

# NNSA-SRSO Limited Ten-Year Site Plan FY 2011 – FY 2020

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**MOX Fuel Fabrication Facility**



**Waste Solidification Building**

## OVERVIEW

At the Savannah River Site (SRS), NNSA executes Tritium and Nuclear Nonproliferation (NN) missions in support of U.S. national security. They include:

- **Tritium Supply** – extraction of tritium from irradiated target rods and management of the tritium inventory for the nuclear stockpile
- **Nuclear Stockpile Maintenance** – loading of tritium and other gases into “reservoirs” (stainless steel containers) that are used in the gas transfer system of a nuclear weapon
- **Nuclear Stockpile Evaluation** – surveillance of gas transfer systems to assure reliability in the absence of nuclear testing
- **Helium-3 Recovery** – recovery of this byproduct of tritium’s radioactive decay for use in neutron detectors and various commercial applications
- **Plutonium Disposition (NN)** – dispositioning of approximately 34 metric tons of surplus weapons-usable plutonium in a manner that makes it inaccessible and unattractive for weapons use

In FY 2009, SRNS consolidated responsibility for these Tritium and NN missions in a single organization.

The Tritium missions continue to be executed successfully, and SRNS has introduced an improved business focus that will drive efficiency and responsiveness. Mission execution and business improvement will remain focus areas for the ten-year horizon. Of primary concern is the pension-driven reduction in buying power of available funding (see Assumption #1) that will impact Tritium’s staffing, facility condition, and mission risk. Human capital management is also a concern because the percentage of retirement-eligible employees will increase rapidly over the next few years.

Three new facilities that support the NN mission are in the project phase. The Mixed Oxide (MOX) Fuel Fabrication Facility (MFFF) will receive plutonium feedstock as plutonium oxide. The Pit Disassembly and Conversion (PDC) facility will disassemble plutonium pits and convert the material to plutonium oxide for use as MFFF feedstock. A smaller amount of plutonium from other DOE sources will also feed MFFF. The Waste Solidification Building (WSB) will treat the liquid waste streams from the PDC facility and MFFF. Shaw Areva MOX Services is the contractor responsible for MFFF, and SRNS is responsible for PDC and WSB.



In the next ten years, MFFF will finish construction, conduct start-up testing, and begin operations. The physical structure of the main process building is expected to be completed in April 2012, and the overall project is expected to be completed in October 2016, with first fuel production beginning in December 2018. The primary concerns involve receipt of needed materials from vendors and the initial plutonium oxide feed from Los Alamos National Laboratory (LANL).

PDC is proposed for the K-Area Complex (KAC), but a final decision has not yet been made. PDC will undergo design, construction, start-up testing, and initial operations over the next ten years. Stabilization and Packaging (S&P) and Vault Storage will likely be accelerated to be operational in four to five years. PDC concerns include acquisition and timing of adequate funding; reorganization of the Project’s Integrated Project Team with new roles and responsibilities; that American Recovery and Reinvestment Act (ARRA) will cover the necessary D&D of existing Structures, Systems, and Components; and managing construction and start-up in a facility that has active, ongoing operational missions.

Construction of the WSB started in December 2009, and is expected to be completed in May 2012, with CD-4 approval for the start of operations in June 2013. WSB is expected to begin accepting water runs from MFFF in the fall of 2013, and will begin receiving chemical runs of waste from MFFF approximately one year later. WSB will begin processing radioactive waste from MFFF in 2016. The MFFF processing rate will increase over the next three years after radioactive start-up and is scheduled to be at design production capacity in 2020.



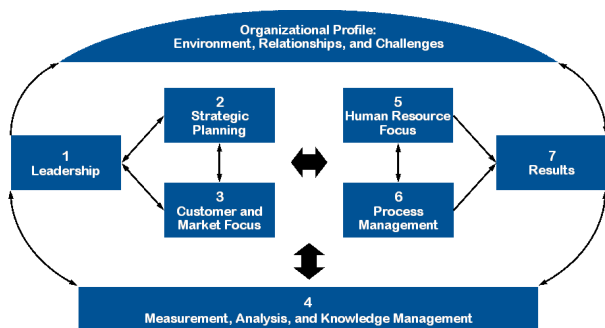
Sometime after 2020, the PDC project will come on line, adding a small waste stream to WSB. Addition of a waste unloading station to accommodate the waste stream from PDC will be the most significant change in the next ten years. Currently there are no programmatic concerns, and project funding is adequate.

## ASSUMPTIONS

1. **Funding** – This TYSP assumes the level of funding in the FY 2011-2015 President’s Budget (February 2010 submission) and projected out-year profiles (FY 2016-2020). The buying power of available funding will decrease significantly in FY 2011 and FY 2012 and remain at a low level through at least FY 2016 due to two primary factors:
  - DOE’s new policy to fund pension at the ERISA minimum necessitates pension payments in these years, and
  - NNSA’s portion of the overall site indirect cost (which includes pension) will approximately double by FY 2012 because NNSA scope will comprise a higher percentage of the site total. This is due to completion of ARRA scope, the expected transfer of K Area materials storage from EM to NNSA, and an increase in required NN scope.
2. **MFFF** – LANL will supply the initial plutonium oxide feed before October 2016 to support start up and fuel production.
3. **PDC** – NNSA will authorize and provide adequate funding to proceed with PDC in KAC. KAC structures are sound and can support planned upgrades and modifications. The ARRA project will perform specific D&D work in support.
4. **WSB** – Funding for the WSB project will not change. Supporting site infrastructure will continue to be available. Funding from the site NNSA M&O pool will be adequate for the transition to operations.

## CURRENT STATE OF THE SITE

SRNS has many significant accomplishments since assuming responsibility for SRS Management & Operations (M&O) in August 2008. For example, Tritium work scope supporting all FY 2009 NNSA Milestones (50 Level 2s and 46 Level 3s) was completed on schedule with a significantly reduced staff – 645 FTEs at the end FY 2009 vs. 741 FTEs in FY 2008<sup>1</sup>. Responsive Operations (involving workforce mobility) were implemented for the Tritium Extraction Facility (TEF), reducing cost 21% in FY 2008 and another 14% in FY 2009. Application of Human Performance Initiative principles has helped to foster a just culture in the workforce. The MFFF project is proceeding on schedule and within budget, three permanent support facilities (administrative, training, and a warehouse) have been completed, and more than half of the process equipment has been ordered. Construction of the WSB began in December 2009, and PDC planning is ongoing to support the NN mission. Most important, this NNSA work is being performed safely – the Total Recordable Case (TRC) Rate was 0.29 for Operations and 0.00 for Construction in FY 2009.



The new M&O contract requires additional business focus, and much progress has been made. A business model was deployed to drive results and organizational maturity. A strategic planning process was established, and has produced a plan for revitalizing the Tritium infrastructure for NNSA’s enduring missions that aligns well with NNSA’s Transformation strategy. Human capital management identified the need to fill the Operator and Engineer “pipelines” with additional personnel, and hiring is under way to reduce the risk associated with an aging workforce. A

Severability Plan was developed and is being implemented to stand up a semiautonomous Tritium organization that is well-positioned to respond to any future contractual direction within the NSE. Key elements of the Severability Plan include tailoring requirements to mission, deploying an Integrated Supply Chain-centric organization, and increasing transparency of M&O-provided scope and cost. Governance reform, Continuous Improvement (e.g., Lean, Six Sigma), and other Business Excellence initiatives have also been launched.

