrestrial impacts (e.g., land use/cover changes, soil compaction, and displaced fauna), the land area affected will be small compared to the total acreage available on SRS and DOE anticipates that this activity will not adversely impact DOE's future development or use of SRS. DOE anticipates that the cumulative impact of these land use changes, in conjunction with other ongoing and proposed SRS mission operations, on terrestrial productivity will result in negligible cumulative effect on SRS and environs.

The conduct of military training activities at SRS will not adversely impact DOE's ability to comply with Federal or State environmental laws, regulations, or permit requirements. Multiple training exercises conducted simultaneously will produce negligible to minor adverse impacts of a temporary nature, excepting the permanent impacts described above. Through the JSOP planning process, DOE and Army will seek to avoid multiple simultaneous training exercises. Such impacts will not be considered additive to produce significant adverse effects. In summary, DOE anticipates that the implementation of the proposed action at SRS will have an overall negligible cumulative impact on the human environment.

Adaptive Management: The traditional environmental management model used in most NEPA analyses has been called "predict, mitigate, and implement." Such a model depends on the accuracy of predicted impacts and the anticipated results of mitigation activities, and does not consider unforeseen changes in environmental conditions, inaccurate predictions, or previously unknown information. The concept of adaptive management adds "monitor and adapt" to the environmental management model, which can provide a mechanism to adapt or compensate for conditions unanticipated in the original NEPA analysis without entering into an additional NEPA review process.

DOE has determined that the proposed action will not have a significant effect on the human environment. However, there are a number of factors related to SRS and the proposed action that necessitate development and implementation of an adaptive management plan, including the following:

- Political actions can change the SRS mission. An adaptive management plan provides a mechanism within the NEPA analysis process that allows evaluation of Army training impacts on a new or expanded SRS mission.

- NEPA analysis is based on environmental conditions at SRS at the time of the analysis. Unanticipated natural changes in environmental conditions could result in the previous impact determinations being invalid. Adaptive management provides a mechanism to

reassess impact determinations relative to changing environmental conditions.

- Predicted impacts on the human environment could prove inaccurate; the magnitude of intensity of impact could be greater than anticipated in the NEPA analysis. Adaptive management provides a way to compare predicted and actual impacts, and to provide mitigation for unanticipated impacts.

- After the initial NEPA determination and during or after the execution of the proposed action, new or previously unavailable information could become known that will have influenced the original NEPA analysis, had it been known at that time. Adaptive management provides a mechanism to reassess the NEPA analysis using the "fresh" information.

- Unforeseen human activities can cause unanticipated changes in environmental conditions, magnitude or intensity of environmental impacts, and similar unexpected circumstances. Adaptive management allows additional NEPA analysis to compensate for unforeseen events.

The JSOP provides a basis for adaptive management related to unforeseen impacts, and mentions SRS infrastructure and environmental resources. Detailed plans specific to the resource will be prepared and approved on an as-needed basis and according to a stand-alone adaptive management plan specific to the Army training proposed action.

Determination: Based upon the information and analyses in the EA (DOE/EA-1606), and after careful consideration of all comments, DOE has determined that the proposed use of SRS lands for low intensity non-live-fire tactical maneuver training by military and other government agencies 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 15th day of December 2011.

David C. Moody, Manager
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