Savannah River Site Presentation

John Lopez
Director, Office of Integration and Planning
U.S. Department of Energy-Savannah River Operations Office

Citizens Advisory Board (CAB) – Budget Update/Site Priorities Discussion
July 2021
Purpose

- Provide an overview of the Federal Budget Planning Process
- Review of Fiscal Year 2022 President’s Budget Request (PBR)
- Review of Fiscal Year 2022 Priorities
- Discuss Fiscal Year 2023 Planning and the Site Priorities
- Request input from the CAB for Fiscal Year 2023 priorities
Federal Budget Planning Process

Inside Circle = Current Fiscal Year (FY)
Middle Circle = FY 2022
Outside Circle = FY 2023
## EM Budget Overview

### Environmental Management

**FY2022**

<table>
<thead>
<tr>
<th>Environmental Management</th>
<th>FY2019 Enacted</th>
<th>FY2020 Enacted</th>
<th>FY2021 Enacted</th>
<th>FY2022 PBR</th>
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<tbody>
<tr>
<td>Environmental Management</td>
<td>7,175,129</td>
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<tr>
<td>Savannah River Site</td>
<td>1,551,014</td>
<td>1,629,924</td>
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### Environmental Management FY2022

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount (in Thousands)</th>
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<tbody>
<tr>
<td>Carlsbad/Waste Isolation Pilot Plant</td>
<td>437</td>
</tr>
<tr>
<td>Idaho</td>
<td>381</td>
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<tr>
<td>Oak Ridge</td>
<td>561</td>
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<tr>
<td>Paducah</td>
<td>275</td>
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<tr>
<td>Portsmouth</td>
<td>547</td>
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<tr>
<td>Richland/Hanford</td>
<td>1,026</td>
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<tr>
<td>River Protection</td>
<td>1,541</td>
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<tr>
<td>Savannah River</td>
<td>1,746</td>
</tr>
<tr>
<td>Lawrence Livermore National Laboratory</td>
<td>37</td>
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<tr>
<td>Los Alamos National Laboratory</td>
<td>334</td>
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<tr>
<td>Nevada</td>
<td>61</td>
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<tr>
<td>Sandia Site Office</td>
<td>4</td>
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<tr>
<td>Separation Process Research Unit (SPRU)</td>
<td>15</td>
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<tr>
<td>West Valley Demonstration Project</td>
<td>92</td>
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<tr>
<td>Energy Technology Engineering Center</td>
<td>21</td>
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<tr>
<td>Moab</td>
<td>85</td>
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<tr>
<td>Closure Sites Administration</td>
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<tr>
<td>Program Direction</td>
<td>293</td>
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<tr>
<td>D&amp;D Fund Deposit</td>
<td>416</td>
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<tr>
<td>Mission Support</td>
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<tr>
<td>D&amp;D Fund Offset</td>
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<tr>
<td><strong>EM Total</strong></td>
<td><strong>7,596</strong></td>
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**FY 2022 Request**

<table>
<thead>
<tr>
<th>Defense Environmental Cleanup</th>
<th>FY 2020 Enacted</th>
<th>FY 2021 Enacted</th>
<th>FY 2022 Request</th>
<th>FY 2022 vs FY 2021</th>
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<tr>
<td>Savannah River Risk Management Operations</td>
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<tr>
<td>SR-0011C - Nuclear Material</td>
<td>360,658</td>
<td>349,724</td>
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<td>SR-0013 - Solid Waste</td>
<td>43,825</td>
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<td>SR-0030 - Soil and Water</td>
<td>65,508</td>
<td>56,412</td>
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<td>SR-0041 - Risk Red Deac &amp; Survand Main</td>
<td>26,324</td>
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<td>SR-0042 - Infrastructure and Land Mgt</td>
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<td>Subtotal, Operating</td>
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<tr>
<td>Construction:</td>
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<tr>
<td>18-D-402 Emergency Operations Center Replacement, SR</td>
<td>6,792</td>
<td>6,500</td>
<td>8,999</td>
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<tr>
<td>19-D-701 SR Security System Replacement</td>
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<td>20-D-402 Advanced Manufacturing Collaborative Facility (AM)</td>
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<td>36,317</td>
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<td>Subtotal, Savannah River Risk Management Operations</td>
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<td>466,723</td>
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<td>SR Legacy Pensions</td>
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<tr>
<td>SR-0101 - SR Legacy Pensions</td>
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<td>130,882</td>
<td>130,882</td>
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<tr>
<td>Savannah River Community and Regulatory Support</td>
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<tr>
<td>SR-0100 - Comm. &amp; Reg.</td>
<td>11,249</td>
<td>11,549</td>
<td>5,805</td>
<td>-5,744</td>
</tr>
</tbody>
</table>

