



**SAVANNAH RIVER SITE**  
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Mr. M. Lesar  
Chief, Rules Review and Directives Branch  
U.S. Nuclear Regulatory Commission  
Mail Stop T6-D59  
Washington, DC 20555-0001

Dear Mr. Lesar:

**DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR AN EARLY SITE PERMIT (ESP) AT THE NORTH ANNA ESP SITE, REPORT NO. NUREG-1811**

On behalf of Westinghouse Savannah River Company, the M&O contractor at the Savannah River Site since 1989, we appreciate the opportunity to review the report entitled, "Draft Environmental Impact Statement (EIS) for an Early Site Permit (ESP) at the North Anna ESP Site, Report No. NUREG-1811." As you know, this draft EIS includes the NRC staff's analysis of environmental impacts for constructing and operating two nuclear units at the North Anna ESP site or at alternate sites (Savannah River Site, Portsmouth Site and Surry Site). We have focused our comments on those sections in the report that discuss the SRS. General and detailed comments are provided. The detailed comments are those changes in the report that result from the general comments.

There are four general comments. They can be summarized as follows:

- The assessment in the report did not credit the extensive environmental and geotechnical database that exists at the SRS;
- Construction and operation impacts for some environmental impacts were overstated as "small to moderate" because the author(s) assumed that the detailed routing of the transmission line right-of-ways are not known at this time. Power from the SRS will be transmitted using existing right-of-ways on and off the site and; therefore, the environmental impacts would be "small."
- Transportation impacts were overstated in community characteristics as "small to moderate" because the assessment did not credit the site as having an infrastructure on and off the site that has already accommodated a workforce of 25,000. This maximum workforce of 25,000 employees is approximately 40% below the projected workforce required for the facility. The environmental impact would be "small."
- The assessment in the report did not credit the relatively isolated location of the SRS and the low nearby density when discussing generic environmental impacts (air quality, nonradiological and radiological health impacts and environmental impacts from postulated accidents) that are dependent on nearby population density and distribution.

Attached are the general and detailed comments with the additional relevant information and supporting data for the changes.

If there are any questions or comments, please contact Lawrence A. Salomone, Site Chief Geotechnical Engineer, at (803) 952-6854.

Sincerely,

Robert A. Pedde  
President

LS:dme  
Enc.

E-RIDS=ADM-03  
Add=J.Cushing (Jx09)

SIS,js Review Complete

WESTINGHOUSE SAVANNAH RIVER COMPANY

The WSRC Team: Westinghouse Savannah River Company LLC • Bechtel Savannah River, Inc. • BNFL Savannah River Corporation  
BWXT Savannah River Company • CH2 Savannah River Company • Polestar Savannah River Company

J. Williamson (ACWS)

Template - ADM-013

**Comments on Draft Environmental Impact Statement for an Early Site Permit (ESP) at the  
North Anna ESP Site (NUREG-1811, draft)**

**By**

**Westinghouse Savannah River Company**

**Aiken, SC 29808**

**GENERAL COMMENTS**

A review of the Draft Environmental Impact Statement for an Early Site Permit (ESP) at the North Anna ESP Site, NUREG-1811 shows that several factors within its scope did not adequately consider available information that if properly credited would demonstrate that all environmental impacts associated with the Savannah River Site are either small or beneficial. The information in question may be summarized as follows:

- The very high level of environmental assessment and characterization of SRS was not accurately credited. SRS has been described as one of the most characterized sites in the Department of Energy (DOE) Complex. In 1951 a baseline environmental study was undertaken as part of initial site startup. In 1970, SRS was named the first National Environmental Research Park. The Savannah River Site (SRS) was characterized in detail as part of a rigorous site selection process and NEPA analysis for a previously proposed mission (Accelerator Production of Tritium). More recently, the Nuclear Regulatory Commission (NRC) has published an Environmental Impact Statement for the Mixed Oxide Fuel Fabrication Facility at the SRS. SRS publishes extensive environmental reports annually, and has extensive monitoring, research, restoration, and remediation information available from numerous SRS organizations (SGCP, SRNL, Site Geotechnical Engineering, SR Forest Service, Environmental Monitoring Section, and SREL) as well as many regional colleges and universities (Clemson, USC, USC-A, SC State, College of Charleston, UGA, GA Tech., Emory and Augusta State).
- Construction and operation impacts for transmission lines were overestimated and would be SMALL. Although transmission lines on the Savannah River Site may need to be upgraded, the transmission lines would use existing right-of-ways, and any construction impacts would be minimal. Offsite, 500-kV transmission lines and switchyards already exist at Plant Vogtle (adjacent to the site and directly across the Savannah River). The 500-kV transmission lines at Plant Vogtle connect to the regional grid so that no additional right-of-ways would be needed. Construction, if any, would merely add additional capacity to the existing lines and a switchyard at the SRS depending on the power being transmitted. Assuming the power from the SRS may be transmitted to a location 60 miles to the west is not realistic because right-of-way and permits may be excessive and time consuming to obtain. This assumption creates unnecessary conservatism in the environmental impacts presented in the report for the SRS.
- Transportation impacts were overestimated and would be SMALL. The assessment did not credit the fact that the existing infrastructure on and in the vicinity of the site is designed and constructed to accommodate a much larger workforce than will exist at the site during the construction and operation phase of the proposed nuclear plant. The assessment does not credit the fact that, even with the 38% increase, the site workforce would still be ~40% below its 1993 peak of ~25,000 employees.

