

Savannah River Operations Office EM Cleanup Project(s)

Baseline Summary

June 2008

Background

Savannah River Site (SRS) encompasses over 310 square miles and is located near Aiken, South Carolina. The site was built in the 1950's to provide nuclear materials in support of the Cold War effort. Eighteen unique areas supported the operation of five reactors, two separation facilities, a heavy water production facility, a fuel rod manufacturing facility, liquid and solid waste storage and treatment facilities as well as general support facilities and office buildings. About 10% of the total land area is used for administration and the operations. The remaining 90% is comprised of upland forest (73%), wetlands (22%) and roadways (5%). Although there are continuing and new production missions at the SRS, the majority of the site mission is Environmental Cleanup. As cleanup activities are completed, continuing operations will be concentrated to the site central core area. The land surrounding the central core area will provide a protective buffer. SRS is managed by contractors and oversight is provided by DOE Savannah River Operations Office.

The EM mission completion goal at SRS is to permanently dispose of all Environmental Management (EM) nuclear material and waste, decommission all EM facilities, and remediate all SRS inactive waste units. The vast majority of EM nuclear material and waste will be permanently removed from SRS and dispositioned offsite. At completion, all inactive waste units will be remediated by employing an Area-by-Area completion strategy and any contaminated groundwater will be remediated, undergoing remediation, or monitored to ensure protection of human health and the environment. Areas for which waste will remain will be under institutional controls, comprised of access restrictions, inspections, maintenance, and monitoring. Concurrently with Area completion, all EM facilities will be decommissioned, except when the facility will be re-used to support other long-range federal missions at SRS, or designated for historical preservation or re-use for economic development.

The removal and offsite disposition of EM nuclear material and waste will significantly reduce risk at SRS. Any remaining hazards will be orders of magnitude less in quantity. Risk to onsite and offsite receptors will be reduced to an acceptable risk level that is protective of human health and the environment and consistent with environmental laws and regulations.

The End State Vision for SRS includes the following:

- SRS land will be federally owned, controlled, and maintained as established by Congress.
- The EM Cleanup Projects and mission at SRS will be complete and ongoing National Nuclear Security Administration (NNSA) nuclear industrial missions will continue. SRS is a site with an enduring mission and is not a completion site.

- EM Cleanup will be complete consistent with the SRS Future Land Use Project Report as follows:
 - EM nuclear materials will be removed from SRS and dispositioned offsite.
 - Radioactive liquid waste, transuranic, mixed, and hazardous waste will be removed from SRS and dispositioned offsite except for the waste facilities closed and monitored in accordance with the Federal Facility Agreement (FFA) and the Resource Conservation and Recovery Act (RCRA) permit for wastes.
 - Low-level waste will be disposed onsite in accordance with the Atomic Energy Act and DOE Order 435.1, Radioactive Waste Management.
 - All SRS inactive waste units will be remediated, and institutional controls will be in place to ensure access to remediated waste units is limited.
 - All EM facilities at SRS will be permanently decommissioned by demolition or in-situ disposal unless reused by another federal program or designated for historical preservation or for economic development.
 - Facilities associated with NNSA missions, their supporting waste management, and essential site infrastructure are anticipated to remain active and appropriately sized to support ongoing missions.
 - Long-term stewardship activities will continue to ensure that EM cleanup project remedies and end states remain protective of human health and the environment. Environmental research consistent with the SRS National Environmental Research Park designation will continue to validate the protectiveness of end states and long-term stewardship activities.

Much of the information used to articulate the End State Vision is based on the Savannah River Site Environmental Management Integrated Deactivation and Decommissioning Plan (WSRC-RP-2003-00233), and the SRS End State Vision documents.

Baseline Background

The baseline was developed consistent with Department of Energy (DOE) Office of Environmental Management (EM) guidance on funding profiles and priorities (reference EM memorandums dated June 25, 2007 and August 15, 2007). The resultant baseline does not meet existing regulatory agreements and requirements with regard to several EM cleanup projects at the Savannah River Site and does not provide an optimal sequencing of work activities. The baseline does identify, within the constraints imposed by EM guidance, a scope of work which can be accomplished within the stated cost and identified completion dates. As such, the proposed baseline is an acceptable point from which to control future change. DOE-SR will adjust the baseline consistent with the 2009 President's Budget and the EM Five Year Plan targets provided through the FY 2010 Budget Field Data Call. Scope, cost, and schedule will be effectively integrated to accomplish mission needs in both the near term and the out years. Changes to the baseline will be incorporated through formal change control and are subject to independent review as determined by EM. The scope is divided into two periods: Near-Term Baseline, which covers the period from the start of FY 2008 through the end of FY 2014 (October 1, 2007 through September 30, 2014) and Out-Year Work Scope, which covers the period from the start of FY 2015 through the End-of-Lifecycle (EOL).