To summarize, successful execution of NNSA missions remains a priority at SRS, and an additional business focus has laid the groundwork for accomplishing these missions more efficiently and responsively going forward.

<sup>1</sup> Includes Tritium Programs’ employees (headcount) and support organization labor (FTEs).



## CHANGES FROM PRIOR YEAR TYSP

Key changes from the NNSA-SRSO Ten Year Site Plan, FY 2009 – FY 2018 (issued August 2008) include:

- Transformation planning has matured considerably since the previous TYSP, and is reflected in the discussion of TRIM (previously named “Tritium Facility Transformation”) and future space needs.
- NNSA’s goal to annually maintain the NNSA Facility Condition Index (FCI) for Mission Critical facilities at 5% cannot be met within current funding constraints.
- NN is now integrated with Tritium Programs in the required sections. MFFF construction has progressed, PDC is now planned for KAC instead of F Area, and construction of WSB has begun.

## REAL PROPERTY ASSET MANAGEMENT

SRNS has developed a prudent plan for managing Tritium’s real property assets in a manner that aligns them with mission and program requirements, known as Tritium Responsive Infrastructure Modifications (TRIM)<sup>2</sup>. TRIM is also well-aligned with NNSA’s current Transformation objectives and other foreseeable strategic directions in which Tritium missions endure.

Key TRIM Scope	Key TRIM Benefits
<ul style="list-style-type: none"> <li>• Relocate and right-size remaining functions from the older facilities (41 to 52 years old) into the more modern facilities (7 to 16 years old)<sup>3</sup></li> <li>• Cease reservoir reclamation<sup>4</sup></li> <li>• Deactivate the older facilities</li> <li>• Establish centralized control of operations</li> <li>• Improve business processes</li> </ul>	<ul style="list-style-type: none"> <li>• Provides suitable facilities that ensure continuous NNSA mission capability for the long term</li> <li>• Reduces annual operating costs by \$20M, with an investment payback period of 5 to 7 years</li> <li>• Avoids the \$105M cost of maintaining the older facilities for another 20 years (estimate includes both current and projected deferred maintenance)</li> <li>• Reduces active Mission Critical footprint by 44% (160K GSF to 89K GSF), and reduces the number of Hazard Category 2/3 facilities from 8 to 5, thereby reducing infrastructure vulnerabilities<sup>5</sup></li> <li>• Establishes a modern working environment that addresses the challenge of attracting and retaining people with critical skills</li> <li>• Eliminates the need to heat and cool the older, energy-inefficient facilities, reducing energy usage by 86 billion BTUs per year (43%)</li> </ul>

Aspects of real property asset management that apply to the new NN facilities are also addressed in the following sections.

### Site Footprint Management/Excess Facilities Disposition

As described in detail in the FY 2009 – FY 2018 TYSP, SRS meets and exceeds the Congressional requirement for footprint reduction for current operations and for all projected new construction, and is well situated to offset any new GSF footprint requirements for NNSA new-construction priorities, including the new NN facilities.

<sup>2</sup> Details of TRIM are provided in the SRNS Tritium Programs Transformational Business Plan (SRNS-RP-2009-01051).

<sup>3</sup> Older facilities: H Area Old Manufacturing (HAOM) facility (1958), building 236-H (1966), and building 238-H (1969). Newer facilities: H Area New Manufacturing (HANM) facility (1994), building 234-7H (2003), and TEF (2003).

<sup>4</sup> Requires NNSA decision to cease reclamation operations.

<sup>5</sup> Even with this reduction in Mission Critical space, SRS has available facility space to accommodate consolidation of research and development for gas transfer systems.

Building 232-H (71,966 GSF) is deactivated, and is currently in long-term surveillance and maintenance (S&M), which costs approximately \$250K per year. Building 232-1H (11,622 GSF) will become excess when construction of its replacement building is completed in 1Q FY 2011. TRIM will eventually render the following buildings excess: 236-H (1,622 GSF), 238-H (11,155 GSF), and HAOM (61,195 GSF). NNSA will propose transferring all of these facilities to Environmental Management (EM) for dispositioning once they become excess. If not accepted by EM, the combined S&M cost would be less than \$500K per year, and have minimal mission impact.

### Future Space Needs

Future space needs include:

- A replacement for the 53-year-old Tritium Construction Support Building (232-1H). The new facility is currently being constructed and will be complete by 1Q FY 2011. It includes shop space and office space.
- A TEF warehouse that will be used exclusively to store TEF materials (e.g., contaminated equipment, waste casks, and extraction baskets). The project is authorized, and construction will be completed by 1Q FY 2011.
- To support TRIM, an administrative/ office building will be needed to receive employees relocated from HAOM, building 238-H, and trailers.
- To support TRIM, a process support/ administrative building is needed to allow building 249-H to receive functions relocated out of HAOM.
- Establishing the PDC capability will utilize approximately 150,000 GSF for radioactive operations within the existing 350,000 GSF K Area Reactor facility. New conventional/ commercial support facilities and structures will also be constructed, adding a total of approximately 150,000 GSF. These facilities will provide construction/ maintenance craft support, technical support, and warehouse space.

No new building footprint for laboratory space is planned.

### Deferred Maintenance Reduction/Facility Condition

An analysis of the ability to reduce deferred maintenance in the Tritium facilities to acceptable levels in accordance with NNSA’s performance goals is provided below. No deferred maintenance (recapitalization) is projected for the new NN facilities during the ten-year planning period.

NNSA Performance Goal	Analysis
By 2008, annually maintain the NNSA Facility Condition Index (FCI) for Mission Critical facilities at 5 %. (RTBF goal)	The current FCI of Mission Critical facilities is 4.2%, but is projected to rise to 9.1% by FY 2020 due to the lack of funding for required maintenance and recapitalization.
By 2013, improve Mission Dependent, Not Critical facilities and infrastructure to an FCI level of 7%. (RTBF goal)	The FCI for Mission Dependent, Not Critical facilities and infrastructure is projected to remain below the current 2.8% during the planning period.
Eliminate \$900M of NNSA’s legacy deferred maintenance backlog by 2013. (FIRP goal)	The SRS Tritium Facilities expect to eliminate \$30M of legacy deferred maintenance by FY 2013. See Attachment F-1.

### Facilities Information Management System

All facilities information provided in this Limited Ten-Year Site Plan is consistent with information provided in the Facilities Information Management System (FIMS). Therefore, there are no discrepancies or assumptions.

## SITE PROJECT PRIORITIZATION AND COST PROFILE

Decisions regarding prioritization of CE/GPPs within each program continue to be made using a formal Change Control Board. In general, available project funding is invested per the following priorities:

1. Projects that ensure operations remain safe, secure, and compliant
2. Projects that ensure continual execution of missions
3. Projects that support Transformation plans
4. Projects associated with facilities other than Mission Critical facilities, unrelated to Transformation

## ENERGY MANAGEMENT PLAN

NNSA-SRSO's energy management plan is the "Savannah River Site FY 2010 Executable Plan for Energy Efficiency, Renewable Energy, and Transportation Management," December 2009 (Rev. 0).