- The assessment did not credit the relatively isolated location of SRS and the low nearby population density relative to the other candidate sites when discussing generic environmental impacts to all sites. The generic environmental impacts listed in the report (air quality, nonradiological and radiological health impacts and environmental impacts from postulated accidents) are dependent on the nearby population density and distribution, and should, therefore, be different for each site.

Detailed comments reflecting the aforementioned general comments are provided in the pages that follow.

## DETAILED COMMENTS

No.	Page	Section	Line	Comment
1	8-63	8.7.1	30	<p>Change the transmission system impacts to "SMALL" (from "SMALL to MODERATE").</p> <ul style="list-style-type: none"> <li>Although transmission lines on the Savannah River Site may need to be upgraded from 115-kV to 230-kV or 500-kV, the transmission lines would use existing right-of-ways, and any construction impacts would be minimal. Offsite, 500-kV transmission lines and switchyards already exist at Plant Vogtle (adjacent to the site and directly across the Savannah River). The 500-kV transmission lines at Plant Vogtle connect to the regional grid so that no additional right-of-ways would be needed. Construction, if any, would merely add additional capacity to the existing lines and a switchyard at the SRS depending on the power being transmitted. Assuming the power from the SRS may be transmitted to a location 60 miles to the west is not realistic because right-of-way and permits may be excessive and time consuming to obtain. This assumption creates unnecessary conservatism in the environmental impacts presented in the report for the SRS.</li> </ul>
2	8-63	8.7.1	37	<p>Change the transmission system impacts to "SMALL" (from "SMALL to MODERATE").</p> <ul style="list-style-type: none"> <li>Although transmission lines on the Savannah River Site may need to be upgraded from 115-kV to 230-kV or 500-kV, the transmission lines would use existing right-of-ways, and any construction impacts would be minimal. Offsite, 500-kV transmission lines and switchyards already exist at Plant Vogtle (adjacent to the site and directly across the Savannah River). The 500-kV transmission lines at Plant Vogtle connect to the regional grid so that no additional right-of-ways would be needed. Construction, if any, would merely add additional capacity to the existing lines and a switchyard at the SRS depending on the power being transmitted. Assuming the power from the SRS may be transmitted to a location 60 miles to the west is not realistic because right-of-way and permits may be excessive and time consuming to obtain. This assumption creates unnecessary conservatism in the environmental impacts presented in the report for the SRS.</li> </ul>

No.	Page	Section	Line	Comment
3	8-67	8.7.3	6	<p>Change the impact of construction on terrestrial resources (including threatened and endangered species) to "SMALL" (from "SMALL to MODERATE").</p> <ul style="list-style-type: none"> <li>The current rating of SMALL to MODERATE is based on the assumption that new transmission right-of-ways may be needed and that the impacts are indeterminate until the new routes are specified. Onsite, any new transmission lines would use existing right-of-ways, which would require some upgrade and would therefore have some minimal impact. Offsite, existing 500-kV transmission right-of-ways would be used as is, or would require an upgrade in capacity only; construction impacts would be minimal. Assuming the power from the SRS may be transmitted to a location 60 miles to the west is not realistic because right-of-way and permits may be excessive and time consuming to obtain. This assumption creates unnecessary conservatism in the environmental impacts presented in the report for the SRS.</li> </ul>
4	8-67	8.7.3	11	<p>Change the impact of operation on threatened and endangered species to "SMALL" (from "SMALL to MODERATE").</p> <ul style="list-style-type: none"> <li>The current rating of SMALL to MODERATE is based on the assumption that new transmission right-of-ways may be needed and that the impacts are indeterminate until the new routes are specified. Onsite, any new transmission lines would use existing right-of-ways, which would require some upgrade and would therefore have some minimal impact. Offsite, existing 500-kV transmission right-of-ways would be used as is, or would require an upgrade in capacity only; construction impacts would be minimal. Assuming the power from the SRS may be transmitted to a location 60 miles to the west is not realistic because right-of-way and permits may be excessive and time consuming to obtain. This assumption creates unnecessary conservatism in the environmental impacts presented in the report for the SRS.</li> </ul>
5	8-73	8.7.5.3	13	<p>Change the transportation impacts of the construction workforce to "SMALL" (from "SMALL to MODERATE").</p> <p>The assessment currently concludes that the transportation impacts of the construction workforce would be SMALL to MODERATE because the construction workforce would add 38% to the current Savannah River Site workforce, thereby adversely impacting transportation. The assessment does not credit the fact that, even with the 38% increase, the site workforce would still be ~40% below its 1993 peak of ~25,000 employees. Also, the current assessment does not credit the fact that the area transportation infrastructure is designed and constructed to handle this larger workforce.</p>