**Savannah River Risk Management Operations**

- Nuclear Materials Stabilization and Disposition Program will meet Public Law 50 U.S. Code § 2633 that requires continued operations and maintaining a high state of readiness for H-canyon.
- Supports storage, treatment and disposal functions for transuranic, low-level radioactive waste, mixed low-level radioactive waste, hazardous, and sanitary waste.
- Soil and Water Remediation & Facility Deactivation and Decommissioning Program will continue to remediate Savannah River Site contaminated soils, groundwater, streams (and associated wetlands), and waste sites.
- Supports deactivation and decommissioning activities of inactive facilities within D Area.
- Supports the surveillance and maintenance of non-operating nuclear facilities (currently consisting of F-Area Complex Facilities, as well as the Receiving Basin for Off-Site Fuels Facility in H-Area), deactivation of the F-Area Materials Storage Facility (235-F).
- General Site functions including land management activities supported by the Forrest Service, identification and management of cultural resources, and sustainment of natural resources by the Savannah River Ecology Lab.

**Construction**

- Complete Final Design and award construction contract for the Emergency Operations Center.
- Start F Area installation and construction for the SR Security Replacement Center.

**SR Legacy Pensions**

- Support EM's share (60%) of Savannah River Site's legacy pension obligation.

**Savannah River Community and Regulatory Support**

- Supports the Citizens Advisory Board, the States of South Carolina and Georgia for emergency management activities, South Carolina Department of Natural Resources for maintaining the Cracker neck Wildlife Management Area and Ecological Preserve, South Carolina Department of Health and Environmental Control and the Environmental Protection Agency oversight.
Radioactive Liquid Tank Waste Stabilization and Disposition

- Installing retrieval and mixing pumps in tanks to support sludge and salt feed for Defense Waste Processing Facility and the Salt Waste processing Facility.
- Processing up to 150 canisters in Defense Waste Processing Facility.
- Operate Salt Waste Processing Facility up to a 6 million gallons per year rate and process available feed of at least 4.5 million gallons.

Construction

- Build Saltstone Disposal Units on schedule to dispose of the decontaminated salt solution produced by the Salt Waste Processing Facility and Tank Closure Cesium Removal unit.

Safeguards & Security

- Supports required security force and resources necessary to guard and safely maintain Special Nuclear Material in accordance with DOE policy.

*Safeguards and Security funding managed as a single complex-wide congressional control. However, funding is displayed for site completeness.*
## Functional Areas of EM Mission: Program Baseline Summaries (PBS)