## ACRONYMS

ARRA	American Recovery and Reinvestment Act
BTU	British Thermal Unit
CD	Critical Decision
CE/GPP	Capital Equipment / General Plant Project
D&D	Deactivation and Decommissioning
DOE	Department of Energy
EM	Environmental Management
ERISA	Employee Retirement Income Security Act
FCO	Facility Condition Index
FIMS	Facilities Information Management System
FIRP	Facilities and Infrastructure Recapitalization Program
FTE	Full-Time Equivalent
FY	Fiscal Year
GSF	Gross Square Feet
HANM	H Area New Manufacturing
HAOM	H Area Old Manufacturing
KAC	K Area Complex
LANL	Los Alamos National Laboratory
LLC	Limited Liability Company
M&O	Management and Operations
MFFF	Mixed Oxide Fuel Fabrication Facility
MOX	Mixed Oxide
NN	Nuclear Nonproliferation
NNSA	National Nuclear Security Administration
NSE	Nuclear Security Enterprise
PDC	Pit Disassembly and Conversion
RTBF	Readiness in Technical Base and Facilities
S&M	Surveillance and Maintenance
S&P	Stabilization and Packaging
SRNS	Savannah River Nuclear Solutions
SRS	Savannah River Site
SRSO	Savannah River Site Office
TEF	Tritium Extraction Facility
TRC	Total Recordable Case
TRIM	Tritium Responsive Infrastructure Modifications
TYSP	Ten-Year Site Plan
WSB	Waste Solidification Building

Attachment A-1  
 Facilities and Infrastructure Cost Projection Spreadsheet  
 Line Item Projects for Savannah River Site  
 (\$000s)

Priority (1)	Project Name (2)	Project Number (3)	Deferred Maintenance Identifier(s) (3a)	Mission Dependency (4)	Mission Dependency Program (4a)	Deferred Maintenance Reduction (5)	GSF Added or Eliminated (6)	Funding Type (7)	Total (8)	Prior Years Funding (9)	FY 2010 Current (10)	FY 2011 FYNSP (11)	FY 2012 FYNSP (12)	FY 2013 FYNSP (13)	FY 2014 FYNSP (14)	FY 2015 FYNSP (15)	FY 2016 (16)	FY 2017 (17)	FY 2018 (18)	FY 2019 (19)	FY 2020 (20)	Comment	
<b>A. Readiness in Technical Base and Facilities (RTBF) Line Items</b>																							
	NONE								OPC														
									PE&D														
									LI														
									Total (TPC)	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NONE								OPC														
									PE&D														
									LI														
									Total (TPC)	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>C. Safeguards &amp; Security (S&amp;S) Line Items</b>																							
	NONE								OPC														
									PE&D														
									LI														
									Total (TPC)	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>D. Other Defense Programs Line Items (for example, Campaigns/Directed Stockpile Work (DSW))</b>																							
	NONE								OPC														
									PE&D														
									LI														
									Total (TPC)	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>SubTotal</b>										0	0	0	0	0	0	0	0	0	0	0	0		
<b>Costs for All NNSA Weapons Activities Account Line Items</b>										0	0	0	0	0	0	0	0	0	0	0	0		
<b>E. Nuclear Nonproliferation (NN) Line Items</b>																							
	MOX	W632	N/A	Mission Critical			600,000		LI	3,975,828	2,014,589	504,238	475,788	385,172	322,802	109,661	125,773	37,805					
									PE&D	0	0	0	0	0	0	0	0	0	0	0	0	0	
									OPC	881,301	122,809	56,466	30,000	97,035	246,669	230,697	91,603	6,022					
									Total (TPC)	4,857,129	2,137,398	560,704	505,788	482,207	569,471	340,358	217,376	43,827	0	0	0	0	
	Waste Solidification Building	Y473	N/A	Mission Critical			28,000		LI	244,331	99,749	70,000	57,000	12,927	4,655								
									PE&D	0	0	0	0	0	0	0	0	0	0	0	0	0	
									OPC	100,124	22,481	7,000	21,500	28,000	21,143								
									Total (TPC)	344,455	122,230	77,000	78,500	40,927	25,798	0	0	0	0	0	0	0	
	PDCF	W630	N/A	Mission Critical			150,000		LI	TBD	272,170	30,321	80,000	158,000	200,000	200,000	157,000	TBD	TBD	TBD	TBD		
									PE&D		0												
									OPC	TBD	276,421	58,780	112,999	30,141	44,992	41,143	35,441	TBD	TBD	TBD	TBD		
									Total (TPC)	\$2.4B - \$3.2B	548,591	89,101	192,999	188,141	244,992	241,143	192,441						
<b>Total</b>										\$7.6B - \$8.4B	2137398	560704	505788	482207	569471	340358	217376	43827	0	0	0	0	
<b>Costs for All NNSA Site Line Items</b>											2137398	560704	505788	482207	569471	340358	217376	43827	0	0	0	0	
<b>F. Non-NNSA Line Items Program A</b>																							
									OPC														
									PE&D														
									LI														
									Total (TPC)	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>										0	0	0	0	0	0	0	0	0	0	0	0		
<b>Costs for Program A</b>										0	0	0	0	0	0	0	0	0	0	0	0		
<b>G. Non-NNSA Line Items Program B</b>																							
									OPC														
									PE&D														
									LI														
									Total (TPC)	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>										0	0	0	0	0	0	0	0	0	0	0	0		
<b>Costs for Program B</b>										0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>										\$7.6B - \$8.4B	2137398	560704	505788	482207	569471	340358	217376	TBD	TBD	TBD	TBD	TBD	TBD
<b>Site Costs</b>											2137398	560704	505788	482207	569471	340358	217376	TBD	TBD	TBD	TBD	TBD	

Attachment A-2  
 Facilities and Infrastructure Cost Projection Spreadsheet  
 Proposed Line Item Projects for Savannah River Site  
 (\$000s)

Priority (1)	Project Name (2)	Project Number (3)	Deferred Maintenance Identifier(s) (3a)	Mission Dependency (4)	Mission Dependency Program (4a)	Deferred Maintenance Reduction (5)	GSF Added or Eliminated (6)	Funding Type (7)	Total (8)	FY 2010 Current (10)	FYNSP FY 2011 (11)	FYNSP FY 2012 (12)	FYNSP FY 2013 (13)	FYNSP FY 2014 (14)	FYNSP FY 2015 (15)	FY 2016 (16)	FY 2017 (17)	FY 2018 (18)	FY 2019 (19)	FY 2020 (20)	Comment								
<b>A. Readiness in Technical Base and Facilities (RTBF) Line Items</b>																													
<b>No Additional Line Items are Proposed for Savannah River Site.</b>									OPC																				
									PE&D																				
									LI																				
									<b>Total (TPC)</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>B. Facilities and Infrastructure Recapitalization Program (FIRP) Line Items</b>																													
									OPC																				
									PE&D																				
									LI																				
									<b>Total (TPC)</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>C. Safeguards &amp; Security (S&amp;S) Line Items</b>																													
									OPC																				
									PE&D																				
									LI																				
									<b>Total (TPC)</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>D. Other Defense Programs Line Items (for example, Campaigns/Directed Stockpile Work (DSW))</b>																													
									OPC																				
									PE&D																				
									LI																				
									<b>Total (TPC)</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>E. Nuclear Nonproliferation (NN) Line Items</b>																													
									OPC																				
									PE&D																				
									LI																				
									<b>Total (TPC)</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>F. Non-NNSA Line Items Program A</b>																													
									OPC																				
									PE&D																				
									LI																				
									<b>Total (TPC)</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>G. Non-NNSA Line Items Program B</b>																													
									OPC																				
									PE&D																				
									LI																				
									<b>Total (TPC)</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>Total Site Costs</b>									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Note:  
 The purpose of this spreadsheet is to allow each Site to propose/forecast additional high-priority NNSA line item construction projects for Headquarters consideration. Sites may propose projects that are above their FYNSP constraints. However, there must be a recognition that budget realities, program priorities, and other factors will necessarily limit/dictate which projects ultimately receive funding. Each site may also list its proposed Non-NNSA Program line item projects by program.



