SRR Project Execution Plan for FY10
Presented to the SRS Citizen’s Advisory Board

Dave Olson
Deputy Project Manager
Savannah River Remediation

Jason Vitali
Lead Technical Planner
Savannah River Remediation

November 17, 2009
• Safety
• Process Overview
• FY10 Objectives
• FY10 Specific Activities
  - Tank Operational Closure
  - Salt Processing
  - Sludge Processing
• Summary
• SRR is building upon the safety tradition by retaining safety and security as company priorities and prerequisites for any activity, and by performing with uncompromising integrity

• SRR has worked over 1.3 million hours without a lost time injury

FY10 Total Recordable Case Rate: 0.00

Industry average: 4.2
DOE-EM average: 1.14
SRR average: 0.15
Liquid Waste Overview
Integrated Processing

- 2x Sludge Prep
- 2x Sludge Feed
- 3x Bulk Waste Removal
- 22 Closures in 8 Years
- HLW Tank Closure
- HLW Sludge Bulk Waste Removal
- HLW Sludge Batch Feed Prep
- DWPF Canisters
- LL Waste (Salt Stone)
- 400 Canisters Per Year
- Salt Separation (ARP/MCU)
- 2x Sludge Prep and Salt processing
- 2x Salt Prep and Salt processing
- ETP
- HLW Evap
- HLW Tank Cleaning
- HLW Salt Waste Removal and Batch Feed Prep
Technology Maturity and Development

Melter Bubblers

Enhanced Chemical Cleaning

DWPF Process Enhancements

Rotary Microfiltration

Thanks to Vitreous State Laboratory
Mature Risk Management process fully integrated with planning process

Risk Management process:
- Identify risks
- Mitigate risks via implementation of Risk Handling Strategies

Risk Categories include:
- Technology (including SRR proposed)
- Business
- Infrastructure
- Interface

Overall Risk Profile decreased for FY10
- Fewer High Residual Risks
- Lower Program Contingency
• Work with regulators to establish procedures to support accelerated tank closures over the next 8 years and begin implementation.
• Increase and sustain interim salt processing (ARP/MCU & SPF) throughput
• Initiate DWPF throughput enhancements
- Single Shell tanks
- Closed / Grouted
- In Closure
- Cleaning in Progress
- Waste Removal in Progress
- Salt Removal and Batch Prep
- Sludge Processing
- Salt Processing
- Single Shell tanks
- Closed / Grouted
- In Closure
- Cleaning in Progress
- Waste Removal in Progress
- Salt Removal and Batch Prep
- Sludge Processing
- Salt Processing
FY 2010 1Q | FY 2010 2Q | FY 2010 3Q | FY 2010 4Q
--- | --- | --- | ---
FTF Performance Assessment/General Closure Plan/Waste Determination/Tier 1 Closure Document | Closure Module/Special Analysis/Tier 2 Closure Document | Closure Module/Special Analysis/Tier 2 Closure Document | Cleaning CM | Tank 18 | Tank 19 | Tank 5 | Tank 6 | Tank 4 | Tank 8 | Tank 7 | Tank 16 | Tank 12 | Tank 13
Our Approach
System Plan Revision 15

<table>
<thead>
<tr>
<th>FY 2010 1Q</th>
<th>FY 2010 2Q</th>
<th>FY 2010 3Q</th>
<th>FY 2010 4Q</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design/Fab ECC Unit #1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECC Real Waste Testing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISDP Salt Batch 2</td>
<td>Batch Qualification</td>
<td>ISDP Salt Batch 3 at 40 kgal/wk</td>
<td>Batch Qualification</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saltstone Processing at 55 kgal/wk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saltstone Reliability Improvements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design and Procurement for SWPF Integration Projects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design Tank 48 FBSR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sludge Batch 5</td>
<td>Sludge Batch 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design/Fab/Install Melter Bubbler</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>186 canisters/year</td>
<td>325 cans/yr</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design/Fab DWPF Process Enhancements and Sludge Batch Prep Enhancements</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Sludge Processing Capacity

Unit Process Canister Production Capability

Canisters per year

- Tank Farm Sludge Prep
- DWPF Batch Prep
- Melter Processing
- Canister Handling