<table>
<thead>
<tr>
<th>PBS</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBS 11C</td>
<td>Nuclear Materials Stabilization &amp; Disposition (Includes Spent Nuclear Fuel Receipt/Storage)</td>
</tr>
<tr>
<td>PBS 13</td>
<td>Solid Waste Stabilization &amp; Disposition</td>
</tr>
<tr>
<td>PBS 30</td>
<td>Soil &amp; Water Remediation, Facility Deactivation &amp; Decommissioning</td>
</tr>
<tr>
<td>PBS 41</td>
<td>Surveillance, Maintenance, and Deactivation (F-Area and 235 Risk Reduction)</td>
</tr>
<tr>
<td>PBS 42</td>
<td>Infrastructure and Land Management</td>
</tr>
<tr>
<td></td>
<td>18-D-402: Emergency Operations Center</td>
</tr>
<tr>
<td></td>
<td>19-D-701: SR Security System Replacement</td>
</tr>
<tr>
<td></td>
<td>20-D-402: Advanced Manufacturing Collaborative Facility (AMC)</td>
</tr>
<tr>
<td>PBS 14C</td>
<td>Radioactive Liquid Tank Waste Stabilization &amp; Disposition</td>
</tr>
<tr>
<td></td>
<td>17-D-402: Saltstone Disposal Unit #7</td>
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<td>18-D-402: Saltstone Disposal Units #8/9</td>
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<td>20-D-401: Saltstone Disposal Units #10-12</td>
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<td>PBS 20</td>
<td>Safeguards and Security</td>
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<tr>
<td>PBS 100</td>
<td>Community &amp; Regulatory Support</td>
</tr>
<tr>
<td>PBS 101</td>
<td>Legacy Pension</td>
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</table>
Major Categories of the Site Priorities

All priorities (scopes) in each PBS are grouped into one of four categories:

– Support Safe Operations & Site Services

– Operational Support

– Cleanup Activities to meet Compliance Milestones & Commitments

– Progress in other EM Mission Activities
Major Categories of the Site Priorities

1. **Support Safe Operations & Site Services**
   Activities necessary to maintain facilities or systems in a state of operational readiness, include Site Safeguards & Security

2. **Operational Support**
   Activities necessary to meet contractual and legal commitments and obligations in support of Site Operations that are not included in Safe Operations, Compliance, and Making Progress categories. Primary focus includes:
   - *Headquarters and Site direct contracts*
   - *Community (CAB) and Regulatory (EPA and SCDHEC) support activities*
   - *Site Infrastructure support activities.*
3. **Cleanup Activities to meet Compliance Milestones & Commitments**
   - Activities necessary to comply with Federal & State Regulations:
     - *Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)*
     - *Resource Conservation and Recovery Act (RCRA)*
     - *Federal Facility Act (FFA)*
   - These regulations primarily focus on cleanup and monitoring activities associated with Solid Waste (PBS 13), Liquid Waste (PBS 14C) and Soil & Water Remediation (PBS 30).

4. **Making Progress in other EM Mission Activities**
   - Primary focus in this category is mission activities associated with Nuclear Materials and Spent Nuclear Fuel stabilization and disposition (PBS 11C), Solid Waste Stabilization & Disposition (PBS-13), F-Area Surveillance, Maintenance, and Deactivation (PBS 41), Facility Deactivation & Decommission (PBS 30).
SRS EM PBS’s & Site Priorities List Categories

PBS 11C
Nuclear Materials Stabilization & Disposition
- Safety
- Operational Support
- Making Progress

PBS 13
Solid Waste Stabilization & Disposition
- Safety
- Operational Support
- Regulatory Commitments
- Making Progress

PBS 30
Soil & Water Remediation, Facilities D&D
- Safety
- Operational Support
- Regulatory Commitments
- Making Progress

PBS 41
Surveillance, Maintenance, and Deactivation
- Safety
- Operational Support
- Making Progress

PBS 42
Infrastructure and Land Management
- Operational Support

PBS 14C
Radioactive Liquid Tank Waste Stabilization & Disposition
- Safety
- Operational Support
- Regulatory Commitments

PBS 100
Community & Regulatory Support
- Operational Support

PBS 101
Legacy Pension
- Safety

PBS 20
Safeguards & Security
- Safety
- Operational Support
DOE-SR requests input from the CAB for Fiscal Year 2023 priorities.