**Attachment A-3  
NNSA Facilities and Infrastructure Cost Projection Spreadsheet  
RTBF/Operations of Facilities for Savannah River Site**

(\$000s)																				
Priority (1)	Project Name (2)	Project Number (3)	Mission Dependency (4)	Mission Dependency Program (4a)	Deferred Maintenance Reduction (5)	GSF Added or Eliminated (6)	Funding Type (7)	Total (8)	Prior Years' Funding (9)	FY 2010 Current (10)	FY 2011 FYNP (11)	FY 2012 FYNP (12)	FY 2013 FYNP (13)	FY 2014 FYNP (14)	FY 2015 FYNP (15)	FY 2016 (16)	FY 2017 (17)	FY 2018 (18)	FY 2019 (19)	FY 2020 (20)
1	Project Support Building	Y547	MD	DSW		14,700		4,700	4,700	0	0	0	0	0	0	0	0	0	0	0
2	Air Monitoring, HAOM	Y430	MC	DSW	1,080		GPP	3,915	3,915	140	0	0	0	0	0	0	0	0	0	0
3	P1 System Piping	Y522	MC	DSW			GPP	1,750	1,750	470	0	0	0	0	0	0	0	0	0	0
4	PS and Z-Bed Recovery System Piping	Y567	MC	DSW			GPP	3,700	350	1,000	1,650	0	0	0	0	0	0	0	0	0
5	HANM/HAOM Remote Alarm Monitoring	TBD	MC	DSW			GPP	900	0	900	0	0	0	0	0	0	0	0	0	0
6	Engineering Building	TBD	MD	DSW		12,000	GPP	5,000	0	5,000	0	0	0	0	0	0	0	0	0	0
7	Process Support Building	TBD	MD	DSW		12,000	GPP	5,000	0	5,000	0	0	0	0	0	0	0	0	0	0
8	Fabricate Dry Calorimeter	Y527	MC	DSW			CE	550	150	400	0	0	0	0	0	0	0	0	0	0
9	High Volt Megger/Measurement Cart Mass Spec	TBD	MC	DSW			GPP	200	0	200	0	0	0	0	0	0	0	0	0	0
10	HANM UPS / Bypass	Y552	MC	DSW			GPP	730	120	610	0	0	0	0	0	0	0	0	0	0
11	"PI" IT Procurement	TBD	MC	DSW			GPP	250	0	250	0	0	0	0	0	0	0	0	0	0
12	EC PLC & GS/HP PLC Equipment	TBD	MC	DSW			CE	750	0	750	0	0	0	0	0	0	0	0	0	0
13	Routers/Switches for Classified Systems	TBD	MC	DSW			CE	350	0	350	0	0	0	0	0	0	0	0	0	0
14	Gas Standards Manifold	TBD	MC	DSW			GPP	200	0	200	0	0	0	0	0	0	0	0	0	0
15	New Mass Flow Cart	TBD	MC	DSW			GPP	120	0	120	0	0	0	0	0	0	0	0	0	0
16	SAN Expansion	TBD	MC	DSW			CE	750	0	750	0	0	0	0	0	0	0	0	0	0
17	P2 System Piping	TBD	MC	DSW	1,550		GPP	1,550	0	300	0	0	0	0	0	1,250	0	0	0	0
18	Relocate Hydroburst	TBD	MC	DSW			GPP	2500	0	800	0	0	0	0	0	1,700	0	0	0	0
19	Replace AHUs 501/502, 234-7H	TBD	MC	DSW	1,000		GPP	3,000	0	0	0	0	0	0	0	2,000	1,000	0	0	0
20	SS System Piping	TBD	MC	DSW	2,100		GPP	2,100	0	0	0	0	0	0	0	0	1,000	1,100	0	0
21	Network Infrastructure Update	TBD	MC	DSW	1,400		GPP	1,400	0	0	0	0	0	0	0	0	0	900	500	0
22	249-H Breathing Air Compressor	TBD	MC	DSW	1,500		GPP	1,500	0	0	0	0	0	0	0	0	0	0	1,500	0
23	Compressed Air System, 249-H	TBD	MC	DSW	2,000		GPP	2,000	0	0	0	0	0	0	0	0	0	0	1,000	1,000
24	HANM Process Control System Replacement	TBD	MC	DSW	7,500		GPP	7,500	0	0	0	0	0	0	0	0	0	0	0	2,000
25	HANM Unclassified Process Control Systems, Replace	TBD	MC	DSW	1,500		GPP	1,500	0	0	0	0	0	0	0	0	0	0	0	0
26	TCAP Column Replacement	TBD	MC	DSW	10,000		GPP	10,000	0	0	0	0	0	0	0	0	0	0	0	0
27	Hydride Beds Replacement	TBD	MC	DSW	5,000		GPP	5,000	0	0	0	0	0	0	0	0	0	0	0	0
28	HANM Cable Tray Heat Detector Replacement	TBD	MC	DSW	1,500		GPP	1,500	0	0	0	0	0	0	0	0	0	0	0	0
29	Replace Environmental Chambers, 234-7H	TBD	MC	DSW	900		GPP	900	0	0	0	0	0	0	0	0	0	0	0	0
30	Replace HANM Supply Air AHU	TBD	MC	DSW	3,700		GPP	3,700	0	0	0	0	0	0	0	0	0	0	0	0
31	Fabricate Dry Calorimeter (three)	TBD	MC	DSW	1,200		GPP	1,200	0	0	0	0	0	0	0	0	0	0	0	0
32	Replace O2 Monitors, HANM	TBD	MC	DSW	TBD		GPP	TBD	0	0	0	0	0	0	0	0	0	0	0	0
33	Inert Unloading	TBD	MC	DSW			GPP	TBD	0	0	0	0	0	0	0	0	0	0	0	0
34	Unloading Laser Replacement	TBD	MC	DSW	3,000		GPP	3,000	0	0	0	0	0	0	0	0	0	0	0	0
35	Purchase and install DE Vessel	TBD	MC	DSW			CE	TBD	0	0	0	0	0	0	0	0	0	0	0	0
36	All Metal Prototype Pump	TBD	MC	DSW			CF	TBD	0	0	0	0	0	0	0	0	0	0	0	0
37	Passivation Facility, HANM	TBD	MC	DSW			GPP	1,700	0	0	0	0	0	0	0	0	0	0	0	0
38	Room 324 Production and Reliability Upgrades	TBD	MC	DSW	930		GPP	930	0	0	0	0	0	0	0	0	0	0	0	0
39	Roundness/Cylindricity System	TBD	MC	DSW			CE	150	0	0	0	0	0	0	0	0	0	0	0	0
40	Lab 270 Mass Spec Mods, HAOM	TBD	MC	DSW			GPP	300	0	0	0	0	0	0	0	0	0	0	0	0
41	Plasma Pen Hot Air Decon (prototype)	TBD	MC	DSW			GPP	1,500	0	0	0	0	0	0	0	0	0	0	0	0
42	IML Controls Replacement, HAOM	TBD	MC	DSW	1,275		GPP	1,275	0	0	0	0	0	0	0	0	0	0	0	0
43	Rm 324 Line 1 Pressure Prot. Upgrades	TBD	MC	DSW	1,250		GPP	1,250	0	0	0	0	0	0	0	0	0	0	0	0
44	Rm 324 Line 2 Pressure Prot. Upgrades	TBD	MC	DSW	1,250		GPP	1,250	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL RTBF/Operations of Facilities</b>								-	10,985	17,240	1,650	0	0	0	4,950	2,000	2,000	3,000	3,000	
<b>TARGET (FYNP)</b>											1,650	0	0	0	0	0	2,000	2,000	3,000	3,000