Scope Description

The EM mission at SRS has three primary objectives:

- mitigate or eliminate risks through safe stabilization, treatment, and disposition of EM-owned nuclear materials, spent nuclear fuel, and waste;
- reduce the costs of continuing operations and surveillance and maintenance; and
- decommission all EM-owned facilities except those identified for transfer to another Program Secretarial Office, and remediate groundwater and contaminated soil, using an Area completion approach.

Past nuclear operations at Savannah River Site (SRS) have generated wastes which, for many years, have been stored pending the availability of treatment and disposal facilities. Over the last decade the inventories of these legacy wastes have been steadily reduced to a fraction of their former magnitude using a variety of treatment and disposal facilities both onsite and offsite. In addition to disposition of legacy wastes, SRS generates new wastes as part of ongoing site EM cleanup work. These newly generated wastes are dispositioned using a variety of treatment and disposal facilities.

Project Management

Based on the direction from EM Headquarters, Savannah River Operations Office (SR) developed a near-term baseline for each of its EM cleanup projects. The Project Baseline Summary (PBS) projects have undergone an independent review to verify the reasonableness of the scope, cost and schedule. Line-item projects are reviewed separately with each line-item project undergoing an independent review of scope, cost and schedule to validate its baseline. For the PBS projects the approved near-term baseline reflects the identified scope that can reasonably be accomplished for the identified cost in the identified time period if near-term baselines are funded as profiled and contingency funds are provided as required during project execution. It also establishes the baseline as an acceptable point from which to track and control future change. The review and approval process accommodates the likely changes in the EM complex, site priorities and funding plans. These changes could affect both near-term (within the next five years) and life-cycle cost, schedule and scope. Such future changes may be required to comply with applicable environmental legal obligations while maintaining essential functions necessary to protect human health, the environment and national security; reflect funding different from the baseline assumptions; incorporate technological advances; realize specific programmatic risks; or implement programmatic business cases. Because the cleanup extends beyond the near-term, out-year planning estimates (ranges) have also been developed and independently reviewed. The Savannah River EM program consists of six PBS and three Line Item projects as shown in the tables below:

LIST OF PROJECTS

PBS Projects

The Near-Term Baseline (NTB) for the PBS projects is from FY 2008 – FY 2014 and the Out-Year Planning Estimate Range (OPER) is from FY 2015 through End of Lifecycle (EOL).

PBS Project	Date Approved	
	Near Term Baseline (NTB)	Out Year Planning Estimate Range (OPER)
SR-0011C – Nuclear Materials Stabilization and Disposition	Jan. 30, 2008	Jan. 30, 2008
SR-0012 – Spent Nuclear Fuels Stabilization and Disposition	Jan. 30, 2008	Jan. 30, 2008
SR-0013 – Solid Waste Disposition	Jan. 30, 2008	Jan. 30, 2008
SR-0014C – Liquid Waste Disposition	Jan. 30, 2008	Jan. 30, 2008
SR-0030 – Soils and Water Remediation	Jan. 30, 2008	Jan. 30, 2008
SR-0040C – Nuclear Facilities D&D	Jan. 30, 2008	Jan. 30, 2008

Line Item Projects

Line Item Project	Date Baseline Reviewed / Approved
05-D-405 / 05-D-405 SWPF	Sept. 24, 2007
04-D-423 / 04-D-414 CSSC	CD2A/3A Feb. 20, 2007 CD-2 TBD
08-D-401 / 08-D-414 PuD	CD-1A Aug. 2006 CD-2 TBD

Project Scope

PBS Project Scope

SR-0011B – Nuclear Materials Stabilization and Disposition

Starting in FY 2008, PBS SR-0011B is exclusively the 3013 Container Storage and Surveillance Capability Project (line-item project 04-D-423). Prior year work scope for PBS SR-0011B included H-Canyon and HB-Line operations. In FY 2008 this work scope was transferred to PBS SR-0011C.

SR-0011C – Nuclear Materials Stabilization and Disposition

The scope for PBS SR-0011C includes the management and disposition of nuclear materials, primarily located in H- and K-Areas at the Savannah River Site. This PBS also includes the safe

surveillance and maintenance of the F-Area Complex and Receiving Basin for Off-Site Fuels facility (RBOF).