No.	Page	Section	Line	Comment
6	8-81	Table 8-6	6	<p>Change the Transmission corridors impacts for the Savannah River Site to "SMALL" (from "SMALL to MODERATE").</p> <ul style="list-style-type: none"> <li>The current rating of SMALL to MODERATE is based on the assumption that new transmission right-of-ways may be needed and that the impacts are indeterminate until the new routes are specified. Onsite, any new transmission lines would use existing right-of-ways, which would require some upgrade and would therefore have some minimal impact. Offsite, existing 500-kV transmission right-of-ways would be used as is, or would require an upgrade in capacity only; construction impacts would be minimal. Assuming the power from the SRS may be transmitted to a location 60 miles to the west is not realistic because right-of-way and permits may be excessive and time consuming to obtain. This assumption creates unnecessary conservatism in the environmental impacts presented in the report for the SRS.</li> </ul>
7	8-81	Table 8-6	12	<p>Change the Terrestrial ecosystems impacts for the Savannah River Site to "SMALL" (from "SMALL to MODERATE").</p> <ul style="list-style-type: none"> <li>The current rating of SMALL to MODERATE is based on the assumption that new transmission right-of-ways may be needed and that the impacts are indeterminate until the new routes are specified. Onsite, any new transmission lines would use existing right-of-ways, which would require some upgrade and would therefore have some minimal impact. Offsite, existing 500-kV transmission right-of-ways would be used as is, or would require an upgrade in capacity only; construction impacts would be minimal. Assuming the power from the SRS may be transmitted to a location 60 miles to the west is not realistic because right-of-way and permits may be excessive and time consuming to obtain. This assumption creates unnecessary conservatism in the environmental impacts presented in the report for the SRS.</li> </ul>
8	8-81	Table 8-6	14	<p>Change the T&amp;E Species impacts for the Savannah River Site to "SMALL" (from "SMALL to MODERATE").</p> <ul style="list-style-type: none"> <li>The current rating of SMALL to MODERATE is based on the assumption that new transmission right-of-ways may be needed and that the impacts are indeterminate until the new routes are specified. Onsite, any new transmission lines would use existing right-of-ways, which would require some upgrade and would therefore have some minimal impact. Offsite, existing 500-kV transmission right-of-ways would be used as is, or would require an upgrade in capacity only; construction impacts would be minimal. Assuming the power from the SRS may be transmitted to a location 60 miles to the west is not realistic because right-of-way and permits may be excessive and time consuming to obtain. This assumption creates unnecessary conservatism in the environmental impacts presented in the report for the SRS.</li> </ul>

No.	Page	Section	Line	Comment
9	8-81	Table 8-6	18	<p>Change the Community Characteristics impacts for the Savannah River Site to "SMALL" (from "SMALL to MODERATE").</p> <p>All of the impacts discussed in section 8.7.5.3 were determined to be SMALL or beneficial except for the transportation impact of the construction workforce which was determined to be "SMALL to MODERATE". This transportation impact should be changed to "SMALL" for reasons discussed in the comment on section 8.7.5.3.</p>
10	8-82	Table 8-7	14	<p>Change the T&amp;E Species impacts for the Savannah River Site to "SMALL" (from "SMALL to MODERATE").</p> <ul style="list-style-type: none"> <li>• The current rating of SMALL to MODERATE is based on the assumption that new transmission right-of-ways may be needed and that the impacts are indeterminate until the new routes are specified. Onsite, any new transmission lines would use existing right-of-ways, which would require some upgrade and would therefore have some minimal impact. Offsite, existing 500-kV transmission right-of-ways would be used as is, or would require an upgrade in capacity only; operation impacts would be minimal. Assuming the power from the SRS may be transmitted to a location 60 miles to the west is not realistic because right-of-way and permits may be excessive and time consuming to obtain. This assumption creates unnecessary conservatism in the environmental impacts presented in the report for the SRS.</li> </ul>