Attachment A-4  
 NNSA Facilities and Infrastructure Cost Projection Spreadsheet  
 Facilities and Infrastructure Recapitalization Program (FIRP) for Savannah River Site  
 (\$000s)

FIRRS Priority (1)	Project Name (2)	FIRRS Score (2a)	Project Number (3)	Deferred Maintenance Identifier (3a)	Mission Dependency (4)	Mission Dependency Program (4a)	Legacy Deferred Maintenance Reduction (FY03 & FY04 Baseline) (5)	Non-Legacy Deferred Maintenance Reduction (5a)	GSF Added or Eliminated (6)	Funding Type (7)	Total (8)	Prior Years' Funding (9)	FY 2010 Current (10)	FY 2011 FYNSP (11)	FY 2012 FYNSP (12)	FY 2013 FYNSP (13)	FY 2014 FYNSP (14)	FY 2015 FYNSP (15)	
1	Replace UPS, HANM	55	TBD	SR-DM-XX-09	MC	DSW	1,400	0	0	GPP	1,500	0		1,500					
2	Fire Protection Replacements	55	TBD	SR-DM-XX-08	MC	DSW	1,450	0	0	GPP	1,500	0			1,500				
3	Breathing Air System Replacement, 249-H	55	TBD	SR-DM-XX-12	MC	DSW	1,040	0	0	GPP	1,500	0				1,500			
<b>TOTAL (FIRP)</b>											<b>4,500</b>	<b>0</b>		<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	<b>-</b>	<b>-</b>	

Attachment A-5  
Other Facilities and Infrastructure Cost Projection Spreadsheet  
For Savannah River Site  
(\$000s)

Priority (1)	Project Name (2)	Project Number (3)	Mission Dependency (4)	Mission Dependency Program (4a)	Deferred Maintenance Reduction (5)	GSF Added or Eliminated (6)	Funding Type (7)	Total (8)	Prior Years' Funding (9)	FY 2010 Current (10)	FY 2011 FYNP (11)	FY 2012 FYNP (12)	FY 2013 FYNP (13)	FY 2014 FYNP (14)	FY 2015 FYNP (15)	FY 2016 (16)	FY 2017 (17)	FY 2018 (18)	FY 2019 (19)	FY 2020 (20)	
<b>NNSA Facilities and Infrastructure Cost Projection Spreadsheet, Defense Stockpile Work</b>																					
1	Unloading B Modifications	Y554	MC	DSW	0	0	GPP	4,000	0	1,500	2,500										
2	Automated Leak Detectors	TBD	MC	DSW	0	0	CE	1,400	0	400	1,000										
3	Emerging Needs															1,500	1,500	1,500	1,500	1,500	
<b>DSW (facilities &amp; infrastructure reported under this category) Total</b>								<b>5,400</b>	<b>0</b>	<b>1,900</b>	<b>3,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	
<b>NNSA Facilities and Infrastructure Cost Projection Spreadsheet, Tritium Readiness Champaign</b>																					
1	Network the TEF and HANM DCS systems	Y587		TEF			GPP	1,700	0	1,700											
2	TEF Warehouse	Y527		TEF			GPP	3,000	100	2,900											
3	Wireless Sensor Development	Y556		TEF			CE	1,475	650	625	200										
4	Mass Spectrometer Installation	Y498		TEF			CE	1,200	300	900											
5	TEF Diffuser System Stacking Capability Expansion	TBD		TEF			GPP	3,000	0	3,000											
7	Wireless Network - Proof of Principle	TBD		TEF			CE	750	0	750											
8	Delta-V Development System	TBD		TEF			CE	750	0	750											
6	Install Continuous Air Monitors in Hot Maintenance Shop and Hot Maintenance Airlock.	TBD		TEF			GPP	1,000	0	0	1,000										
9	TEF Process Control System Replace(ICS)	TBD		TEF			GPP	4,500	0							1,000	1500	1500	500		
10	TEF Process Control System Replace (PCS)	TBD		TEF			GPP	2,500	0										1000	1500	
<b>Tritium Readiness Champaign (facilities &amp; infrastructure reported under this category) Total</b>								<b>19,875</b>	<b>1,050</b>	<b>10,625</b>	<b>1,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,000</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>

**Attachment A-6(a) - FY 2010 - FY 2012**  
**NNSA Facilities and Infrastructure Cost Projection Spreadsheet**  
**Currently Funded Security Infrastructure Projects for Savannah River Site (\$000s)**

Priority (1)	Project Name (2)	Site Specific Project Number (3)	Mission Dependency (4)	Mission Dependency Program (4a)	Estimated Total Project Cost (8)	Planned Funding Source				
						Line Item A-1,2	RTBF A-3	FIRP A-4	Other A-5	DBT Related? Y or N
	<b>FY2010</b>									
1	Replace 720-H Chillers		MD	DSW	1,100				FS-20	N
2	Security Automated Gates/Upgrades		MD	DSW	2,000				FS-20	N
3	249-H Exclusion Area		MC	DSW	125				FS-20	N
4	701-3H General Renovation		MD	DSW	100				FS-20	N
5	720-H General Renovation		MD	DSW	100				FS-20	N
6	Remove PIDAS Devices/Junction Boxes		MD	DSW	150				FS-20	N
	<b>No FY11/FY12 Planned</b>									

Note: Prioritize for each Fiscal Year (FY10, FY11 and FY12) in sequential order site Security Infrastructure projects/activities.

**Attachment A-6(b) - FY11 and FY12 Unfunded**  
**NNSA Facilities and Infrastructure Cost Projection Spreadsheet**  
**Security Infrastructure Projects for Savannah River Site Site**  
**(\$000s)**