Near-Term Baseline

PBS SR-0011C provides for the operation of H-Canyon, HB-Line, K-Area; safe surveillance and maintenance of F-Area Complex (FB-Line, F-Canyon and FAMS facilities) and RBOF facility; and ultimate transfer for decommissioning to PBS SR-0040C, Nuclear Facilities Deactivation and Decommissioning (D&D). Full deactivation of F-Canyon is expected prior to September 30, 2011. Disposal of depleted uranium oxides will be initiated. The remaining materials to be stabilized and/or dispositioned through H-Canyon and HB-Line facilities include plutonium/uranium residues, scrap materials, and irradiated and un-irradiated fuels. H-Canyon and HB-Line will complete processing of National Nuclear Security Administration (NNSA) metals, initiate spent fuel processing; continue plutonium processing; and upgrade infrastructure. The K-Area scope includes the following activities: nuclear materials consolidation and storage, interim 3013/9975 surveillance, and modifications to fire protection and material storage systems.

Out-Year Work Scope

RBOF and the F-Area Complex facilities will continue to remain in this PBS for continued surveillance and maintenance until ready for decommissioning, at which time they will be transferred to PBS SR-004C, Nuclear Facilities D&D. Included in the F-Area complex activities is the continued disposition of low-enriched uranium oxide. H-Canyon and HB-Line will continue to process uranium and plutonium materials (oxides, metals and spent nuclear fuels (SNF)). The K-Area Complex will continue to provide safe and secure storage of special nuclear material (SNM), heavy water in drums and tanks, highly enriched uranium (HEU), and other miscellaneous nuclear materials, and will also continue to both ship and receive SNM to support facility missions. It will continue to support storage of SNM designated to be under International Atomic Energy Agency (IAEA) safeguards. H-Canyon and HB-Line will begin deactivation by October 1, 2019 and will be complete by September 30, 2023. K-Area Complex will begin deactivation by October 1, 2019 and will be complete by September 30, 2022. These facilities along with RBOF and the F-Area Complex facilities will be maintained in a minimum surveillance and maintenance condition until transferred to PBS SR-0040C for decommissioning.

PBS SR-0011C Key Performance Parameters

Year	Plutonium Metal or Oxide Packaged for Long-Term Storage: N containers	Depleted and other Uranium packaged for disposition: MT	Material Access Areas Eliminated: N areas
Pre-2008 Total	919	8,755	1
2008	0	0	0

2009	0	2,136	0
2010	0	2,136	0
2011	0	2,136	0
2012	0	2,136	1
2013	0	2,136	0
2014	0	2,136	0
Near-Term	0	12,816	1
Out-Years	0	1,611	1
Total	919	23,182	3

SR-0012 – Spent Nuclear Fuels Stabilization and Disposition

The scope for PBS SR-0012 is to provide safe shipping, receipt, storage, and disposition of SNF and heavy water in L-Area. The scope includes all programmatic and physical support efforts related to safe receipt and storage of SNF in L-Basin and the final disposition of all SNF at SRS. Heavy water will continue to be stored in L-Area pending disposition via sale or other approved method. This PBS also covers facility deactivation and assumes turnover to PBS SR-0040C for surveillance and maintenance pending the initiation of decommissioning.

Near-Term Baseline

PBS SR-0012 work scope in the near-term includes continued receipt and storage of SNF, initiation of the transfer of SNF to H-Canyon, and initiation of the disposal of heavy water.

Out-Year Work Scope

Out-year work scope includes de-inventory and de-activation of SNF and heavy water inventory and facilities.

PBS SR-0012 Key Performance Parameters

Year	Plutonium or Uranium Residues Packaged for Disposition: KgB	Enriched Uranium residues packaged for long term storage: N containers	Spent Nuclear Fuel packaged for final disposition: MTHM
Pre-2008 Total	490	2,717	2.821
2008	0	92	
2009	0	0	1.50
2010	0	0	4.44
2011	0	0	4.44
2012	0	0	4.44
2013	0	0	4.44
2014	0	0	5.44
Near-Term	0	2,809	27.521

Out-Years	0	0	11
Total	490	2,809	38.521

SR-0013 – Solid Waste Disposition

The scope for PBS SR-0013 includes receipt, treatment, storage, and disposal of legacy and newly generated low-level waste (LLW), low-level mixed waste (LLMW), transuranic (TRU) waste, hazardous waste, and sanitary waste.

Near-Term Baseline

Near-term work scope includes the receipt, storage, and disposal of legacy and newly generated LLW/LLMW, TRU waste, HW, and sanitary waste. The SRS Pollution Prevention (P2) Program employs the Office of Environmental Management (EM) preference of source reduction and recycling over treatment, storage, and disposal and the preferred use of energy-efficient and resource-conservative practices and operations. The P2 Program provides SRS a safe, effective, and environmentally responsible strategy to implement specific waste and pollutant reduction techniques based on current and projected information on waste generation, waste characterization, and ultimate waste disposal costs. Other miscellaneous items of work in support of mission operations include: operational direct support to DOE, United States Forest Service, site housing support, deactivation planning for infrastructure facilities, infrastructure database management, and small capital projects (capital equipment and general plant projects) for infrastructure support facilities and activities. Surveillance and maintenance activities for the Consolidated Incineration Facility will continue through FY 2014, at which point decommissioning will commence.