No.	Page	Section	Line	Comment
11	9-1	9.0	26	<p>Delete the statement, "The alternative sites have not undergone a comparable level of detailed study." The statement is not appropriately crediting the very high level of environmental assessments and characterizations that exist for the SRS. In the case of the Savannah River Site, the environmental impacts have been well characterized and are indeed SMALL.</p> <ul style="list-style-type: none"> <li>The very high level of environmental assessment and characterization of SRS was not accurately credited. SRS has been described as one of the most characterized sites in the Department of Energy (DOE) Complex. In 1951 a baseline environmental study was undertaken as part of initial site startup. In 1970, SRS was named the first National Environmental Research Park. The Savannah River Site (SRS) was characterized in detail as part of a rigorous site selection process and NEPA analysis for a previously proposed mission (Accelerator Production of Tritium). More recently, the Nuclear Regulatory Commission (NRC) has published an Environmental Impact Statement for the Mixed Oxide Fuel Fabrication Facility at the SRS. SRS publishes extensive environmental reports annually, and has extensive monitoring, research, restoration, and remediation information available from numerous SRS organizations (SGCP, SRNL, Site Geotechnical Engineering, SR Forest Service, Environmental Monitoring Section, and SREL) as well as many regional colleges and universities (Clemson, USC, USC-A, SC State, College of Charleston, UGA, GA Tech., Emory and Augusta State).</li> </ul> <p>Also for SRS, offsite impacts would be limited to currently existing transmission right-of-ways, and the impacts are expected to be small.</p>
12	9-3	Table 9-1	7	<p>Change the Transmission corridors impacts for the Savannah River Site to "SMALL" (from "SMALL to MODERATE").</p> <ul style="list-style-type: none"> <li>The current rating of SMALL to MODERATE is based on the assumption that new transmission right-of-ways may be needed and that the impacts are indeterminate until the new routes are specified. Onsite, any new transmission lines would use existing right-of-ways, which would require some upgrade and would therefore have some minimal impact. Offsite, existing 500-kV transmission right-of-ways would be used as is, or would require an upgrade in capacity only; construction impacts would be minimal. Assuming the power from the SRS may be transmitted to a location 60 miles to the west is not realistic because right-of-way and permits may be excessive and time consuming to obtain. This assumption creates unnecessary conservatism in the environmental impacts presented in the report for the SRS.</li> </ul>

No.	Page	Section	Line	Comment
13	9-3	Table 9-1	12	<p>Change the Terrestrial ecosystems impacts for the Savannah River Site to "SMALL" (from "SMALL to MODERATE").</p> <ul style="list-style-type: none"> <li>The current rating of SMALL to MODERATE is based on the assumption that new transmission right-of-ways may be needed and that the impacts are indeterminate until the new routes are specified. Onsite, any new transmission lines would use existing right-of-ways, which would require some upgrade and would therefore have some minimal impact. Offsite, existing 500-kV transmission right-of-ways would be used as is, or would require an upgrade in capacity only; construction impacts would be minimal. Assuming the power from the SRS may be transmitted to a location 60 miles to the west is not realistic because right-of-way and permits may be excessive and time consuming to obtain. This assumption creates unnecessary conservatism in the environmental impacts presented in the report for the SRS.</li> </ul>
14	9-3	Table 9-1	14	<p>Change the Threatened and endangered species impacts for the Savannah River Site to "SMALL" (from "SMALL to MODERATE").</p> <ul style="list-style-type: none"> <li>The current rating of SMALL to MODERATE is based on the assumption that new transmission right-of-ways may be needed and that the impacts are indeterminate until the new routes are specified. Onsite, any new transmission lines would use existing right-of-ways, which would require some upgrade and would therefore have some minimal impact. Offsite, existing 500-kV transmission right-of-ways would be used as is, or would require an upgrade in capacity only; construction impacts would be minimal. Assuming the power from the SRS may be transmitted to a location 60 miles to the west is not realistic because right-of-way and permits may be excessive and time consuming to obtain. This assumption creates unnecessary conservatism in the environmental impacts presented in the report for the SRS.</li> </ul>
15	9-3	Table 9-1	19	<p>Change the Community Characteristics impacts for the Savannah River Site to "SMALL" (from "SMALL to MODERATE").</p> <p>All of the impacts discussed in section 8.7.5.3 were determined to be SMALL or beneficial except for the transportation impact of the construction workforce which was determined to be "SMALL to MODERATE". This transportation impact should be changed to "SMALL" for reasons discussed in the comment on section 8.7.5.3.</p>