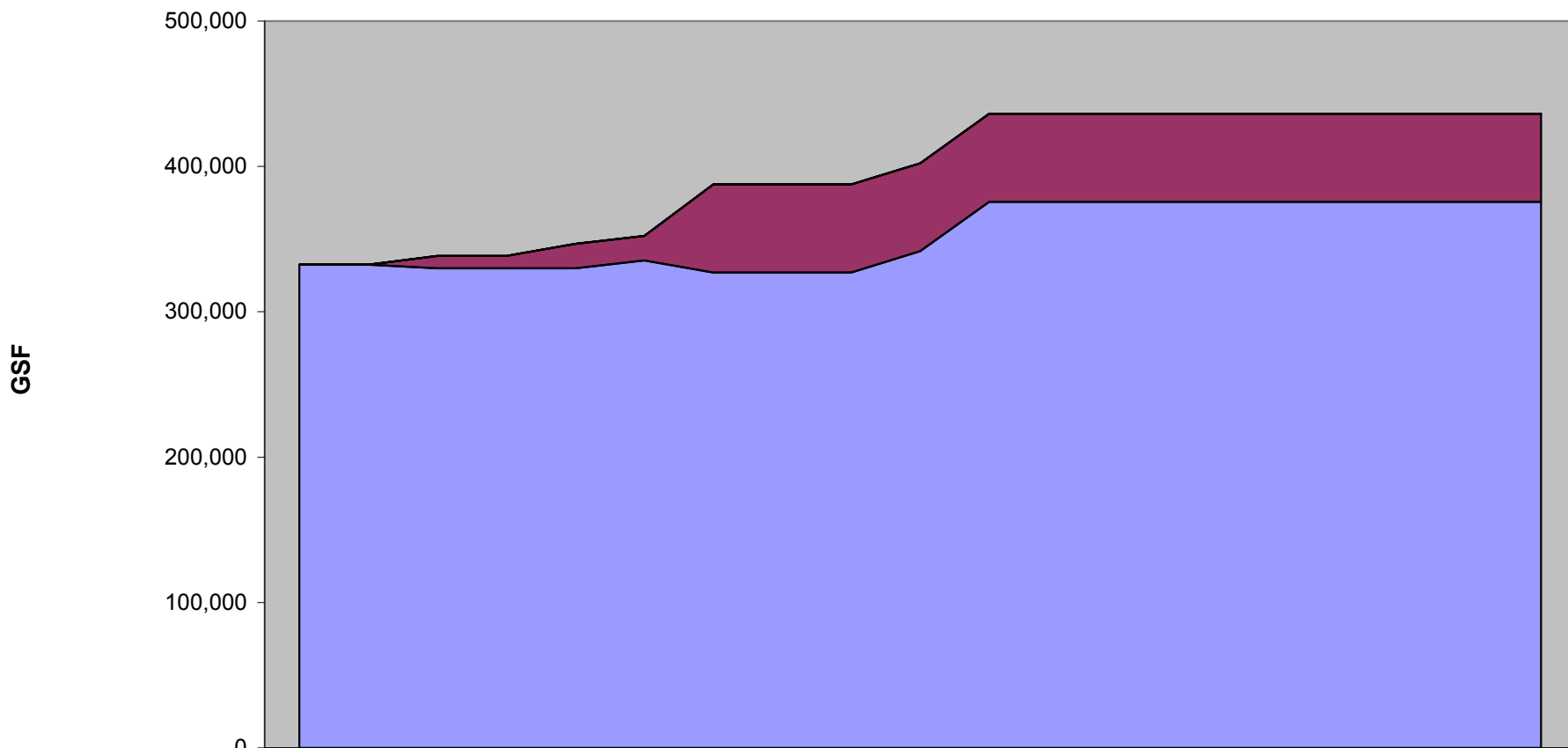
Priority (1)	Prioritization Score (2a)	Project Name (2)	Site Specific Project Number (3)	Mission Dependenc y (4)	Mission Dependenc y Program (4a)	Total (8)	Proposed for either FY11 or FY12 funding	DBT Related? Y or N
1		Tritium ARGUS				TBD		N
2		K-Area Argus				TBD	FY12	N
3		K-Area PIDAS Upgrades				TBD	FY12	Y
4								
5								
<b>TOTAL</b>								



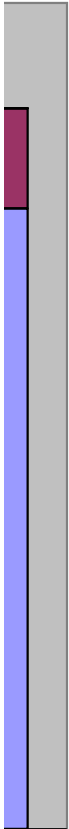
**Attachment E-4(a)**  
**FOOTPRINT TRACKING SUMMARY SPREADSHEET**  
**DP Tritium Facilities, Savannah River Site**

Fiscal Year (1)	Beginning Site Footprint (gsf) (2)	Excess Facilities Footprint Elimination (gsf) (3)	New Construction/ Footprint Added (gsf) (4)	Site Footprint Reduction by FY* (gsf) (5)	Footprint "Banked" (gsf) (6)	Waiver/ Transfer (gsf) (7)	"Grandfathered" Footprint Added (gsf) (8)	Cumulative "Grandfathered" Footprint Added (gsf) (8a)	NNSA Site Total Footprint (gsf) (9)	NNSA Leased Space (10)	Weapons Activities Account (gsf) (11)
FY 2002 Actual	332,351	0	0	332,351	0		0	0	332,351	0	
FY 2003 Actual	332,351	-2,364	0	329,987	-2,364		0	0	329,987	0	RTBF
FY 2004 Actual	329,987	0	0	329,987	-2,364		8392	8,392	338,379	0	DSW
FY 2005 Actual	329,987	0	0	329,987	-2,364		0	8,392	338,379	0	
FY 2006 Actual	329,987		5,368	335,355	3,004		8,351	16,743	352,098	0	TEF
FY 2007	335,355	-8,384	0	326,971	-5,380			16,743	343,714	0	RTBF
FY 2008	326,971	0	0	326,971	-5,380		43,832	60,575	387,546	0	TEF
FY 2009	326,971	0	0	326,971	-5,380		0	60,575	387,546	0	
FY 2010	326,971	0	14,700	341,671	0		0	60,575	402,246	0	RTBF
FY 2011	341,671	0	34,000	375,671	0		0	60,575	436,246	0	RTBF/TEF
FY 2012	375,671	0	0	375,671	0		0	60,575	436,246	0	
FY 2013	375,671	0	0	375,671	0		0	60,575	436,246	0	
FY 2014	375,671	0	0	375,671	0		0	60,575	436,246	0	
FY 2015	375,671	0	0	375,671	0		0	60,575	436,246	0	
FY 2016	375,671	0	0	375,671	0		0	60,575	436,246	0	
FY 2017	375,671	0	0	375,671	0		0	60,575	436,246	0	
FY 2018	375,671	0	0	375,671	0		0	60,575	436,246	0	
FY 2019	375,671	0	0	375,671	0		1	60,576	436,247	1	
FY 2020	375,671	0	0	375,671	0		2	60,578	436,249	2	
				*Cumulative, non-grandfathered site footprint at the end of each fiscal year.							
Note :	DP Tritium Facilities' end of year FY 2009 Total Footprint includes the following:										
											160,215
											145,096
											<b>305,311</b>
											71,966
											<b>377,277</b>
											10,269
											<b>387,546</b>

**ATTACHMENT E-4(a)  
DP Tritium Facilities, Savannah River Site Space Tracking Summary**



	FY 2002 Actual	FY 2003 Actual	FY 2004 Actual	FY 2005 Actual	FY 2006 Actual	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
□ NNSA Leased Space (10)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
■ Cumulative "Grandfathered" Footprint Added (gsf) (8a)	0	0	8,392	8,392	16,743	16,743	60,575	60,575	60,575	60,575	60,575	60,575	60,575	60,575	60,575	60,575	60,575	60,576	60,578
■ Beginning Site Footprint (gsf) (2)	332,35	332,35	329,98	329,98	329,98	335,35	326,97	326,97	326,97	341,67	375,67	375,67	375,67	375,67	375,67	375,67	375,67	375,67	375,67