[Bar chart showing the production capability of each unit process.]
Unit Process Canister Production Capability

- Tank Farm Sludge Prep
- DWPF Batch Prep
- Melter Processing
- Canister Handling

Canisters per year

2010 – Bubbler Installation
ISDP Weekly Processing Capacity

Gallons per Week

<table>
<thead>
<tr>
<th>Process Step</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>MST Strike</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Filtration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cs Extraction</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Salt Processing Capacity

MST Strike Filtration Cs Extraction

Process Step

Gallons per Week

Tank Closure Capacity

Capacity for Annual Tank Closure Activities

<table>
<thead>
<tr>
<th>Process Step</th>
<th>2009</th>
<th>2012</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk Waste Removal and Mech Heel Removal</td>
<td>4</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Chem Cleaning</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

We do the right thing.
Life Cycle Impact

FY2010 2015 2020 2025 2030 2035

System Plan R. 14

Sludge Processing

ARP/MCU SWPF Operating Period

Sludge Depleted

Salt Depleted

All tanks closed

System Plan R. 15

Sludge Processing

ARP/MCU SWPF Operating Period

Sludge Depleted

Salt Depleted

All tanks closed

Opportunity for Lifecycle Reduction
• Tank Operational Closure
  - Continue progress on Tanks 18, 19, 5, 6, 8, and 12 to meet FFA commitments
  - Work with regulators to establish procedures to support accelerated tank closures over the next 8 years and begin implementation

• Salt
  - Continue accelerated interim salt processing with ARP/MCU
  - Develop infrastructure to support SWPF upon startup

• Sludge
  - Accelerate DWPF processing rate to 325 canisters per year by end of FY10
  - Develop infrastructure to increase processing rate to 400 canisters per year in FY12
SRR is committed to closing the 22 remaining Single Shell (Type I, II, and IV) tanks in the next 8 years.
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARP</td>
<td>Actinide Removal Process</td>
</tr>
<tr>
<td>ARRA</td>
<td>American Recovery and Reinvestment Act</td>
</tr>
<tr>
<td>CPB</td>
<td>Contract Performance Baseline</td>
</tr>
<tr>
<td>Cs</td>
<td>Cesium</td>
</tr>
<tr>
<td>DWPF</td>
<td>Defense Waste Processing Facility</td>
</tr>
<tr>
<td>ECC</td>
<td>Enhanced Chemical Cleaning</td>
</tr>
<tr>
<td>FBSR</td>
<td>Fluidized Bed Steam Reformer</td>
</tr>
<tr>
<td>FFA</td>
<td>Federal Facility Agreement</td>
</tr>
<tr>
<td>FTF</td>
<td>F Tank Farm</td>
</tr>
<tr>
<td>HLW</td>
<td>High Level Waste</td>
</tr>
<tr>
<td>HTF</td>
<td>H Tank Farm</td>
</tr>
<tr>
<td>ISDP</td>
<td>Interim Salt Disposition Project</td>
</tr>
<tr>
<td>MCU</td>
<td>Modular Caustic-Side Solvent Extraction Unit</td>
</tr>
<tr>
<td>MST</td>
<td>Monosodium Titanate</td>
</tr>
<tr>
<td>SPF</td>
<td>Saltstone Processing Facility</td>
</tr>
<tr>
<td>SWPF</td>
<td>Salt Waste Processing Facility</td>
</tr>
<tr>
<td>WR</td>
<td>Waste Removal</td>
</tr>
</tbody>
</table>
Backup
ARRA Impact on Lifecycle

Salt Disposition Integration Projects ensure SWPF is supported for design throughput

Infrastructure Projects reduce risk and increase confidence in achieving projected end date

Tank 13 and Melter Bubbler Projects accelerate risk reduction
• System Plan Rev 15, Risk Management Plan Rev 5, and initial SRR Contract Performance Baseline (CPB) submitted to DOE for approval 9/30/09
  - System Plan and Risk Management Plan cover the remainder of the Liquid Waste Lifecycle
  - CPB defines Scope, Schedule, and Cost through June 2017
• DOE approval of baseline documents expected to take approximately 30 working days
• CAB briefings on System Plan and CPB after DOE approval