Out-Year Work Scope

Out-year work scope includes the continued receipt, treatment, storage, and disposal of legacy and newly generated LLW/LLMW, TRU waste, HW, and sanitary waste. The legacy TRU waste disposition continues through FY 2025. The major generator of waste dispositioned in the out-years will be the decommissioning of facilities from PBS SR-0040C, Nuclear Facilities D&D. All newly generated waste streams will be managed as the waste is generated and disposed within timescales established by RCRA regulations and DOE Orders.

PBS SR-0013 Key Performance Parameters

The LLW/LLMW metric is based upon the existing forecast for all generators.

Year	Transuranic Waste shipped for disposal at WIPP: M3	Low -Level and Mixed Low-Level Waste Disposed from ER and D&D Activities: M3	Low -Level and Mixed Low-Level Waste Disposed from Legacy and New Generated: M3
Pre-2008 Total	4,952	9,606	90,444
2008	650	650	2,780
2009	160	TBD	4,444

2010	TBD	TBD	2,425
2011	TBD	TBD	2,915
2012	TBD	TBD	2,517
2013	TBD	TBD	2,958
2014	160	TBD	2,967
Near-Term	TBD	TBD	21,006
Out-Years	TBD	TBD	26,129
Total	15,590	764,499	137,579

SR-0014C – Liquid Waste Disposition

The scope for PBS SR-0014C includes treatment and permanent disposal of LW stored in 49 underground storage tanks, including the management of waste in the F- and H-Tank Farms through transfers, evaporation, and storage to safely and efficiently manage tank space and includes work scope to treat salt waste and prepare it for disposal.

Near-Term Baseline

During the near-term, the deactivation (flushing and isolation) of eight of the LW tanks is planned. Sludge batches will be pretreated and provided as feed for DWPF. The Salt Waste Processing Facility (SWPF), the line-item project that supports PBS SR-0014C, is being designed, constructed, and operationally started during this period, and interim salt processing operations in existing facilities will cease.

Out-Year Work Scope

In the out-years a third Glass Waste Storage Building (GWSB) will be constructed, and a Canister Shipping Facility (CFS) will be designed, constructed, and operated to support shipments to a Federal Repository. All LW tanks in F- and H-Tank Farms will be operationally closed (i.e., removed from service and filled with grout). The 1H, 1F, 2H, 2F, and 3H Evaporators and contaminated waste transfer systems will be deactivated (flushing and isolation) in preparation for decommissioning activities covered by PBS SR-0040C. The Defense Waste Processing Facility (DWPF) and SWPF, along with the Failed Equipment Storage Vaults will also be deactivated. The GWSBs will be de-inventoried (canisters shipped to a Federal Repository) and deactivated.

PBS SR-0014C Key Performance Parameters

Year	High-Level Waste packaged for final disposition: N containers	Liquid Waste Tanks Closed: NT	Liquid Waste in inventory eliminated: k-gal
Pre-2008 Total	2,359	2	0
2008	98	0	500
2009	186	0	700
2010	186	2	700
2011	186	2	700
2012	124	3	700

2013	217	1	1,200
2014	263	0	1,800
Near-Term	1,260	8	6,300
Out-Years	2,715	41	33,200
Total	6,334	51	39,500

SR-0030 – Soils and Water Remediation

The scope for PBS SR-0030 includes 515 waste units regulated under the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). These include surface waste sites, groundwater, and surface water. PBS SR-0030, hereafter referred to as the Soil and Groundwater Project (SGP), is responsible for cleaning up these waste units to reduce risk to be protective of human health and the environment. Waste units range in size from a few square feet to tens of acres and include basins, pits, piles, burial grounds, landfills, tanks, associated groundwater contamination and surface water with associated sediments and biota. The timing for execution of SGP work scope is directly related to the Federal Facility Agreement with the regulators. The near-term and out-year scopes described below are contingent upon successful negotiations of enforceable cleanup schedules and commitments with the regulators.

Near-Term Baseline

The near-term focus for SGP is surveillance and maintenance.

Out-Year Work Scope

In the out-years, SGP will initiate and complete the planned Area Completions, RCRA permit post-closure activities, and Integrator Operable Unit sampling. Additionally, activities required to transition to long term stewardship will be conducted.