FY  
2020

2

30,578

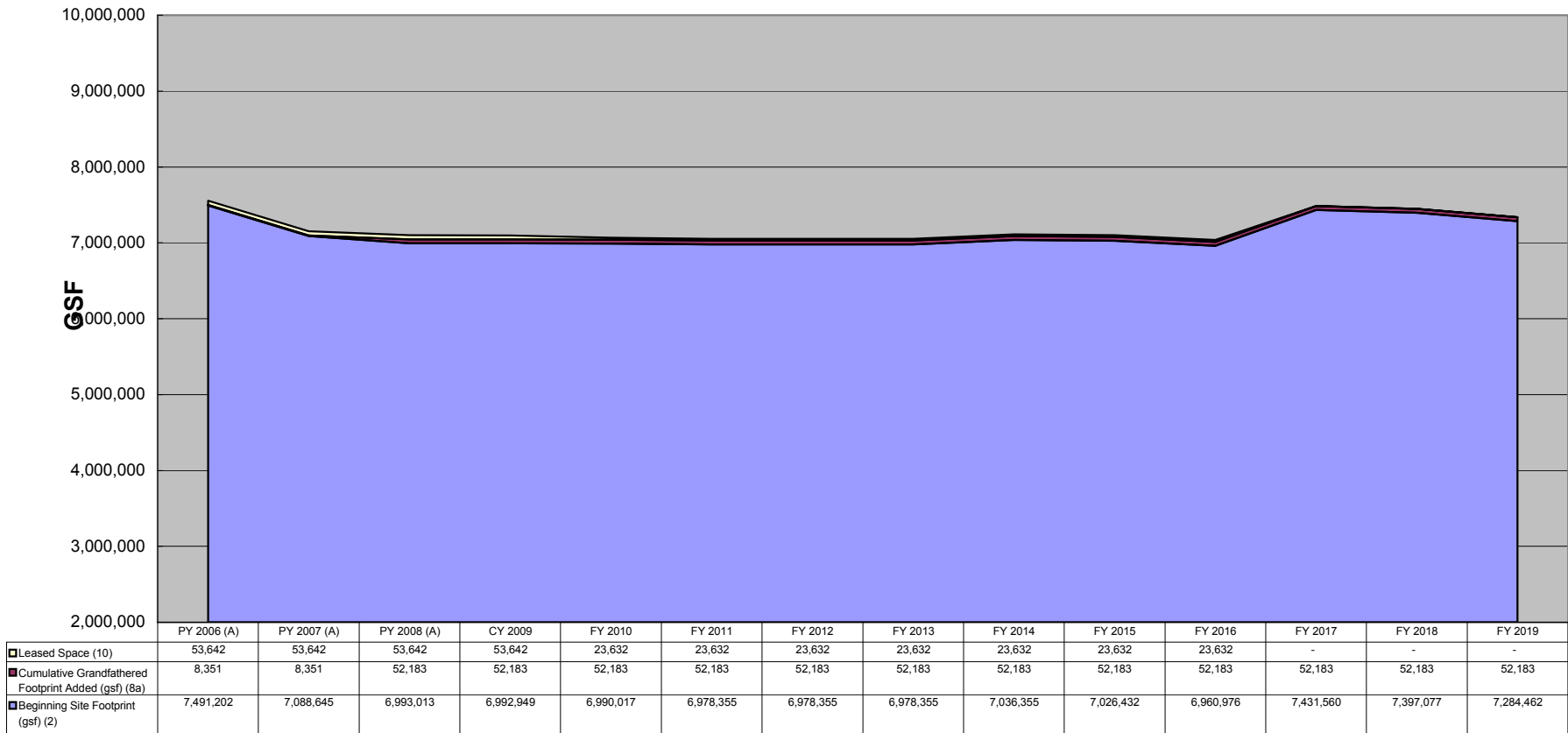
375,67

**Attachment E-4 (b)**  
**FOOTPRINT SUMMARY SPREADSHEET**  
**Savannah River Site Footprint Tracking Summary - SITE WIDE (Multi-Program)**

Fiscal Year (1)	Beginning Site Footprint (gsf) (2)	Excess Facilities Footprint Elimination (gsf) (3)	New Construction Footprint Added (gsf) (4)	Site Footprint Reduction by FY (5)	Footprint "Banked" (gsf) (6)	Waiver/Transfer (gsf) (7)	"Grandfathered" Footprint Added (gsf) (8)	Cumulative Grandfathered Footprint Added (gsf) (8a)	Site Total Footprint (Multi-Program) (gsf) (9)	Leased Space (10)
PY 2006 (A)	7,491,202	-402,557	0	7,088,645	-1,357,487	0	8,351	8,351	7,096,996	53,642
PY 2007 (A)	7,088,645	-138,992	43,360	6,993,013	-1,453,119	0	0	8,351	7,001,364	53,642
PY 2008 (A)	6,993,013	-64	0	6,992,949	-1,453,183	0	43,832	52,183	7,045,132	53,642
CY 2009	6,992,949	-2,932	0	6,990,017	-1,456,115	0	0	52,183	7,042,200	53,642
FY 2010	6,990,017	-11,662	0	6,978,355	-1,467,777	0	0	52,183	7,030,538	23,632
FY 2011	6,978,355	0	48,700	7,027,055	-1,419,077	0	0	52,183	7,079,238	23,632
FY 2012	6,978,355	0	0	6,978,355	-1,419,077	0	0	52,183	7,030,538	23,632
FY 2013	6,978,355	0	58,000	7,036,355	-1,361,077	0	0	52,183	7,088,538	23,632
FY 2014	7,036,355	-9,923	0	7,026,432	-1,371,000	0	0	52,183	7,078,615	23,632
FY 2015	7,026,432	-143,456	78,000	6,960,976	-1,436,456	0	0	52,183	7,013,159	23,632
FY 2016	6,960,976	-129,416	600,000	7,431,560	-965,872	0	0	52,183	7,483,743	23,632
FY 2017	7,431,560	-34,483	0	7,397,077	-1,000,355	0	0	52,183	7,449,260	-
FY 2018	7,397,077	-112,615	0	7,284,462	-1,112,970	0	0	52,183	7,336,645	-
FY 2019	7,284,462	-829,728	0	6,454,734	-1,942,698	0	0	52,183	6,506,917	-

**ATTACHMENT E-4(b)**

**Savannah River Site - Site Wide Footprint Tracking Summary - SITE WIDE (Multi-Program)**





Attachment F-1  
 FIRP FY 2003 Legacy Deferred Maintenance Baseline and Projected Deferred Maintenance Reduction from Baseline  
 NNSA Savannah River  
 (\$000s)

Category of Maintenance	FY 2003 (Baseline)	FY 2004 (Actual)	FY 2005 (Actual)	FY 2006 (Actual)	FY 2007 (Actual)	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
<b>1. FIRP DEFERRED MAINTENANCE (DM) BASELINE (Excludes Programmatic Real Property or Equipment)</b>	52,038	45,504	35,072	31,672	31,622	30,099	28,219	26,869	25,469	24,019	22,979	22,979	22,979	21,979	20,979	19,979	18,979	17,979
<b>2. DEFERRED MAINTENANCE BASELINE (DM) REDUCTION TOTAL</b>	8,459	6,534	10,432	3,400	50	1,523	1,880	1,350	1,400	1,450	1,040	-	-	1,000	1,000	1,000	1,000	1,000
A. Reduction in DM Baseline (total due to FIRP ONLY) for all F&I	7,077	5,460	6,432	1,500	50	1,523	243	1,350	1,400	1,450	1,040							
i. Reduction in DM for <u>Mission-Critical</u> F&I (due to FIRP ONLY)				1,500	-	1,523	243	1,350	1,400	1,450	1,040							
ii. Reduction in DM for <u>Mission Dependent, Not Critical</u> F&I (due to FIRP ONLY)				-	50	-	-	-	-	-	-							
iii. Reduction in DM for <u>Not Mission Dependent</u> F&I (due to FIRP ONLY)				-	-	-	-	-	-	-	-							
<b>3. REPLACEMENT PLANT VALUE (RPV) FOR NNSA FACILITIES &amp; INFRASTRUCTURE</b>	735,600																	