No.	Page	Section	Line	Comment
16	9-4	Table 9-2	16	<p>Change the Threatened and endangered species impacts for the Savannah River Site to "SMALL" (from "SMALL to MODERATE").</p> <ul style="list-style-type: none"> <li>The current rating of SMALL to MODERATE is based on the assumption that new transmission right-of-ways may be needed and that the impacts are indeterminate until the new routes are specified. Onsite, any new transmission lines would use existing right-of-ways, which would require some upgrade and would therefore have some minimal impact. Offsite, existing 500-kV transmission right-of-ways would be used as is, or would require an upgrade in capacity only; operation impacts would be minimal. Assuming the power from the SRS may be transmitted to a location 60 miles to the west is not realistic because right-of-way and permits may be excessive and time consuming to obtain. This assumption creates unnecessary conservatism in the environmental impacts presented in the report for the SRS.</li> </ul>
17	9-4	9.1	28-32	<p>The statements of generic impacts quoted below cannot be supported without further analyses - the results of which may show a clear preference for one or another of the proposed sites. Each of these impacts is dependent upon the nearby population density and distribution, and should therefore be different for each site. The Savannah River Site, with its large controlled access area, relatively isolated location, and low nearby population density may have a distinct advantage.</p> <p>Quote from document: "Some environmental impacts considered for the North Anna ESP site or for the alternative sites are generic to all sites and therefore do not influence the comparison of impacts between North Anna ESP site and the alternative sites. The generic environmental impacts common to all sites are air quality, nonradiological and radiological health impacts, and environmental impacts from postulated accidents."</p>
18	9-6	9.2.1	19-25	<p>Delete the current paragraph and replace with:</p> <p>"The adverse impacts of construction at the Savannah River Site alternative are SMALL for all impact categories. Beneficial impacts ranging from SMALL to MODERATE were noted in the community characteristics category, primarily as a result of beneficial economic impacts in Barnwell County."</p> <p>The current paragraph is based on two observations, which are invalid in light of further information. First, the staff concludes that new transmission right-of-ways may be needed, necessitating new construction and possible adverse impacts. In fact, the SRS site selection process would ensure that the location of any new facility would be accessible to existing rights-of-ways, and any upgrades would have negligible impact. Second, the staff concludes that the construction workforce would substantially increase the SRS workforce thereby moderately impacting transportation. In fact, the SRS workforce, including the construction work force, would be significantly less than recent SRS staffing levels and would be easily accommodated by existing transportation infrastructure.</p>

No.	Page	Section	Line	Comment
19	9-7	9.2.2	11-16	<p>Delete the current paragraph and replace with:</p> <p>"The adverse impacts of operations at the Savannah River Site alternative ESP site are <b>SMALL</b> for all impact categories. Beneficial impacts ranging from <b>SMALL</b> to <b>Moderate</b> were noted in the community characteristics category, primarily as a result of beneficial economic impacts in Barnwell County."</p> <ul style="list-style-type: none"> <li>The current paragraph is based on the observation that new transmission right-of-ways may be needed, necessitating new construction and adversely impacting operations and maintenance. In fact, the SRS site selection process would ensure that the location of any new facility would be accessible to existing right-of-ways, and any upgrades would have negligible impact. Offsite, existing 500-kV transmission right-of-ways would be used as is, or would require an upgrade in capacity only; operation impacts would be minimal. Assuming the power from the SRS may be transmitted to a location 60 miles to the west is not realistic because right-of-way and permits may be excessive and time consuming to obtain. This assumption creates unnecessary conservatism in the environmental impacts presented in the report for the SRS.</li> </ul>
20	9-7	9.2.2	25-26	<p>Delete "and the Savannah River Site has significant unknown impacts associated with the transmission line rights-of-way (could be anywhere from <b>SMALL</b> to <b>Moderate</b>)."</p> <ul style="list-style-type: none"> <li>This phrase is based on the observation that new transmission right-of-ways may be needed, necessitating new construction and adversely impacting operations and maintenance. In fact, the SRS site selection process would ensure that the location of any new facility would be accessible to existing right-of-ways, and any upgrades would have negligible impact. Offsite, existing 500-kV transmission right-of-ways would be used as is, or would require an upgrade in capacity only; operation impacts would be minimal. Assuming the power from the SRS may be transmitted to a location 60 miles to the west is not realistic because right-of-way and permits may be excessive and time consuming to obtain. This assumption creates unnecessary conservatism in the environmental impacts presented in the report for the SRS.</li> </ul>