PBS SR-0030 Key Performance Parameters

Year	Remediations Complete
Pre-2008 Total	345
2008	14
2009	TBD
2010	TBD
2011	TBD
2012	TBD
2013	TBD
2014	TBD
Near-Term	TBD
Out-Years	TBD
Total	515

SR-0040C – Nuclear Facilities D&D

The scope for PBS SR-0040C includes surveillance and maintenance (S&M) of major deactivated facilities following their transfer to PBS SR-0040C; and the deactivation and decommissioning, (D&D) of excess facilities which have no post-EM future mission at the Savannah River Site. Through May 2008, 248 of 985 facilities have been decommissioned.

Near-Term Baseline

The near-term work scope for PBS SR-0040C includes: S&M of inactive facilities, continuation of D&D planning for F-Area Material Storage (FAMS) facility, re-initiation of D&D of the P- and R-Reactor Areas in FY 2014, and start of D&D on the D-Area Powerhouse and associated facilities in FY 2014.

Out-Year Work Scope

Out-year work scope includes D&D of facilities to support Area Completions and any remaining excess EM facilities.

PBS SR-0040C Key Performance Parameters

Year	Industrial Facility Completions	Nuclear Facility Completions	Radioactive Facility Completions
Pre-2008 Total	229	10	7
2008	2	0	0
2009	0	0	0
2010	0	0	0
2011	0	0	0
2012	0	0	0
2013	0	0	0
2014	8	0	0
Near-Term	10	0	0
Out-Years	515	181	33
Total	754	191	40

Line-Item Project Scope

Salt Waste Processing Facility (SWPF) (05-D-405)

The SWPF project scope includes design, construction, and commissioning of the Salt Waste Processing Facility, to safely separate the high-activity fraction from the low-activity fraction of the radioactive liquid waste stored in underground tanks at the Savannah River Site. The Department has selected Caustic-Side Solvent Extraction as the preferred technology for separation of cesium from these wastes. Salt Waste Processing Facility processing also includes a separation step to remove strontium, uranium, plutonium and neptunium from the waste by sorption onto granular monosodium titanate followed by filtration. The Salt Waste Processing Facility will consist of all buildings, equipment, and services required to provide a fully

functioning facility for processing radioactive liquid waste. The Salt Waste Processing Facility will contain necessary process areas, service areas, chemical storage areas, and administrative areas. The process building will contain shielded processing cells and chemical processing equipment. In-cell tanks and components will be of a closed-cell design for ease of maintenance, replacement, and later decommissioning. The operating area will contain chemical feed pumps and tanks, hot and cold laboratories for testing samples, electrical and mechanical equipment areas, truck unloading area, and maintenance and decontamination areas. The chemical storage area will be located near the process building and will contain chemical storage tanks. Service and administrative spaces will be sized as required to accommodate the process facility. Where safety analysis indicates confinement barriers are necessary for worker protection, the Salt Waste Processing Facility Preliminary Design has been revised to incorporate a Performance Category 3 designation for safety-related piping, process vessels, and other components that would provide a local confinement barrier. Portions of the facility housing safety-related Performance Category 3 local confinement barriers are also designated to resist natural phenomena events. As a defense-in-depth measure, safety related active ventilation systems will be provided to protect workers from process upsets involving a significant release of radioactive material due to non-Natural Phenomenon Hazards events (i.e., tank overflow or spills). The 80 percent confidence completion date for the start of hot operations is November 2013, which includes 60 weeks of schedule contingency.

Container Storage and Surveillance Capability (CSSC) (04-D-423)

The CSSC Project is to provide safe storage of Plutonium (Pu) metal and oxides, increased 3013 storage capacity, detection of conditions potentially adverse to long-term (50 year) safe storage (i.e. Non-Destructive Evaluation (NDE) and Destructive Evaluation (DE)), and capability to re-stabilize and re-package Pu to the DOE-STD-3013 standard. In preparation of the CD-2, and as required by Department of Energy (DOE) Order 413.3A, the CSSC line item is re-assessing whether the mission need has changed, been eliminated, or if there are new alternatives to address the need. This re-assessment will consider the recent operational changes for H-Canyon and Mixed Oxide Fuel Fabrication Facility (MFFF). Namely, H-Canyon will maintain operations through 2019 and MFFF will increase its processing throughput. With these recent events, the assumptions bounding the CSSC project's mission need have changed and other alternatives are now available to more effectively meet the needs of the Department. DOE-SR has developed a new alternative for Pu dispositioning at the Savannah River Site. This new strategy requires cancellation of CSSC, upgrading the K-Area Interim Surveillance project for permanent operations, and revising the PuD project to process Pu material and green fuel for acceptance by either MFFF or H Canyon, Upgrading MFFF and H Canyon to handle the additional material and Upgrading F&H Laboratory to increase testing throughput. A final decision as to continuing CSSC or incorporating some of the elements into PuD is expected directly.