**Attachment F-2**  
**NNSA Savannah River, DP Tritium, Total Deferred Maintenance and Projected Deferred Maintenance Reduction**  
(\$000s)

Category of Maintenance	FY 2003 (Baseline)	FY 2004 (Actual)	FY 2005 (Actual)	FY 2006 (Actual)	FY 2007 (Actual)	FY 2008 (Actual)	FY 2009 (Actual)	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
<b>1. ANNUAL REQUIRED MAINTENANCE for F&amp;I</b>					28,334	29,083	29,823	30,843	31,779	32,498	34,308	37,546	40,794	44,225	45,209	46,204	47,220	48,259
<b>2. ANNUAL PLANNED MAINTENANCE TOTAL</b>	19,022	20,678	18,971	22,132	25,766	28,694	30,458	31,049	27,815	27,179	23,308	24,295	25,013	30,133	31,241	31,852	32,475	30,660
a. Direct (Includes TEF Maint., FY07 and beyond)	16,080	17,805	17,676	19,645	24,172	27,047	28,757	29,292	26,000	25,304	21,371	22,192	22,853	27,916	28,964	29,524	30,096	28,229
b. Indirect	2,942	2,873	1,294	2,487	1,594	1,647	1,701	1,757	1,815	1,875	1,937	2,103	2,160	2,218	2,278	2,328	2,379	2,431
<b>3. DEFERRED MAINTENANCE (DM) TOTAL</b> (Excludes Programmatic Real Property or Equipment) = Inflation Prior Year DM Total + DM New - Prior Year DM Reduction	52,038	45,504	36,801	45,743	50,243	53,655	56,135	53,718	57,357	61,009	70,202	83,841	98,204	108,085	117,462	127,332	137,712	147,239
i. Backlog Inflation Rate (%)	/	0.0%	4.9%	2.0%	2.2%	2.6%	2.5%	-1.9%	2.0%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%
ii. DM Inflation	/	-	1,729	736	1,006	1,306	1,341	(1,067)	1,074	1,090	1,159	1,334	1,593	1,866	2,054	2,232	2,419	2,617
iii. DM NEW	/	-	-	11,844	3,500	3,629	3,300	3,650	3,964	4,012	9,074	12,305	12,771	11,015	10,823	11,138	11,460	10,410
A. DM, Mission-Critical F&I ONLY	/	/	/	40,896	45,289	50,508	50,416	48,388	51,910	55,442	64,513	78,026	92,262	102,012	111,256	120,989	131,368	140,893
B. DM, Mission-Dependent, Not Critical F&I ONLY	/	/	/	4,847	4,954	5,083	5,719	5,330	5,447	5,567	5,689	5,814	5,942	6,073	6,207	6,343	6,344	6,345
C. DM, Not Mission-Dependent F&I ONLY	/	/	/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>4. DEFERRED MAINTENANCE (DM) REDUCTION TOTAL</b>	8,459	6,534	10,432	3,638	50	1,523	2,162	5,000	1,400	1,450	1,040	-	-	3,000	3,500	3,500	3,500	3,500
i. Reduction Total attributed to FIRP ONLY	7,077	5,460	6,432	1,605	-	1,523	243	1,350	1,400	1,450	1,040	/	/	/	/	/	/	/
A. Reduction in DM for Mission-Critical F&I	/	/	/	3,638	50	1,523	2,162	5,000	1,400	1,450	1,040	-	-	3,000	3,500	3,500	3,500	3,500
1. Reduction attributed to FIRP ONLY	/	/	/	1,605	-	1,523	-	-	-	-	-	/	/	/	/	/	/	/
B. Reduction in DM for Mission-Dependent, Not Critical F&I	/	/	/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1. Reduction attributed to FIRP ONLY	/	/	/	-	-	-	-	-	-	-	-	/	/	/	/	/	/	/
C. Reduction in DM for Not Mission-Dependent F&I	/	/	/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1. Reduction attributed to FIRP ONLY	/	/	/	-	-	-	-	-	-	-	-	/	/	/	/	/	/	/
<b>5. REPLACEMENT PLANT VALUE (RPV)</b> for Facilities and Infrastructure (F&I) = Inflation of PY RPV + Increase or Decrease due to other causes	735,604	867,805	942,376	837,348	1,337,922	1,372,708	1,430,726	1,464,116	1,507,057	1,540,212	1,574,097	1,608,727	1,644,119	1,680,290	1,717,256	1,755,036	1,793,647	1,833,107
A. RPV for Mission-Critical F&I ONLY	/	/	/	672,789	1,148,255	1,178,110	1,228,466	1,256,721	1,284,369	1,312,625	1,341,502	1,371,015	1,401,178	1,432,004	1,463,508	1,495,705	1,528,610	1,562,240
B. RPV for Mission-Dependent, Not Critical F&I	/	/	/	164,559	189,667	194,598	202,260	207,395	222,689	227,588	232,595	237,712	242,941	248,286	253,748	259,331	265,036	270,867
C. RPV for Not Mission-Dependent F&I	/	/	/	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D. RPV Increase from prior year attributed to inflation	/	/	/	63,100	53,400	34,786	58,018	32,918	32,442	33,155	33,885	34,630	35,392	36,171	36,966	37,780	38,611	39,460
E. RPV Increase / decrease attributed to causes other than inflation (See Notes below)	/	/	/	(168,128)	447,174	-	-	472	10,500	-	-	-	-	-	-	-	-	-

Note 1: FY06, Decrease from exclusion of the 232-H facility which is shutdown and an increase due to addition of TEF Service Building (\$3M)

Note 2: FY07, Addition of the balance of the Tritium Extraction Facility

Note 3: FY11, Net RPV change upon completion of Replacement 232-1H, Engineering Building and Process Service Building, TEF Warehouse

Note 5: FY10 Office trailer deferred maintenance and RPV added

Facility Condition Index (FCI)	FY 2003 (Baseline)	FY 2004 (Actual)	FY 2005 (Actual)	FY 2006 (Actual)	FY 2007 (Actual)	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
<b>FCI TOTAL</b>	7.1%	5.2%	3.9%	5.5%	3.8%	3.9%	3.9%	3.7%	3.8%	4.0%	4.5%	5.2%	6.0%	6.4%	6.8%	7.3%	7.7%	8.0%
FCI Mission Critical	/	/	/	6.1%	3.9%	4.3%	4.1%	3.9%	4.0%	4.2%	4.8%	5.7%	6.8%	7.1%	7.6%	8.1%	8.6%	9.0%
FCI Mission Dependent, Not Critical	/	/	/	2.9%	2.6%	2.6%	2.8%	2.6%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.3%
FCI Not Mission Dependent	/	/	/	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Asset Condition Index (ACI)</b>	0.93	0.95	0.96	0.95	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.95	0.94	0.94	0.93	0.93	0.92	0.92
ACI Mission Critical	/	/	/	0.94	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.95	0.93	0.93	0.92	0.92	0.91	0.91
ACI Mission Dependent, Not Critical	/	/	/	0.97	0.97	0.97	0.97	0.97	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
ACI Not Mission Dependent	/	/	/	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A