- Does the CAB want to maintain the same priorities from FY2022 for FY2023?
Last Year’s CAB Input to Fiscal Year 2022 Budget

CAB’s FY22 priorities:
- Liquid Waste Program
- Nuclear Materials
- Common and Program Infrastructure across entire SRS complex to be addressed down to PBS levels
- Accelerated Deactivation & Decommissioning of 235-F
Questions?
Backup Slides
EPA’s Input to Fiscal Year 2023 Budget

EPA’s Priorities:

- High Level Waste, with an emphasis on meeting FFA milestones per the 2019 Suspension Agreement, emptying high level waste tanks, and the acceleration of F Tank Farm and Tank Closure, in light of the hot operations start of the Salt Waste Processing Facility on 1/18/21.
- Procure funding to support FY 2023 soil and groundwater projects, and where possible, procure additional funding to accelerate projects listed in Appendix E.3 of the SRS FFA, including the continued acceleration of D Area remedial actions and Powerhouse D&D, addressing potential GW sources ahead of current schedules, if possible, for example with treatability studies.
- Procure funding for C Area reactor D&D, including removal of the heavy water.
SCDHEC’s Input to Fiscal Year 2023 Budget

SCDHEC’s Priorities:

- Treatment of high-level waste and closure of tanks.
- Procure funding to support FY2023 soil and groundwater projects, and where possible procure additional funding to accelerate projects listed in Appendix E.3 of the SRS FFA.
- Procure funding to complete the decommissioning of the F-Area Material Storage Building (235-F) and closure under the FFA.
- Procure funding to complete D&D of the D-Area Powerhouse.
- Procure funding for the C-Area Reactor Building.
- Environmental Surveillance and Oversight Program.
SRSCRO’s Input to Fiscal Year 2023 Budget

SRSCRO Priorities:

- Advanced Manufacturing Collaborative
- SRS Contract Re-Bids
- Liquid Waste Program
- Processing Spent Fuel
- Waste Disposition by Characterization
- SRS Infrastructure

April 14, 2021
Mr. Michael Frickley, Manager
Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, SC 29802

Re: SRSCRO Priorities for the FY2023 SRS Budget Development

Dear Mr. Frickley:

We appreciate the opportunity to offer our input as we develop the FY23 budget request list for Savannah River Site (SRS). We are aware that you are at the point of soliciting input on the SRS FY23 budget (workorders and to you at last year, requesting operator workshops and other interested parties to provide their list of priorities for consideration.

As we expressed last year, a stable and adequate SRS budget is always beneficial for SRS and we know Congress will deliver such a budget for FY23. All the missions and programs at SRS are important to the SRSCRO Community Reuse Organization (SRSCRO). It is difficult to place a priority ranking on our list and it has not changed much since last year. Below you will find a list of the important elements at SRS that need to be selectively funded and included in the SRS FY23 budget:

- Advanced Manufacturing Collaborative (AMC)
  Having such a facility on the campus of USC, Aiken, will be a positive impact to our local region. We see this as a “game changer” for the local area and it also was a valued asset. Even under a new Administration, the Department of Energy’s Office of Environmental Management (DOEM) needs to stay behind its commitment and DOE needs to be held, the source of the budget.

- SRS Contract Re-Bids
  DOR-EM has expressed its option to extend the primary SRS contracts, multiple times in some cases. While this maintains the “status quo” for SRS missions, the need around the site is left with uncertainty on whether new contracts will occur. We are pleased to see that Savannah River National Laboratory (SRNL) contract has been awarded and the transition between contractors has begun. The SRSCRO is now focused on working with Baez/Savannah River Alliance, LLC (B/SA) on community issues and the future roadmap is very important to the AMC.

As a continual priority, DOE needs to focus on local area issues and job retention is not limited to Aiken and the surrounding community to which the affected workforce belongs.