Plutonium Disposition (PuD) (08-D-414)

Public law requires a disposition pathway out of South Carolina for all plutonium transferred to SRS. In August 2005, the Deputy Secretary of Energy approved Critical Decision (CD) 0, *Approval of Mission Need*, for a project to disposition plutonium. The scope of the project is to disposition EM surplus plutonium: remove from storage, transform the material into a state that

meets final repository requirements, and stage material ready for shipment. In August 2006, the Deputy Secretary of Energy approved CD-1A, *Selection of Preferred Alternative*, for the Plutonium Disposition Project. Savannah River Site was reaffirmed as the disposition site and vitrification was selected as the preferred technology. On October 23, 2006 the Assistant Secretary of Environmental Management approved the Acquisition Strategy. The H-Canyon operational extension and proposed increase in Mixed Oxide Fuel Fabrication Facility (MFFF) throughput have presented new alternatives to the Pu program, such that the full scope of the aforementioned project may no longer be needed. The project continues to reassess the preferred alternative considering the operational extension of H-Canyon and increases in MFFF throughput. DOE-SR provided a draft recommendation to an EM-led Independent Project Review (IPR) Team in October. The IPR report was issued on November 16, 2007 concurring on the DOE-SR recommended approach for a new preferred alternative for Plutonium disposition (PuD) at the Savannah River Site. DOE-SR incorporated the IPR recommendations into a pre-decisional draft CD-1B, Revised Alternative Selection. The Assistant Secretary for Environmental Management (EM-1) was briefed on December 10, 2007. SR has completed an alternative analysis of new alternatives against the three prong approach with vitrification. The Environmental Management Acquisition Advisory Board (EMAAB) accepted the preferred alternative on May 20, 2008 and the Energy Systems Acquisition Advisory Board (ESAAB) presentation was held on June 2, 2008. A Supplemental Environmental Impact Statement is under development.

PBS Project Cost

(dollars in millions)

Cost Element	Project Number						
	SR-0011B	SR-0011C**	SR-0012**	SR-0013	SR-0014C	SR-0030	SR-0040C
1. Prior Year Cost (1997-2007)	\$3,599*	\$679	\$259	\$970	\$4,746	\$1,109	\$482
2. Total Near-Term Baseline (50% Confidence Level)	\$0	\$2,468	\$304	\$411	\$4,394	\$87	\$108
3. Unfunded Contingency	\$0	\$0	\$0	\$8	\$1	\$0	\$0
4. Performance Baseline (80% Confidence Level)	\$0	\$2,468	\$304	\$419	\$4,395	\$87	\$108
5. Out Year Planning Estimate Range	\$0	\$3,728 - \$4,359	\$486 - \$508	\$2,900 - \$3,340	\$11,850 - \$20,350	\$2,840 - \$3,330	\$5,040 - \$5,810
6. Total Life Cycle Cost	\$3,599	\$7,506	\$1,071	\$4,725	\$29,488	\$4,524	\$6,400

* Prior year cost for PBS SR-0011B reflects H-Canyon and HB-Line operations. In FY 2008 this work scope was transferred to PBS SR-0011C

** Reviewed and approved as Enriched Uranium Disposition (EUD) and Balance of Nuclear Materials (BNM).

Line Item Project Cost

(dollars in millions)

Cost Element	Line Item Project Numbers		
	05-D-405 / 05-D-405 SWPF	04-D-423 / 04-D-414 CSSC	08-D-401 / 08-D-414 PuD
Prior Year Cost (1997-2007)	N/A	N/A	N/A
Total Near-Term Baseline (50% Confidence Level)	N/A	N/A	N/A
Unfunded Contingency	N/A	N/A	N/A
Performance Baseline (80% Confidence Level)	TPC = \$899	TPC = \$159	TPC Range* \$340 to \$540
Out Year Planning Estimate Range	N/A	N/A	N/A
Total Life Cycle Cost	\$899	\$159	Range \$340 to \$540*