- Liquid Waste Programs
  We believe it is essential that high-level liquid waste (HLW) is removed from the aging underground tanks at SRS in an expedited manner. However, the longer work remains in the aging tanks, the greater the risks of acid leaks from the containment. The Salt Waste Processing Facility (SWPF) will significantly accelerate the ability to treat the remaining radioactive tank waste at the site. SWPF funding and operation needs to be a priority at SRS

ED, Box 966, Aiken, South Carolina 29802 P: 803.506.7401 F: 803.593.4296 www.srs.gov
Serving the Counties of Aiken SC, Allendale SC, Barnwell SC, Columbia GA, and Richmond GA
GNAC’s Input to Fiscal Year 2023 Budget

GNAC’s Priorities:

- **Restoration of $60M necessary to ensure continuity of operation of the Salt Waste Processing Facility (SWPF).** The SWPF was recently commissioned and is processing HLW. This operation is key to enabling the emptying of HLW tanks at SRS. This funding would include waste retrieval of 10 HLW tanks which is critical to avoid impacting SWPF operations (waste retrieval is necessary to pace SWPF operations). We believe proper funding for the SWPF operations addresses the most significant environmental risk at site and urge its restoration.

- **Complete key infrastructure upgrades (critical HLW equipment and aged underground utilities) to the HLW Tank Farms that was deferred from the FY2021 submittal.**

- **H Canyon – increase the pace for the ABD project to achieve full implementation of the plutonium without recovery so that the canyon materials can be sent to liquid waste while it operates for the next number of years.**

- **235 F Deactivation - This is the most hazardous facility onsite and needs increased funding to complete its full deactivation.** It has only been funded at diminished pace and the DNFSS has been very critical of the lack of progress given its hazardous profile.

- **In the FY22 pass back there is work being done to identify a separate PBS line item for pensions and benefits so that these needs in times of market volatility will not pull funds away from critical project activities as has been the experience of the past. There is internal DOE support for this initiative.**

- **If additional funding is provided beyond the restored $60M, the HLW program could begin interim closure of Saltstone Disposal Unit Vault 4, initiate design and procurement of DWPF melter 5 which is essential for DWPF operations and commence operational closure of another waste tank.**

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SRS FY2023 Budget Priorities Request - GNAC

Mr. Lopez,

We thank you for the opportunity to participate. We reviewed the recommendations of other organizations and borrowed some descriptive text as a means of issuing consistency. I have conveyed the membership and provide the following recommendations which are ranked in priority:

1. **Restoration of $60M necessary to ensure continuity of operation of the Salt Waste Processing Facility (SWPF).** The SWPF was recently commissioned and is processing HLW. This operation is key to enabling the emptying of HLW tanks at SRS. This funding would include waste retrieval of 10 HLW tanks which is critical to avoid impacting SWPF operations (waste retrieval is necessary to pace SWPF operations). We believe proper funding for the SWPF operations addresses the most significant environmental risk at site and urge its restoration.

2. **Complete key infrastructure upgrades (critical HLW equipment and aged underground utilities) to the HLW Tank Farms that was deferred from the FY2021 submittal.**

3. **H Canyon – increase the pace for the ABD project to achieve full implementation of the plutonium without recovery so that the canyon materials can be sent to liquid waste while it operates for the next number of years.**

4. **235 F Deactivation - This is the most hazardous facility onsite and needs increased funding to complete its full deactivation.** It has only been funded at diminished pace and the DNFSS has been very critical of the lack of progress given its hazardous profile.

5. **In the FY22 pass back there is work being done to identify a separate PBS line item for pensions and benefits so that these needs in times of market volatility will not pull funds away from critical project activities as has been the experience of the past. There is internal DOE support for this initiative.**

6. **If additional funding is provided beyond the restored $60M, the HLW program could begin interim closure of Saltstone Disposal Unit Vault 4, initiate design and procurement of DWPF melter 5 which is essential for DWPF operations and commence operational closure of another waste tank.**

Best regards,
Rick Lee
Chair
SC Governor’s Nuclear Advisory Council