* TPC and TLC Range at CD-1A, August 2006

Summary Lifecycle Baseline Schedule

SRS EM Cleanup Project Integrated Site		LINE : Line Num	Activity ID	Finish
SR-0011B NM STABILIZATION & DISP - 2012				30-Sep-11
PEP8-Baseline.01.30.02.33 LI Project 3013 CSSC				30-Sep-11
SR-0011C NM STABILIZATION & DISP - 2035				28-Jan-25
PEP8-Baseline.01.30.02.02.01 H Canyon				30-Sep-23
PEP8-Baseline.01.30.02.02.02 HB-Line				30-Sep-23
PEP8-Baseline.01.30.02.15.03 RBOF Long Term Stewardship				31-Mar-14
PEP8-Baseline.01.30.02.15.04 RBOF Cask Pad Disposition				31-Mar-14
PEP8-Baseline.01.30.02.33.02.01.02 3013 CSSC 105-K CNST (OPC)				31-Jul-12
PEP8-Baseline.01.30.02.34 LI Project Pu Disposition In KAC				30-Sep-16
PEP8-Baseline.01.30.02.35 DOE LANL Support				30-Sep-20
PEP8-Baseline.01.30.14 Nuclear Materials Storage				28-Jan-25
PEP8-Baseline.01.30.14.01.01 K Area Material Storage - Operations				30-Sep-22
PEP8-Baseline.01.30.14.01.01.09 Fast Flux Test Facility (FFTF)Mods				30-Sep-12
PEP8-Baseline.01.30.14.01.01.11.01 PU Consolidation				30-Sep-09
PEP8-Baseline.01.30.14.03.02 NMM PU DISPOSITION OPEX SUPPORT				30-Sep-16
PEP8-Baseline.01.30.14.03.03 NMM CSSC OPEX SUPPORT				31-Jul-12
PEP8-Baseline.01.30.14.05 NMM Stewardship Program				30-Sep-22
PEP8-Baseline.01.30.14.07 PU Waste Form				30-Sep-14
PEP8-Baseline.01.30.14.08 3013 Surveillance Operations				30-Sep-22
PEP8-Baseline.01.30.14.09 K-Area OPEX Funded Projects				30-Sep-12
PEP8-Baseline.01.30.14.10.01 F Canyon S&M				30-Sep-14
PEP8-Baseline.01.30.14.10.02 F Area Deinventory				30-Sep-14
PEP8-Baseline.01.30.14.10.03 F Area Deactivation				30-Sep-14
PEP8-Baseline.01.30.14.10.04 235-F S&M				30-Sep-14
SR-0012 SNF STABILIZATION & DISP				11-Sep-24
PEP8-Baseline.01.30.15.01 L Area Facility				30-Sep-19
PEP8-Baseline.01.30.15.01.01 L Area Facility - Operations				30-Sep-14
PEP8-Baseline.01.30.15.01.01.01 L Area Surveillance and Maintenance				30-Sep-14
PEP8-Baseline.01.30.15.01.04 Heavy Water Project				30-Sep-14
PEP8-Baseline.01.30.15.01.05 L Area Deactivation				11-Sep-24
SR-0013 SOLID WASTE STABILIZ & DISP				30-Sep-39
PEP8-Baseline.01.30.16.01 Solid Waste Operations				30-Sep-39
PEP8-Baseline.01.30.16.01.01 Waste Certification				30-Sep-14
PEP8-Baseline.01.30.16.01.02 Sanitary Waste				30-Sep-14
PEP8-Baseline.01.30.16.01.03 Hazardous Waste				30-Sep-14
PEP8-Baseline.01.30.16.01.04 Mixed Waste				30-Sep-14
PEP8-Baseline.01.30.16.01.05 Low Level Waste				30-Sep-14
PEP8-Baseline.01.30.16.01.06 TRU Waste				15-Sep-32
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Activity Name	LINE : Line Num	Activity ID	Finish
PEP8-Baseline.01.30.16.01.07 Waste Minimization			30-Sep-14
PEP8-Baseline.01.30.16.01.08 Waste Stream Support			30-Sep-14
PEP8-Baseline.01.30.16.02 Infrastructure / Facilities			15-Sep-38
PEP8-Baseline.01.30.16.04 Cold Ware Artifacts Collection			20-Sep-38
PEP8-Baseline.01.30.16.10.01 CIF Operations			31-Mar-14
SR-0014C RADIOACT LIQ STAB & DISP 2035			28-Jan-32
PEP8-Baseline.01.30.03.01.01 H-Tank Farm			30-Sep-28
PEP8-Baseline.01.30.03.01.01.01 H-Tank Farm Deactivation			30-Sep-29
PEP8-Baseline.01.30.03.01.02 F-Tank Farm			30-Jun-24
PEP8-Baseline.01.30.03.01.02.01 F-Tank Farm Deactivation			01-Jul-26
PEP8-Baseline.01.30.03.01.04 Bulk Waste Removal			30-Sep-24
PEP8-Baseline.01.30.03.01.07 Salt Processing Tank Preparation			30-Mar-08
PEP8-Baseline.01.30.03.01.07.03 Modular Salt Processing			30-Sep-13
PEP8-Baseline.01.30.03.01.15 Salt			30-Sep-25
PEP8-Baseline.01.30.03.01.15.09 Tank 48 Treatment Process			30-Sep-11
PEP8-Baseline.01.30.03.01.16 Tank Closure Preps / Operational Closure			30-Sep-25
PEP8-Baseline.01.30.03.01.17 LWO Technical Development			30-Sep-25
PEP8-Baseline.01.30.03.02.01 Canister Production / DWPF Operations			31-Mar-28
PEP8-Baseline.01.30.03.02.01.01 DWPF Deactivation			30-Sep-29
PEP8-Baseline.01.30.03.02.03 Saltstone Operations			30-Sep-27
PEP8-Baseline.01.30.03.02.03.01 Saltstone Deactivation			30-Sep-29
PEP8-Baseline.01.30.03.02.15 GWSB III			30-Sep-19
PEP8-Baseline.01.30.03.16 ETF			30-Sep-29
PEP8-Baseline.01.30.03.16.01 ETF Deactivation			28-Jan-32
PEP8-Baseline.01.30.03.30 LI Project (93-D-187)			31-Mar-30
PEP8-Baseline.01.30.03.31 LI Proj Canister Shipping - PED (xx-D-414)			30-Sep-15
PEP8-Baseline.01.30.03.36 Salt Waste Process Facil - PED (03-D-414)			30-Sep-14
PEP8-Baseline.01.30.03.37 Salt Waste Process Fac - Constr (04-D-401)			30-Sep-13
PEP8-Baseline.01.30.03.38 Salt Waste Process Facility Operations			30-Sep-28
PEP8-Baseline.01.30.03.38.01 SWPF Deactivation			30-Sep-29
SR-0030 SOIL & WATER REMEDIATION			16-May-40
PEP8-Baseline.01.30 EM Closure Contract			16-May-40
PEP8-Baseline.01.30.12.01 Flood Plain Swamp Watershed			30-Sep-37
PEP8-Baseline.01.30.12.02 Four Mile Branch Watershed			30-Sep-37
PEP8-Baseline.01.30.12.03 Lower Three Runs Watershed			30-Sep-37
PEP8-Baseline.01.30.12.04 Pen Branch Watershed			30-Sep-37
PEP8-Baseline.01.30.12.05 Steel Creek Watershed			30-Sep-37
PEP8-Baseline.01.30.12.06 Upper Three Runs Watershed			30-Sep-37
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SRS EM Cleanup Project Integrated Site			
Activity Name	LINE : Line Num	Activity ID	Finish
PEP8-Baseline.01.30.12.07 ER Field Support			30-Sep-37
PEP8-Baseline.01.30.12.08 PROGRAM MANAGEMENT			30-Sep-37
SR-0040 NUCLEAR FACILITY D&D			30-Sep-38
PEP8-Baseline.01.30.04.02.01 A Area			30-Sep-38
PEP8-Baseline.01.30.04.02.02 B Area			31-Dec-30
PEP8-Baseline.01.30.04.02.03 C Area			30-Sep-30
PEP8-Baseline.01.30.04.02.04 D Area			30-Apr-31
PEP8-Baseline.01.30.04.02.05 E Area			30-Sep-31
PEP8-Baseline.01.30.04.02.06 F Area			27-Nov-34
PEP8-Baseline.01.30.04.02.07 G Area			31-Jan-31
PEP8-Baseline.01.30.04.02.08 H Area			27-Nov-34
PEP8-Baseline.01.30.04.02.09 J Area			31-Aug-32
PEP8-Baseline.01.30.04.02.10 K Area			28-Jan-30
PEP8-Baseline.01.30.04.02.11 L Area			10-Sep-32
PEP8-Baseline.01.30.04.02.12 M Area			30-Sep-30
PEP8-Baseline.01.30.04.02.13 N Area			30-Jun-31
PEP8-Baseline.01.30.04.02.14 P Area			30-Sep-30
PEP8-Baseline.01.30.04.02.15 R Area			30-Sep-19
PEP8-Baseline.01.30.04.02.16 S Area			30-Sep-32
PEP8-Baseline.01.30.04.02.17 T Area			30-Sep-31
PEP8-Baseline.01.30.04.02.18 U Area			31-Dec-23
PEP8-Baseline.01.30.04.02.19 Z Area			31-Aug-32
PEP8-Baseline.01.30.04.03 S&M/Operations Support			10-Sep-32
PEP8-Baseline.01.30.04.04 Reactor Areas S&M			30-Sep-22
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